

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

In the Matter of)	
)	
The Development of Operational,)	
Technical and Spectrum Requirements)	
For Meeting Federal, State and Local)	WT Docket No. 96-86
Public Safety Agency Communication)	
Requirements Through the Year 2010)	
)	
Establishment of Rules and Requirements)	
For Priority Access Service)	

To the Commission:

**COMMENTS BY THE STATE OF FLORIDA
TO THE THIRD NOTICE OF PROPOSED RULEMAKING**

1. The State of Florida, Department of Management Services, Division of Information Technology, Bureau of Wireless Communications, offers these comments to the Third Notice of Proposed Rulemaking (the *NPRM*) in the above referenced matter. As a licensed user of public safety spectrum, and an agency with regulatory responsibility for other state and local public safety agencies within Florida, we have direct interest in the outcome of this proceeding. We are familiar with the First Report and Order (the *First Report*) in this matter, as issued concurrently with the *NPRM*. Our comments are divided into same four broad categories as the *NPRM*, and include a reference to the paragraph number(s) of the *NPRM* to which they respond.

A. USE AND LICENSING OF RESERVE SPECTRUM

2. (Re: ¶170-173) Regarding the region planning committee (RPC) process, we agree that it has been successful within Region-9 (Florida) for all local agencies. For statewide operations however, we have found no benefit from the region planning committee. In Florida's case, it was apparent in the earliest stages of region planning that all frequency allotments for statewide operations must be assigned prior to any local allotments. Consequently, a block of 30 channels was set aside specifically for a statewide radio system. The statewide channels were carefully selected to require the minimum number of 12.5 kHz guard channels, so that the maximum number of channels would remain available for local use. License applications for stations on these statewide channels are processed through the region committee, but no other actions by the region planning committee have occurred regarding these channels. In fact, since it is our own office (Division of Information Technology) which examines all region applications for technical

compliance for the region committee, some efficiency is lost by requiring the region chairperson to sign our own applications for operations on these channels. Consequently, we see no reason why any statewide allotments from the 8.8 MHz of reserved spectrum should be administered by the region planning committee.

3. (Re: ¶175) The State of Florida began the planning for a consolidated statewide 800 MHz radio system for its five primary law enforcement agencies¹ nearly 15 years ago. Cost effectiveness, spectrum availability and efficiency, and advanced operational features were primary reasons for creation of the new radio system. A Joint Task Force Board of Directors was established to administer the project, and our Division of Information Technology continues to perform the planning and engineering aspects of the implementation and operation. The first phase of the project became operational in 1994, and we are now beginning the third of a five-phased construction schedule. The radio system employs digital, trunked, and simulcast technologies using 20 channels from the 806 MHz band and 30 channels from the 821 MHz band. The system also includes mutual aid channels from the 821 MHz band which are made available for both state and local public safety use.

4. Since the inception of the statewide radio project, use of the system has grown from the initial five agencies to 13 agencies today,² with more possible in the future. The economies of scale and scope are attractive incentives to these agencies that could otherwise not develop such an advanced system on their own. At present there are no municipalities or counties using the radio system beyond use of the mutual aid channels, although numerous interagency agreements have been executed for sharing of real estate and communications towers.

5. We fully expect that the statewide 800 MHz radio system will continue to be constructed as planned, eventually obtaining full statewide coverage for the participating agencies. Concurrently with construction of new portions of the system, we are upgrading the system software and capabilities as the technology becomes available. Due to the dynamics of system loading, we are also modifying the numbers of frequencies at various sites as the demand requires. However due to the limited number of frequencies, we can accommodate only a certain degree of growth without degrading the service. We expect that the current channel allotment (50 channels) will sustain the system for the next five years or so. After that time, additional growth will require channel increases through both narrowband conversions, and the inclusion of frequencies from the 700 MHz band.

¹ The five initial participating Florida state agencies were the Department of Highway Safety and Motor Vehicles (Division of Florida Highway Patrol), Department of Law Enforcement, Florida Game and Freshwater Fish Commission (Division of Law Enforcement), Department of Environmental Protection (Division of Law Enforcement), and the Department of Business and Professional Regulation (Division of Alcoholic Beverages and Tobacco).

² The additional participants include the Department of Transportation (Motor Carrier Compliance Office), Department of Corrections, Department of Insurance (Division of State Fire Marshal and Division of Insurance Fraud), and the Department of Agriculture and Consumer Services (Office of Agricultural Law Enforcement). Arrangements are pending for inclusion of the Division of Capitol Police, University of Central Florida, Florida Atlantic University, and Florida International University.

6. (Re: ¶176) Regarding the State's policy and technical expertise, our Division of Information Technology includes 27 full-time positions directly involved in the statewide 800 MHz project, of which 18 are engineering related and 5 are registered engineers. We also maintain over 250 other positions involved in radio, telephony and data communications engineering and management for both local and state agencies. These include 7 engineering positions dedicated exclusively to the support of local public safety agency radio communications including law enforcement and emergency medical services. We additionally provide all the technical resources, database and software required to maintain the Region-9 public safety plan and reviews of all license applications in that band. In the provision of communications planning and engineering for both state and local government, our Division of Information Technology is at least the equal of any private consulting firm in its qualifications, training and experience. There is no question that Florida has sufficient policy and technical expertise to determine how best to increase the efficiency of public safety operations throughout the state through the deployment of spectrum-based technologies.

7. (Re: ¶177) We believe that in the case of Florida, a statewide license for a portion of the 8.8 MHz of reserved spectrum would be the best mechanism for managing the spectrum for statewide use. We see no advantages to management of such spectrum by the region planning committee. The provision within the *First Report* to allow states to "opt out" of current region affiliation and redefine region boundaries along state lines is not applicable in the case of Florida³, and would be an insufficient alternative to direct state licensing.

8. (Re: ¶178) Regarding a state planning process, we believe that it would be appropriate for Florida, or any other state, to develop a state plan for use and management of the radio frequencies that comprise a statewide allotment from the 8.8 MHz of reserved spectrum. We believe the planning process and plan elements should be similar to those described for regional planning committees in the *First Report*⁴. We suggest that, as with region plans, licensing be contingent on prior FCC approval of the state plan.

9. We must point out that there is yet no clearly established direction in which State of Florida planning will proceed with regard to the channels in the 8.8 MHz of reserved spectrum. There is likewise no clear indication of funding availability or mechanism. However we fully expect that as the need for additional channels increases for both our statewide system and that of the local public safety agencies, these directions will become clear. In the case of our present 800 MHz statewide radio system project, as well as that of many counties and municipalities in Florida, the long-standing shortage of channels has been a far more severe impediment to planning and system implementation than has funding. The first two phases of our statewide project were funded through the Florida legislature using a revenue source specific to the project. We are currently considering a public-private partnership to facilitate construction of the remaining phases. We expect that this mechanism may be attractive to local agencies who find that participation in the statewide radio system is more cost effective than developing their own infrastructure. We firmly believe that Florida and many other states will fully utilize the 8.8 MHz

³ The boundary of public safety region 9 coincides with that of the State of Florida.

⁴ See *First Report*, paragraphs 81-89

of reserve spectrum for both state and local public safety communications, provided that a sufficient amount of spectrum remains available for a continuous and sufficient period of time.

10. (Re: ¶178, 181) Although it is difficult to predict with accuracy the types and quantities of future spectrum requirements for the 700 MHz band, we estimate that Florida state agencies may require up to 400 channels at 6.25 kHz to enable in-building coverage for hand-held radios in a non-simulcast environment, which equates to 2.5 MHz of spectrum. We expect that an additional demand for data communications equal to 50% of the voice demand, or an additional 1.25 MHz, would be required. The overall spectrum total for these uses is 3.75 MHz out of the 8.8 MHz of reserved spectrum. These projected demands include only the state agencies within Florida, so any quantity of municipal, county, Federal, or other users would increase the overall requirement, possibly requiring the entire block of reserved spectrum. While we cannot be more specific as to quantity, we suggest that approximately one-half of the 8.8 MHz can remain in reserve for the time being, until future communications needs indicate appropriate uses.

11. (Re: ¶179) Regarding the sharing of frequencies within a statewide allocation with local agencies, political subdivisions, Federal, and other public safety service providers, we believe that it should be permitted, but will not be commonplace. The evolution of a consolidated statewide radio communications system involves multi-year efforts of planning, legislation, funding development, site acquisition, design, procurement, construction and testing. Completion of these stages throughout a state of Florida's size may easily take 10 to 20 years⁵. During the course of that progress, many factors which interrupt, modify, threaten, and otherwise delay the project must be overcome. Managing such a project for a group of otherwise independent state agencies is itself a forbidding task. Although not inconceivable, the inclusion of agencies beyond those of state government itself within a statewide system is beyond the present scope of communications planning within Florida. The wide diversity of political, administrative, and fiscal mechanisms which would be required to come together to develop a statewide radio system across these political layers is beyond present consideration. We can however foresee the inclusion, on a case by case basis, of small local public safety agencies where warranted by sharing of facilities or other mutual needs which arise during the course of the project.

12. (Re: ¶180) Regarding the mechanics of granting licenses to individual states, we believe that Florida's case should be straightforward. Within Florida, our Department of Management Services, which includes our Division of Information Technology⁶, is an executive agency of the Governor. The powers and duties of the Department of Management Services, as expressed in Florida Statutes, subsection 282.102⁷, specifically includes the mandate *"To apply for, receive, and hold, or assist agencies in applying for, receiving, or holding, such authorizations, licenses, and allocations or channels and frequencies to carry out the purposes of ss. 282.101-282.109"*.

⁵ Florida's current statewide radio system planning began in 1984 and construction is expected to be substantially complete in 2004.

⁶ The Division of Information Technology was created in 1997 from a merging of the former Division of Communications and Division of Administrative Services.

⁷ The entire text of Florida Statutes §§ 282.102 is available on the internet at:

http://www.leg.state.fl.us/citizen/documents/statutes/1998/ch0282/SEC102_.HTM#0282.102

The entire text of Florida Statutes, Chapter 282, Part 1, "Information Resource Management" is available on the internet at: <http://www.leg.state.fl.us/citizen/documents/statutes/1998/ch0282/PART01.HTM#PART01>

Our Division of Information Technology currently serves as licensee for the statewide 800 MHz trunked radio system, including its microwave operations, and manages all of the arrangements for frequency coordination, region plan committee approval, and other licensing matters as they arise.

13. We suggest that each state which seeks a statewide authorization for use of a portion of the 8.8 MHz of reserved spectrum be required to include within its state plan a clear showing of its legal authority to serve as licensee on behalf of its participating agencies. Each state plan should be subject to public comment in the same manner as the regional public safety plans. In Florida's case, we see no reason to involve the state legislature in the coordination of the use of this spectrum, since the legislature will be directly involved by enabling the funding necessary for implementation of the state plan. Other states that have no established statutory provision for statewide radio communications may require a different approach.

14. (Re: ¶182) Regarding administration of the interoperability spectrum (2.6 MHz designated in the *First Report*), we completely agree that the state communications systems are the most appropriate "bridge" between local and Federal government agencies. Within Florida, the national interoperability channels in the 821-824/866-869 MHz public safety bands have been constructed over the past 7 years through a combination of municipal, county, and state implementation. While this approach was equitable and well intentioned, we have found that "seamless" operation and availability of these channels is essentially impossible when spread throughout so many differing systems having widely different coverage, management and maintenance. Following recent disasters in Florida, we have concluded that the most functional approach requires a uniform statewide implementation of the mutual aid channels. We are seeking funding to expand our statewide 800 MHz radio system project to include all of the national mutual aid channels throughout the balance of our statewide implementation, and to retrofit other portions of the state which have already been completed. We have further concluded that local needs may dictate additional channels and capabilities, even in other frequency bands, but that these should be planned as a complement to, rather than a substitute for, a complete and standardized statewide mutual aid system⁸. For these reasons, we recommend that the 2.6 MHz of interoperability spectrum in the 700 MHz band be established primarily for implementation as part of a statewide or region-wide system, and that independent local systems not be allowed to proliferate as was the case in the 821-824/866-869 MHz bands.

15. (Re: ¶183) Regarding amendments to Section 90.179 of the Commission's rules, we agree that appropriate revisions should be made to allow a state licensee to authorize appropriate public safety agencies within the state and its political subdivisions to use the spectrum for their own purposes pursuant to the licensee's authorization.

⁸ These findings are documented in a white paper entitled "*Considerations for Mutual Aid Communications for Public Safety Radio Services within Florida*", prepared by the Wireless Communications Bureau of the Division of Information Technology, dated 12/8/98.

B. INTEROPERABILITY BELOW 512 MHz

16. (Re: ¶185-187) We agree that many local public safety agencies, particularly the many smaller ones located in rural areas, do not consider the frequency bands above 512 MHz to be a viable option for their operations. These agencies typically have only several dozen radios, but may have jurisdictional responsibility for much larger geographic areas than the better-funded municipalities. For these smaller agencies, the propagation characteristics at VHF and UHF are more attractive than 700-800 MHz since their operations are usually more dependant on mobile than portable radio use, and sufficient coverage can often be attained with only one centrally-located base station site. For these agencies, the higher frequency bands offer little or no incentive due to the costs involved. During disasters or other mutual aid operations, these agencies often have no channels available for interoperability due to the continued unavailability of additional VHF and UHF channels in most areas. Techniques such as sharing of channels, or cross-patching, do not solve the underlying problem since these methods concurrently reduce the number of channels available for normal use, and are not common to all the participating agencies.

17. Within Florida, we annually face repeated disaster preparations for hurricanes, wildfires, mass migrations, and other situations requiring mutual aid between public safety agencies at the local, state, and Federal levels. In all cases these operations have of necessity included agencies who normally operate below 512 MHz. The fact that these agencies cannot access mutual aid channels in the 800 MHz band is an issue we are currently addressing, and may resolve through procurement of low-cost radios specifically for 800 MHz mutual aid. But the greater underlying problem is that these agencies often have no mutual aid capability even within their own bands.

18. (Re: ¶188, 190) We therefore fully agree with the Commission's view that the provision of interoperability channels in the 700 and 800 MHz bands does not, standing alone, provide a comprehensive solution to the interoperability problem of the agencies operating below 512 MHz. We therefore fully support the Commission's proposal to designate 5 nationwide interoperability channels in the 150-174 MHz band and another 5 in the 450-512 MHz band. These channels would provide immediate and substantial relief to the many agencies in these bands, without requiring additional hardware in most cases. We concur with the proposal to require every public safety mobile radio in these bands to be capable of both transmitting and receiving on at least one of these channels. We recommend that the Commission establish specific operational guidelines on the use of these channels in a manner similar to the national mutual aid channels in the 821-824/866-869 MHz bands. Inasmuch as these channels will be used primarily by local agencies, we further suggest that the region planning committees be charged with coordinating the establishment of base stations on these channels, or other region-specific requirements within the national guidelines.

19. (Re: ¶192-193) Regarding interoperability channels in the 138-144 MHz band, we agree in general with the previous recommendations of PSWAC and NPSTC that a portion of this band should be withheld from auction and allocated to public safety exclusively for interoperability. We concur that the need for wideband data communications can be accommodated in the 700 MHz band, but the need for simple and inexpensive voice interoperability would be greatly

facilitated with an allocation in the 138-144 MHz band. Particularly in states having large areas providing no availability of the national mutual aid channels in the 821-824/866-869 MHz bands, and no plans for 700 MHz implementation, a VHF interoperability band would enable mutual aid communications without a large investment in mobile equipment or infrastructure. Recent disaster situations have occurred within Florida during which the 800 MHz mutual aid channels have been insufficient to accommodate the large number of disaster response personnel which must converge during and following these events. This was particularly noticeable during the 1998 wildfires in Florida, during which many agencies from other states were involved. The predominate resource of these agencies, including Federal users, were relatively inexpensive VHF radios. The availability of a common nationwide resource of channels in this band would solve the major difficulty for agencies operating in this band. We expect that many agencies that operate below 800 MHz will concur that small, inexpensive radios in the 138-144 MHz band is both a practical solution to these problems, and preferable to procurement of equipment in either the 700 MHz or 800 MHz bands.

C. GLOBAL ORBITING NAVIGATION SATELLITE SYSTEM (GLONASS) AND GLOBAL POSITIONING SYSTEM (GPS)

20. (Re: ¶196-201) We are concerned that the proposed standard for limiting second harmonic emissions may severely impact public safety use of the 700 MHz band, particularly for hand-held portable radios. We can offer no quantitative technical information, but are hesitant to concur with the proposed standard in light of the apparent lack of consensus and actual field testing. In view of the potential impact to the cost, size, weight, and battery life of hand-held portable radios, we are very concerned that the matter be more thoroughly investigated prior to further conclusions by the Commission. We agree with Motorola's suggestion that a technical committee thoroughly review the matter prior to adoption of rules. We believe that Motorola and other manufacturers of public safety equipment are best prepared to arrange test programs to determine the actual, rather than calculated, degree of interference that could be caused by radios transmitting in the 794-806 MHz band. We do not believe that geographic restrictions, e.g., limiting use near airports, to be a satisfactory way of protecting GLONASS receivers. We also do not believe that emission standards similarly proposed for commercial mobile satellite equipment (GMPCS terminals) should have any direct bearing on the establishment of standards for public safety.

D. PREPARATION OF COMPUTERS TO ACCOMMODATE YEAR 2000

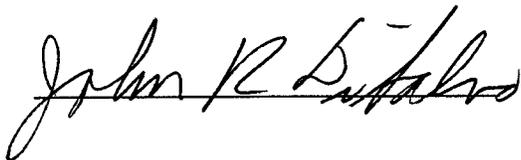
21. (Re: ¶202-207) We are acutely aware of the Year 2000 problems, and of the Commission's concerns regarding the preparedness of public safety agencies. Within the state government of Florida, the effort to address these problems has been ongoing for several years. In mid-1996, Florida's Office of the Auditor General undertook a survey of state agencies to assess the awareness and preparations among those agencies. In early 1997, a Year 2000 Task Force was established in order to arrive at a real estimate of the costs and impacts of this problem on the public sector's ability to provide services and fulfill the State's legal responsibilities. The Task Force has continued to oversee and direct the progress of the state agencies toward a successfully

completed program. A complete accounting of the efforts, progress and present role of Florida's Year 2000 Task Force⁹ can be found on the internet at: <http://y2k.state.fl.us/>

22. Year 2000 compliance at the county and municipal levels is somewhat less organized and complete. Many of the larger agencies that employ full-time MIS staff are better prepared than smaller agencies. We know of no current accounting that identifies the specific problems at the local level, or the actions in progress to rectify them. We are aware that the Florida House of Representatives' Community Affairs Committee, under the leadership of Representative Greg Gay (R-Cape Coral), will begin holding Year 2000 hearings in January 1999. These hearings will seek to assess the compliance status of Florida's local governments, school districts, hospitals, colleges and universities, utilities, and other organizations that directly affect the citizens and visitors of Florida. We doubt that the regional public safety planning committees or frequency coordinators will be able to provide any substantial information on Year 2000 compliance among public safety agencies.

23. For any additional information concerning these comments, contact Bob Ferrell of the Wireless Communications Bureau of the Division of Information Technology at (850) 922-7406, e-mail ferrelb@dms.state.fl.us

Respectfully submitted,



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JRD:RBF:Comments to 3rd NPRM in 96-86.doc

cc: Joint Task Force Board of Directors
Joint Task Force Agency Heads

⁹ Inquiries regarding Florida's Year 2000 effort may be directed to Year 2000 Project Office, Office of Planning and Budgeting, Executive Office of the Governor, 225 Knott Building, 111 St. Augustine Street, Tallahassee, Florida 32399-0001, Phone: 850/921-2235, Facsimilie: 850/921-2483, Email: Florida.Year2000@laspbs.state.fl.us