

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

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

COMMENTS OF LOS ANGELES COUNTY

Los Angeles County government (“**LAC**”), through its Internal Services Department (“**ISD**”), by its undersigned counsel files these comments in the above captioned proceeding.

I. Summary

On December 20, 2002, the Federal Communications Commission (the “**Commission**”) released a Notice of Inquiry in the above captioned proceeding (the “**NOI**”) in which it sought comment on a variety of issues related to permitting unlicensed devices to operate in the TV broadcast spectrum “at locations and times when spectrum is not being used, and on the technical requirements that would be necessary to ensure that such devices do not cause interference . . .”¹

LAC believes 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. While LAC notes the success of the Commission’s Part 15 rules for unlicensed transmitters, the very real risk to the public today is too great to justify the current proposal. As explained below, the way in which LAC utilizes these frequencies for mobile communication services and the topography of Los Angeles County makes it and its associated agencies particularly susceptible to interference from competing

¹ See *In the Matter of Additional Spectrum for Unlicensed Devices Below 900 MHz and in the 3 GHz Band*, Notice of Inquiry, ET Docket No., 02-380, ¶1 (rel. December 20, 2002)(“**NOI**”).

devices, regardless of their power levels. Such interference – whether between two Sheriff’s deputies or a fire truck with its dispatcher – can endanger lives.

II. Background

The ISD is a department of the Los Angeles County government. It provides local governmental entities within Los Angeles County – including fire, sheriff and other administrative agencies – with telecommunications consultation and analysis, communications systems design, installation, maintenance and operation services. The ISD is responsible for building integrated networks for radio, telephone and digital communications, and keeps Los Angeles County departments in communication with each other, other governmental agencies and citizens. In addition, the ISD supports over 300 major network sites, 30,000 mobile/portable communications units, 16,000 pager users and 75,000 telephone lines.

The major Los Angeles County emergency service providers, including the Los Angeles County Sheriff’s Department and the Los Angeles County Fire Department, operate land mobile radio services in the 470-512 MHz band (TV broadcast channels 14 and 16). These emergency service organizations use this band to transmit both voice and data traffic between hundreds of receivers at high and low elevations throughout Los Angeles County and mobile and portable devices being used in the field. Typical land mobile communications include voice communications between central dispatch stations and emergency vehicles throughout Los Angeles County on tactical and command channels.

In addition to voice communications, Los Angeles County has begun deploying mobile data systems (“**MDTs**”) for use by its public safety organizations. MDTs are wireless devices that transmit data communications to users and have the potential to provide immeasurable benefits to public safety and emergency service personnel. For instance, during routine traffic

violation stops, Los Angeles County Sheriff's Department personnel using MDTs can instantaneously access vital information on individuals such as outstanding warrants and prior criminal histories.

III. Comments

A. *The Commission Should Restrict The Use Of Unlicensed Devices In The 470-512 MHz Band*

LAC does not dispute the success of the Commission's prior unlicensed device rules, nor does it opine as to the effect of these devices in other parts of the TV broadcast band or in other geographic areas. LAC does, however, feel very strongly that permitting the use of these devices in the 470-512 MHz band in Los Angeles County, or any other areas of the country, raises serious interference concerns for the emergency service organizations that transmit voice and data on those channels. LAC also sees the potential for interference from the fact that unlicensed devices deployed in areas not utilizing the 470-512 MHz may be transported and used in Los Angeles County, thereby causing the interference risk described.

The Commission specifically granted these frequencies to public safety organizations in order to assist them in their life-saving functions.² As the threat of terrorism has manifested into a reality in recent years, public safety organizations have become the first line of defense in homeland security efforts. The Commission should not, on the one hand, allocate spectrum for use by public safety organizations, and then on the other hand, handicap these same organizations from effectively using it. As courts have held time and time again in various

² In the Matter of Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Radio Services and Modify the Policies Governing Them and Examination of Exclusivity and Frequency Assignments Policies of the Private Land Mobile Services, *Second Report and Order*, Docket No. 92-235, 12 FCC Rcd. 14, 307 (1997).

contexts, the electromagnetic spectrum is the property of the American public.³ There is no greater public interest served than by allowing police, fire and EMS organizations to effectively use this spectrum to perform their life-saving duties, and without being impeded by competing devices.

B. Limits On Power And/Or Field Strength Limits Will Not Effectively Prevent Interference

LAC does not believe that power and/or field strength limits would effectively reduce the risk of interference raised by unlicensed devices. One reason for this belief is that many of the devices that are used by public safety officers are themselves relatively low-powered and mobile. Therefore, a law enforcement officer entering a dwelling or a fire fighter entering an office building may find that their communications devices operate on the same frequency as an unlicensed device being used nearby. The potential for interference in this circumstance is very real and very dangerous.

This problem is only exacerbated by the fact that the use of this spectrum by public safety organizations in Los Angeles is mobile in nature. Therefore, emergency vehicles may find their communications interrupted as they pass by areas where unlicensed devices are in use. As stated above, LAC's communications system makes use of receivers at varying elevations throughout the county. Rather than being able to effectively transmit signals from powerful towers at high elevations, LAC must adapt to receivers at high and low elevations. This makes its communications particularly susceptible to interference from natural sources. The Commission should not add to this problem by introducing more man-made interference.

³ See *Red Lion Broadcasting Co. v. F.C.C.*, 395 U.S. 367, 376 (1969), *National Broadcasting Co., Inc. v. F.C.C.*, 516 F.2d 1101, 1191-1192 (D.C. Cir. 1974); *Muir v. Alabama Educational Television Commission*, 688 F.2d 1033, 1039 (5th Cir. 1982).

The NOI asks for comments on whether there are technical requirements that can be imposed upon unlicensed devices before they can be permitted to operate in the TV broadcast band. Specifically, the Commission notes that “advances in computer technology mean[s] that it should be possible to design equipment that would monitor the spectrum to detect frequencies already in use and ensure that transmissions only occur on open frequencies.”⁴ Currently, LAC is unaware of any technology capable of being practically applied to serve this function. Regardless, such a technology is likely to have greater success in broadcast channels where there is a constant signal being transmitted, as opposed to sporadic signals that are characteristic of LAC’s land mobile radio uses. LAC believes that allowing nascent technologies to share spectrum with public safety organizations simply poses too great an interference risk to consider at this time.

C. As LAC Moves To More Narrowband Devices, The Potential For Harmful Interference Will Increase

LAC has begun the process of transitioning its communications network from legacy analog devices to digital systems that use narrowband technology. This process was begun, in part, as a result of Commission reforming proceedings calling for the use of spectrum-efficient technologies.⁵ While there are clear advantages to digital communications over analog – especially in the area of data transmissions – there are also some serious concerns as they relate to interference issues. LAC has found that digital communications can be more “fragile” than

⁴ NOI ¶13.

⁵ See Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended; Promotion of Spectrum Efficient Technologies on Certain Part 90 Frequencies; Establishment of Public Service Radio Pool in the Private Mobile Frequencies Below 800 MHz; Petition for Rule Making of the American Mobile Telecommunications Association, *Report and Order and Further Notice of Proposed Rule Making*, WT Docket No. 99-87, RM-9332, RM-9405, RM-9705, 15 FCC Rcd 22709 (1999); Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended; Promotion of Spectrum Efficient Technologies on Certain Part 90 Frequencies, *Second Report and Order and Second Further Notice of Proposed Rule Making*, WT Docket No. 99-87, RM-9332, (rel. February 25, 2003).

traditional analog transmission. The effect can be more serious disruptions to digital communications as a result of interference. When communicating on analog devices, competing devices may be the cause of the familiar interference or static sound. However, interference on digital devices often has the effect of “dropping” communications entirely. The consequence of this type of disruption goes far beyond the mere inconvenience that mobile phone users may encounter. It is not merely an inconvenience for fire fighters, Sheriff deputies or other first responders to have their communications “dropped” simply because there are unlicensed devices operating nearby – it is very often a matter of life and death. This concern will only grow as LAC, and the public safety organizations it serves, roll-out digital equipment to replace analog devices.

IV. Conclusion

Permitting unlicensed devices to operate in the 470-512 MHz band will create serious risks for public safety organizations and the citizens they serve. As explained above, the Los Angeles County Sheriff’s Department and the Los Angeles County Fire Department, as well as other first responders, operate land mobile radio services in this band. These emergency service organizations use this band to transmit both voice and data traffic throughout Los Angeles County. Introducing competing devices into the band – regardless of their power and/or field strength or any geographical limitations– will almost assuredly create interference problems for the communications of these public safety organizations, making it more difficult for them to perform their life-saving duties. The Commission should gear its policies towards assisting public safety organizations, rather than impeding them. Any rules that are conceived as a result of the NOI should explicitly restrict the use of unlicensed devices in the 470-512 MHz band.

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Dated: April 15, 2003