

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

In the Matter of

)
Additional Spectrum for Unlicensed Devices)
Below 900 MHz and in the 3 GHz Band)
ET Docket No. 02-380

REPLY COMMENTS OF
AMERICAN MOBILE TELECOMMUNICATIONS ASSOCIATION, INC.

The American Mobile Telecommunications Association, Inc. (“AMTA” or “Association”), by its attorneys and pursuant to Section 1.415 of the Federal Communications Commission (“FCC” or “Commission”) rules and regulations, respectfully submits its reply comments in the above-captioned proceeding.¹ Although AMTA supports the FCC’s investigation into the exciting potential promised by unlicensed devices, the Association submits that the record in this proceeding raises serious concerns about their current, and perhaps even future, ability to co-exist on a non-interfering basis with licensed land mobile systems in the 470-512 MHz (“T-band”) and the 700 MHz bands. Until these issues have been resolved and there is empirical support confirming that harmful interference will not occur, the FCC should not permit the use of unlicensed devices in these portions of the broadcast band.

AMTA’s comments in this proceeding cautioned the FCC that unlicensed devices likely would find it difficult to avoid the intermittent, relatively low-power transmissions of land mobile stations operating in these discrete portions of the broadcast band. It noted the greater complexity

These same concerns were expressed by the Land Mobile Communications Council (“LMCC”) and by a number of land mobile licensees and industry representatives. LMCC referenced the concerns on this very subject raised by both the Telecommunications Industry Association (“TIA”) and by Motorola, Inc. in their comments on this subject in response to the FCC’s Spectrum Policy Task Force Report.² Parties such as Los Angeles County (“LAC”), the City and County of San Francisco (“San Francisco”), the Association of Public-Safety Communications Officials-International, Inc. (“APCO”), and the American Petroleum Institute (“API”) all cautioned the Commission that T-band channels currently support critical public safety and other safety-related communications. They noted that public safety had been allocated a substantial spectrum block in the 700 MHz band that has been earmarked for vital communications needs when completion of the DTV migration process makes it usable.

For example, LAC stated that “permitting unlicensed devices to operate in the 470-512 MHz band in Los Angeles County will impede greatly the ability of emergency service organizations to effectively perform their first-responder, lifesaving duties.”³ API explained that “...while it may be possible for unlicensed devices to dynamically sense the presence of TV broadcast operations, it would be difficult (if not impossible) to design and manufacture devices that also could sense and protect the non-TV operations in the band (such as PLMRS systems) which differ from broadcast operations in terms of center frequency and modulation type.”⁴ Similarly, APCO expressed its deep concern about the proposal “...insofar as it includes spectrum also allocated for public safety and other land mobile frequencies”⁵ and stated that it “...is equally concerned with the 764-776/794-806 MHz band (TV channels 63, 64, 68 and 69) which, pursuant to a Congressional mandate, has been reallocated nationwide for public safety radio services.”⁶

Many of these same commenters, including AMTA, noted that they support the expanded availability of unlicensed devices. Indeed, they indicated that they or their members are enjoying the substantial benefits such devices can provide when deployed appropriately. Their concerns relate not to the need for spectrum to accommodate what has become a vibrant, integral part of this nation’s telecommunications revolution, but how to integrate these devices into the spectrum landscape to their best advantage and without risking destructive interference to other spectrum users. The record in this proceeding indicates that their use in these particular bands has a high potential for causing interference to vital safety-related operations. That result would not serve the

interests of the incumbent users on those channels or those who rely on their services and also would not benefit those who wish to see the use of unlicensed devices flourish in a welcoming environment.

The incompatibility of unlicensed devices with existing operations in these bands was confirmed even by proponents of their widespread use. Thus, RadioShack Corporation (“RadioShack”), which describes itself as perhaps the nation’s largest retailer of unlicensed consumer electronics products, recommends that unlicensed wireless devices remain prohibited in certain bands. It identifies the Wireless Medical Telemetry Service and radio astronomy operations as services deserving particular protection because the first involves “communications related to safety-of-life” and the second involves communications at very low signal levels.⁷ AMTA is confident that RadioShack’s recognition of the problems that could arise if unlicensed devices were intermingled with certain types of services surely would extend to the public safety systems that utilize T-band channels intensively and that will proliferate in the 700 MHz allocation.

The Comments of Intel Corp. (“Intel”), a leading manufacturer of unlicensed communications equipment, are particularly instructive in respect to the complexity of such devices sharing spectrum with licensed land mobile systems:

Developing unlicensed devices to share TV bands is made easier by the fact that the TV bands and the receivers operating in them have been doing so for half a century. There is a huge body of data characterizing, analyzing and profiling the environment in which these devices will operate. The signal strength contours of service areas and receiver design and operation are well understood....

existing TV broadcasters is well documented and centrally located in the Commission's database.

Sharing spectrum in this well-defined, stable environment is a manageable task for today's radio devices....⁸

Of course, as explained in the comments of AMTA, LMCC and others, to the extent that unlicensed devices would be required to protect land mobile facilities, the environment would be neither stable nor well-defined. Transmissions of land mobile systems are intermittent and often mobile. The operation and contours of incumbent systems are not fixed; they are constantly in flux as systems are relocated or otherwise modified. Thus, a least in respect to the bands in which land mobile systems operate, it is questionable whether even Intel would consider this spectrum a favorable home for opportunistic unlicensed devices.

RadioShack's comments highlight a related concern, one raised in the comments of APCO, AMTA and others. It may not be possible to permit unlicensed devices to operate on broadcast spectrum that is not shared with land mobile while preventing them from causing interference to those systems. The T-band allocations are different in each of the markets in which land mobile/TV sharing is authorized.⁹ These channels are different than those allocated to public safety in the 700 MHz band. Unless the FCC intends to prohibit unlicensed devices from operating on any of these channels, it cannot expect to keep users from operating them in unauthorized areas. As noted by RadioShack:

Since many popular unlicensed devices are portable products, attempts to place geographic restrictions on the usage of these devices in border areas near Canada and Mexico (as well as near any “sensitive” areas within the U.S.) are likely to be ineffective if imposed on the user as an attempt to control behavior; i.e., telling them where they can and cannot use their devices.¹⁰

The Commission must consider this cautionary, and AMTA believes entirely accurate, assessment of the FCC's or industry's ability to control the use of these devices once they are placed into the stream of commerce. In the Association's opinion, this caveat, in conjunction with the comments of Intel and the expressed concerns of land mobile users and representatives, argue against the proposal under consideration herein, at least until there is compelling evidence indicating that unlicensed devices can be introduced into the band on an interference-free basis.

For the reasons described herein, AMTA urges the Commission to take action consistent with the foregoing.

Respectfully submitted,

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