



# Public Safety Wireless Network

*Saving Lives and Property Through Improved Interoperability*

July 23, 2002

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 Twelfth Street, SW  
12th St. Lobby, TW-A325  
Washington, DC 20554

**Re: Reply Comments to the Commission's Request for Public Comment on Spectrum Policy, In the Matter of Spectrum Policy Task Force Seeks Public Comment on Issues Related to the Commission's Spectrum Policies, ET Docket No. 02-135**

Dear Ms. Dortch:

On behalf of the Public Safety Wireless Network (PSWN) Program and pursuant to Section 1.51 of the Commission's Rules, 47 C.F.R. § 1.51 (2000), enclosed herewith for filing are an original and four (4) copies of the PSWN Program's Reply Comments in the above-referenced proceeding.

Kindly date-stamp and return the additional, marked copy of this cover letter and filing to the person delivering it.

Should you require any additional information, please contact the undersigned.

Respectfully submitted,

Brigadier General Paul H. Wieck II  
Iowa Army National Guard  
Chair, PSWN Executive Committee  
Spectrum Working Group

Steven Proctor  
Executive Director,  
Utah Communications Agency Network  
Executive Vice-Chair,  
PSWN Executive Committee

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

Before the  
Federal Communications Commission  
Washington, DC 20554

In the Matter of )  
Spectrum Policy Task Force Seeks Public ) DA 02-1311  
Comment on Issues Related to Commission's ) ET Docket No. 02-135  
Spectrum Policies )

To: The Commission

**REPLY COMMENTS TO THE COMMISSION'S REQUEST FOR PUBLIC COMMENT  
ON SPECTRUM POLICY**

Filed by: The Public Safety Wireless Network Program

Date: July 23, 2002

Before the  
Federal Communications Commission  
Washington, DC 20554

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To: The Commission

**REPLY COMMENTS TO THE COMMISSION'S REQUEST FOR PUBLIC  
COMMENT ON SPECTRUM POLICY**

1. The Public Safety Wireless Network (PSWN) Program<sup>1</sup> Executive Committee (EC) respectfully submits the following reply comments to the Federal Communications Commission (Commission), to address issues examined in several of the comments directed to this docket regarding the Spectrum Policy Task Force initiative.<sup>2</sup> The PSWN Program supports the Commission's decisive action to meet the new challenges that confront all spectrum users in the 21st century. The PSWN Program will continue to serve the Commission by voicing the needs and concerns faced by local, state, federal, and tribal public safety agencies.

**I. INTRODUCTION**

2. The issues under consideration by the Commission in this rulemaking proceeding include a number of critical topics that have potentially far-reaching repercussions. This docket may

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<sup>1</sup> The PSWN Program is a federally funded initiative operating on behalf of all local, state, federal, and tribal public safety agencies. The Department of Justice and the Department of the Treasury are jointly leading the PSWN Program's efforts to plan and foster interoperability among public safety wireless networks. The PSWN Program is a 10-year initiative that is an effort to ensure that no man, woman, or child loses his or her life because public safety officials cannot talk to one another.

<sup>2</sup> Public Notice, *Spectrum Policy Task Force Seeks Public Comment on Issues Related to Commission's Spectrum Policies*, DA 02-1311, rel. June 6, 2002.

make fundamental changes in the way that spectrum is regulated, the uses and applications permitted, and the advancement of technology to enhance reliability and efficiency, and improve the range and access to services that will be developed in the coming decades. The PSWN Program is pleased to offer the following reply comments for the Commission's consideration with respect to the issues that touch on the needs and concerns of the public safety community, subject to further examination in this rulemaking.

3. The announcement of this rulemaking generated more than 150 comments from different licensees, including government, private, commercial, and other spectrum users that have an interest in these proceedings. In addition, the PSWN Program notes that several parties filed motions to extend the deadline for filing a response in this rulemaking proceeding.<sup>3</sup> This response is indicative of the importance of the issues being examined by the Commission in this docket and the sincere desire by licensees to ensure that all matters are examined thoroughly and with due regard to the long-term effect a determination of policy in these areas may create. While reexamination of spectrum management policy is urgently needed, it is clear that decisions of this magnitude cannot be made in haste.

4. On Wednesday, July 10, 2002, the Commission announced a tentative schedule for conducting further inquiry into spectrum-related issues, including experimental licensing and unlicensed uses, protection from interference, spectral efficiency, and user rights and

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<sup>3</sup> See, e.g.; New York State Office of Technology, Request for Extension of Time, In the Matter of Spectrum Policy Task Force Seeks Public Comment on Issues Related to Commission's Spectrum Policies, ET Docket No. 02-135; June 24, 2002; Software Defined Radio Forum (SDR Forum), Request for Extension of Time, ET Docket No. 02-135, June 24, 2002; United Telecom Council, Request for Extension of Time, ET Docket No. 02-135, June 10, 2002.

responsibilities.<sup>4</sup> The PSWN Program looks forward to participating in those workshops and emphasizes that the Commission must avail itself of all its resources to develop further spectrum policy plans. By leveraging the experience and advice of the Public Safety and Private Radio Division of the Wireless Telecommunications Bureau, the 800 megahertz (MHz) and 700 MHz Committees,<sup>5</sup> and the National Telecommunications and Information Administration (NTIA), the Commission will gain an even greater understanding of the complex issues in this proceeding. A policy which includes contributions from subject matter experts with an appreciation of the many areas affected by the spectrum management process will help to develop a well-rounded and objective view in the policies that are ultimately adopted.

## II. DISCUSSION

### A. **The Commission Should Take Advantage of the Opportunity to Coordinate Spectrum Policy and Develop a Flexible, Comprehensive Spectrum Plan**

5. The Spectrum Policy Task Force presents the Commission with a unique opportunity to integrate policy and craft an orchestrated plan to accomplish the many objectives targeted in this rulemaking. The PSWN Program agrees that the Commission should promote flexible policies that facilitate efficient use of spectrum and encourage the introduction of innovative technologies that could enhance public safety users' optimization of spectrum. By providing effective new tools for the preservation of life and property, the Commission can greatly empower public safety agencies, as well as the manufacturers who build and market these applications, and can adapt the principles applied to suit other customers and markets.

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<sup>4</sup> Public Notice, *Spectrum Policy Task Force Announces Public Workshops on Issues Related to Commission's Spectrum Policies*, DA 02-1643, rel. July 10, 2002.

<sup>5</sup> See Comments of Bergen County, New Jersey, ET Docket No. 02-135, July 8, 2002 (*Bergen County Comments*), at pp. 9–10, calling for expansion of the resources and authority of the Public Safety and Private Radio Division and noting the reliance the Commission has traditionally placed on the advice of the Committees.

6. The Commission should also approve new techniques, applications, and partnerships to provide services that enhance sharing of spectrum and technology resources, and offer incentives that will encourage cooperation and planning between licensees to better serve the public. For example, the Association of Public Television Stations' comments to this docket affirmed its willingness to support public safety agencies by using broadcast facilities to provide live visual communications in support of first responders.<sup>6</sup> The Satellite Industry Association (SIA) recognized that "FSS and MSS Systems proved critical for the relief efforts following the terrorist attacks on September 11, 2001....[S]atellite systems offer a high degree of reliability, which is needed for public safety communications....Therefore, satellite systems make communication available in emergency situations where terrestrial service is not available."<sup>7</sup> This is a technology the Commission should integrate into a comprehensive public safety spectrum plan.

7. Another comment stated that the Commission should promote spectrum management policies that lead to the licensing of smaller geographic areas and the development of secondary markets. The National Telecommunications Cooperative Association recommended that national carriers could lease "fallow" spectrum to small market providers in rural communities<sup>8</sup> to assist in the provision of wireless communications to underserved areas, provide greater coverage, and maximize the efficient use of spectrum. To further promote efficiency, the PSWN Program has also recommended that the Commission inquire further and investigate technologies

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<sup>6</sup> Comments of the Association of Public Television Stations (*Public Television Comments*), ET Docket No. 02-135, July 8, 2002, at pp. 2-3.

<sup>7</sup> Comments of the Satellite Industry Association, ET Docket No. 02-135 (*SIA Comments*), at p. 18.

<sup>8</sup> Comments of the National Telecommunications Cooperative Association, ET Docket No. 02-135, July 8, 2002, at pp. 3-5.

such as software defined radio (SDR) that may provide solutions for using scarce spectrum to support the interoperability needs of diverse public safety agencies in the future.<sup>9</sup>

**B. The Commission's Policies Must Consider Factors in Addition to Market Orientation in the Allocation and Management of Spectrum Resources**

8. The Commission's proposal to adopt market-oriented allocation policies has caused a number of commenters to question the propriety of using economic valuation as an indicator to guide decisions regarding use of spectral resources. Countervailing considerations must be assessed to promote the public interest. One comment notes the statutory mandate for the Commission "to make available, so far as possible, to all the people of the United States, a rapid, efficient, Nation-wide and world-wide wire and radio communication service with adequate facilities at reasonable charges...' for a wide variety of purposes, including national defense and public safety."<sup>10</sup> Aeronautical Radio, Inc. (ARINC) observed that "highest and best use' of spectrum is hard to define....Flexibility should not be so broad as to permit the licensees to divert safety spectrum to non-safety uses or to divert broadcast spectrum to mobile communications."<sup>11</sup> Another commenter stated "while market forces may efficiently allocate certain private goods to their best and highest uses, it is well recognized that where there is a market failure for the distribution of certain goods, or where it is necessary to implement specific congressional policy choices that are not market driven and may be unrelated to the advancement of competition, government intervention may be necessary."<sup>12</sup>

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<sup>9</sup> PSWN Program Reply Comments in Response to Comments Filed by Other Parties, In the Matter of Inquiry Regarding Software Defined Radios, ET Docket No. 02-47, at para. 4.

<sup>10</sup> SIA Comments at p. 3, citing 47 USC §151.

<sup>11</sup> ARINC Comments, In re: Spectrum Policy Task Force Inquiry, ET Docket No. 02-135, July 8, 2002 (*ARINC Comments*), at p. 2.

<sup>12</sup> Public Television Comments, at p. 2.

9. The PSWN Program asserts that the prior statement applies to “intangible” services not regulated by market forces, such as the need for enhanced public safety communications. The comments of the Association of Public-Safety Communications Officials-International, Inc. (APCO) also emphasize this opinion. “Public safety communications is entirely unrelated to marketplace forces and is a classic ‘uneconomic’ provision of service. A commercial service provider can place a price on the value of spectrum, relative to the revenue or other economic benefit to be received from the use of that spectrum. In contrast, a public safety entity cannot place a price on the potential life saving benefits of communicating effectively with police, fire, EMS and other public safety personnel in the field.”<sup>13</sup>

10. The PSWN Program is in agreement with those parties who have contributed comments to this docket indicating that the Commission must clarify that “market-oriented policies are but one and not the sole element in carrying out its statutory responsibilities.”<sup>14</sup> Instead, the objective of this docket should be to reinforce the principle that “[w]e should not tie our future needs to an economic approach based on the assumptions and limits of early 20th century radio technology, and we should be careful about predicting future applications of radio communications as mere extensions of currently mature applications of that technology (such as broadcast radio and TV, radio dispatching services, walkie-talkies, and radio-telephony).”<sup>15</sup> Because this rulemaking will have lasting effects on spectrum use in the 21st century, the PSWN Program asks the Commission to take these factors into account when examining its policies.

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<sup>13</sup> Comments of APCO, ET Docket No. 02-135, July 8, 2002 (*APCO Comments*), at p. 3. *See also* Comments of the United Telecom Council, ET Docket No. 02-135, at p. 3: “However, if the definition of ‘highest value’ use of the spectrum is not limited to commercial services, then these policies do not, and cannot, take into consideration non-economic factors such as public safety, Homeland security and maintenance of critical infrastructure and essential public services.” *Id.*

<sup>14</sup> *See* Bergen County Comments, at p. 1.

11. The PSWN Program also agrees with the statements made by parties that have urged the Commission to “maximize the value of the public’s spectrum and to use the proceeds from auctions or other revenue sources to fund public safety communications requirements.”<sup>16</sup> Several dockets currently pending action by the Commission address issues that concern improving the quality and capacity of public safety communications.<sup>17</sup> The PSWN Program is hopeful that the Commission will take this opportunity to coordinate those measures addressed by each of the separate rulemakings and to meet the exigent needs of public safety agencies nationwide. Such a policy would augment the abilities of the public safety community to upgrade systems and smoothly transition to new technology and could also assist in the development of an overarching plan to consolidate the communications operations of the federal agencies that are reassigned to the Department of Homeland Security.

**C. Interference Protection Must Remain a Priority to Preserve Reliable Communication Services**

12. The PSWN Program agrees with the priority explicitly endorsed by the Commission to ensure that public safety wireless communications must take place without degradation from interference.<sup>18</sup> Others have further acknowledged that “[r]adio spectrum used by Public Safety/Homeland security services should be protected from interference caused by any shared

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<sup>15</sup> David P. Reed, Ph.D., Comments for FCC Spectrum Policy Task Force on Spectrum Policy, ET Docket No. 02-135, July 8, 2002 (*Reed Comments*), at p. 4.

<sup>16</sup> Comments of the Office of the Chief Technology Officer, Government of the District of Columbia, *In the Matter of Issues Related to the Commission’s Spectrum Policies*, ET Docket No. 02-135, July 8, 2002, at p. 2; *see also* Bergen County Comments, at p. 7.

<sup>17</sup> *See, e.g.*; In the Matter of Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Agency Communications Requirements Through the Year 2010, WT Docket No. 96-86; In the Matter of Service Rules for the 746–764 and 776–794 MHz Bands and Revisions to Part 27 of the Commission’s Rules, WT Docket No. 99-168; In the Matter of Revision of Part 15 of the Commission’s Rules Regarding Ultra-Wideband Transmission Systems, ET Docket No. 98-153; In the Matter of the 4.9 GHz Band Transferred from Federal Government Use, WT Docket No. 00-32; In the Matter of Improving Public Safety Communications in the 800 MHz Band [and] Consolidating the 900 MHz Industrial/Land Transportation and Business Pool Channels, WT Docket No. 02-55. In addition, several other dockets also consider issues that have a direct impact on the provision of public safety communications services.

<sup>18</sup> *See* Notice of Proposed Rulemaking (*NPRM*), WT Docket No. 02-55, rel. March 15, 2002, at para. 16.

band uses” and further recommended that “[t]he Commission should assign such radio systems to a new higher Super-preferred status in all co-Primary service spectrum.”<sup>19</sup> The PSWN Program concurs that further protection from interference is necessary, and notes the Commission’s recent decision to require “mandatory coordination zones” for public safety base stations in the upper 700 MHz band<sup>20</sup> as a positive step in that direction. The Commission’s current definitions of “interference” and “harmful interference” should be adequate to protect public safety communications from other licensees. Improved enforcement of these restrictions, and penalties carrying appropriate consequences for offending licensees, will help to deter future violations.

**D. Spectral Efficiency Can Be Achieved Through Frequency Management, Adoption of a Narrowband Standard for Voice and Data, and Receiver and Emissions Standards**

13. The PSWN Program acknowledges the continued success of frequency coordinators in enabling efficient use of the spectrum allocated for public safety communications.<sup>21</sup> The PSWN Program also commends the Commission for its recent adoption of the 6.25 kilohertz standard for voice and data transmission in the 700 MHz public safety band.<sup>22</sup> While the effects of this decision may not be apparent for several years, the migration to a more spectrally efficient technology will serve all licensees and enable users to optimize use of this limited resource. The PSWN Program continues to urge the Commission to adopt standards for receivers and to

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<sup>19</sup> Comments of Airwaves Rules & Regulations Co., ET Docket No. 02-135, July 8, 2002 (*Airwaves Comments*), at p. 3.

<sup>20</sup> See Third Memorandum Opinion and Order, WT Docket No. 99-168, July 12, 2002, at para. 17.

<sup>21</sup> APCO Comments, at p. 3.

<sup>22</sup> FCC News Release, *FCC Implements Migration Path to Promote the Efficient Use of Spectrum in the 700 MHz Public Safety Band*, WT Docket No. 96-86, July 16, 2002.

regulate emissions, as recommended in previous rulemakings.<sup>23</sup> The PSWN Program advises that a transition must be made gradually so that legacy systems are able to interact and concurs with comments that “fostering cooperation gain and rewarding systems that use the minimum necessary power to achieve the desired end-to-end bit rate is the approach that benefits all.”<sup>24</sup>

**E. The Commission Must Ensure Public Safety Agencies Have Adequate Resources to Satisfy Current and Foreseeable Communications Needs**

14. Since the Public Safety Wireless Advisory Committee (PSWAC) first published the report documenting its findings and recommendations in September 1996 (PSWAC Report), public safety agencies have called for the Commission to adopt the measures called for in that report to provide additional resources to meet their growing communications needs.<sup>25</sup> The provision of reliable, ubiquitous coverage for local, state, and federal public safety communications nationwide must be the Commission’s primary concern in evaluating the competing alternatives examined in this rulemaking.<sup>26</sup> The PSWN Program also agrees with the Commission’s efforts to incorporate additional resources as redundant and alternative systems, such as priority access, to ensure these needs are met, but agrees with comments reminding the Commission that commercial services are not a substitute for dedicated public safety spectrum.<sup>27</sup> Critical issues such as how calls can be interrupted without notice, and commercial services instantly transitioned to public safety or Homeland Security use, still remain to be resolved.

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<sup>23</sup> See, e.g.; PSWN Program Comments to NPRM, WT Docket No. 02-55, May 3, 2002, at paras. 16–17; In the Matter of Petition for Rulemaking by the Public Safety Wireless Network, *To Promote the Allocation of Spectrum for Public Safety Agencies and Other Matters to Address Communications Needs Through 2010*, September 14, 2001, at paras. 38–39, and noting the concurrence of the Federal Law Enforcement Wireless Users Group in recommending the adoption of receiver standards.

<sup>24</sup> Reed Comments at p. 12.

<sup>25</sup> Bergen County Comments at p. 5. See also Airwaves Comments at p. 6, advocating that the Commission should work with NTIA to determine the spectrum needs for Federal Government Homeland Security capabilities.

<sup>26</sup> APCO Comments at p. 4.

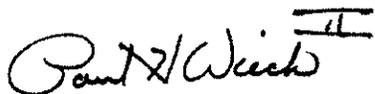
<sup>27</sup> *Id.*, at p. 6.

### III. CONCLUSION

15. The PSWN Program thanks the Commission for the opportunity to contribute to this rulemaking proceeding and is optimistic that the policies that are approved for the management of spectrum will benefit the user community and improve cooperation between commercial, private, and government spectrum users. The PSWN Program is confident that the objectives of preventing interference, improving efficiency, fostering growth and innovation, and ensuring reliability and quality of communications resources can be balanced to all users' satisfaction.

16. The PSWN Program commends the efforts of all parties that have participated in this docket and respectfully requests that the Commission consider the recommendations and concerns expressed herein. The PSWN Program welcomes the opportunity to continue participating in this inquiry and asks the Commission to proceed carefully and deliberately in this proceeding. The Commission must take sufficient time to study the impact of the proposed measures and avoid costly trial and error. There is very little margin for risk when interference, interruption of service, or compromise of quality can mean disaster in circumstances where safety-of-life is involved. The Commission has taken on a worthy but formidable task, and the public safety community will continue to render its support to meet this challenge.

Respectfully submitted,



Brigadier General Paul H. Wieck II  
Iowa Army National Guard  
Chair, PSWN Executive Committee  
Spectrum Working Group



Steven Proctor  
Executive Director,  
Utah Communications Agency Network  
Executive Vice-Chair,  
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Before the  
Federal Communications Commission  
Washington, DC 20554

**Certificate of Service**

In the Matter of )  
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Spectrum Policy Task Force Seeks Public ) DA 02-1311  
Comment on Issues Related to Commission's ) ET Docket No. 02-135  
Spectrum Policies )

I, Richard N. Allen, Senior Associate, Booz Allen Hamilton, 8283 Greensboro Drive, McLean, Virginia, 22102-3838, hereby certify that on this date I caused to be served, by first-class mail, postage prepaid (or by hand where noted) copies of the Public Safety Wireless Network Program's Reply Comments in response to the Second Report and Order and Further Notice of Proposed Rulemaking, *Spectrum Policy Task Force Seeks Public Comment on Issues Related to the Commission's Spectrum Policies*, the original of which is filed herewith and upon the parties identified on the attached service list.

DATED at Fair Oaks, Virginia this 23rd day of July 2002.



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Richard N. Allen

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