

Before the  
Federal Communications Commission  
Washington, DC 20554

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 )  
 )

To: The Commission

**PETITION FOR RECONSIDERATION**

Filed by: John S. Powell

Date: March 19, 2001

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**PETITION FOR RECONSIDERATION**

**John S. Powell**

1. Pursuant to section 405 of the Telecommunications Act of 1934, as amended,<sup>1</sup> and section 1.429 of the Commission's rules,<sup>2</sup> I, John S. Powell, respectfully request that the Commission reconsider certain aspects of the Fourth Report and Order as further explained herein. The Fourth Report and Order was published in the Federal Register on February 16, 2001, 66 FR 33.

**I. BACKGROUND**

2. I am a 25-year veteran sergeant with the University of California Police Department at Berkeley. I received a BS degree in Electrical Engineering from UC Berkeley in 1973 and joined UCPD as a sworn officer that same year. The University of California has been one of California's largest users of law enforcement communications interoperability since the founding of the California Law Enforcement Mutual Aid Radio System (CLEMARS) in the late 1960s.

3. In 1984, I designed and implemented UC's first E-911/CAD Dispatch Center. I recently played a leadership role in the licensing, design and construction of a statewide 800 MHz trunked radio system serving all units of the University's ten campuses and four medical centers.

4. I have been active in communications issues my entire career, testifying before the California legislature, Congress and the FCC on numerous public safety communications matters.

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<sup>1</sup> 47 U.S.C. § 405.

I served two terms as president of the Northern California chapter of the Association of Public Safety Communications Officials - International (APCO) and served as APCO's International President in 1992-93. As APCO President, I worked closely with Congress and the FCC to address important issues of Spectrum Refarming and spectrum allocations, including the Congressional mandate for a public safety spectrum needs study in the 1993 federal budget act. Direct results of that mandate were the Public Safety Wireless Advisory Committee (PSWAC) and the current allocation of 24 MHz of spectrum in the 700 MHz band for public safety use in this Docket. I played an active role on the PSWAC representing the law enforcement user community.

5. I currently serve as a member of the CLEMARS Executive Committee. I am Vice-Chair of the Communications Subcommittee of the Law Enforcement and Corrections Technology Advisory Council at the National Institute of Justice (NIJ) within the U.S. Department of Justice and serve as secretary to the Communications and Technology Committee of the International Association of Chiefs of Police (IACP). I serve as IACP's technical representative to the National Public Safety Telecommunications Council (NPSTC).<sup>3</sup> I am a life member of APCO, a member of the Institute of Electrical and Electronic Engineers and a fellow of the Radio Club of America.

6. I have actively participated in the Public Safety National Coordination Committee (NCC),<sup>4</sup> which was convened pursuant to the Federal Advisory Committee Act (FACA)<sup>5</sup> to develop rules for the management of the 700 megahertz (MHz) band interoperability spectrum. I currently chair the NCC's Interoperability Subcommittee. In the Fourth Notice of Proposed Rulemaking the Commission sought comments regarding the NCC's recommendations involving the 700 MHz band. On January 17, 2001, the Commission issued the Fourth Report and Order in this proceeding. While I agree that the Commission has appropriately resolved a number of critical issues, primarily regarding interoperability, in the Fourth Report and Order, I disagree with the Commission's determination in the Fourth Report and Order on five critical issues. Thus, I am

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<sup>2</sup> 47 C.F.R § 1.429.

<sup>3</sup> NPSTC is an umbrella group of over a dozen government and national/international professional organizations representing all aspects of public safety telecommunications at the local, state and federal levels. See their website at <http://www.npstc.org> for additional information.

<sup>4</sup> See Public Safety National Coordination Committee's Recommendations to the Federal Communication Commission for Technical and Operational Standards for Use of the 764-776 MHz and 794-806 MHz Public Safety Band Pending Development of Final Rules (February 25, 2000).

<sup>5</sup> 5 U.S.C. App 2 (1988).

respectfully requesting that the Commission reconsider its determination in the Fourth Report and Order with regard to the Pre-coordination Database, Access Priority, Trunking Channels, Guard Channels, and Channel Designations.

7. I provided input for development of a similar Petition filed on March 19, 2001 by the Public Safety Wireless Network (PSWN) covering these same issues. In filing this Petition, I am bringing to the Commission's attention additional information that is not included in the PSWN Petition.

## **II. DISCUSSION**

### **Pre-coordination Database**

8. In the 4<sup>th</sup> Report and Order, the Commission's found that the "pre-coordination database has great merit."<sup>6</sup> However, the Commission's decided not to mandate the use of such a pre-coordination database. The Commission further states that it is not persuaded that the correct course of action at this time is to mandate a pre-coordination database that has not been fully developed and tested. On the other hand, the Commission is concerned that its decision not to mandate such a database "could inadvertently delay the actual utilization of the Interoperability spectrum."<sup>7</sup>

9. The National Institute of Justice (NIJ) within the US Department of Justice has agreed to fund the pre-coordination database. The four FCC-certified Public Safety Frequency Coordinators have agreed to enter and maintain the applicable information in the database as part of the pre-established licensing process. In fact, these Coordinators have further agreed to a methodology to assume funding and maintenance responsibility for the database should the NIJ be unable to continue its support at some later time.

10. I am a participant on the NPSTC Committee that is overseeing the development of the pre-coordination database on behalf of the National Institute of Justice. I have seen the rapid development of this package based upon a detailed design document developed by the public safety user community in conjunction with the four certified Frequency Coordinators. I believe,

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<sup>6</sup> See Fourth Report and Order ¶ 18.

<sup>7</sup> *Id.* at ¶18.

based upon my years of experience with APCO as an alternate local frequency advisor and a member of APCO's Automated Frequency Coordination Advisory Committee, that the pre-coordination database will be fully operational by mid-2001 and will meet all of its design criteria. The obligation to create, initially populate and/or administer this pre-coordination database will not fall to the Commission, the states nor the Regional Planning Committees (RPCs). However, the RPCs will be major users of this database in performing their pre-coordination responsibilities and in regularly updating their portions of the database to reflect current planning activities within their region.

11. As pointed out in the PSWN Petition, there is concern that a non-mandatory pre-coordination database will not contain complete and accurate information, which will in turn substantially, if not entirely, impair the usefulness of the pre-coordination database to public safety entities, whether or not they choose to participate.

12. Importantly, the greatest benefit (and an area left unclear in the NCC's presentation on this subject) is with coordination of the General Use channels. The Commission correctly stated, "we believe the pre-coordination database may have the greatest benefit in planning the General Use channels, given that we expect to have more applications filed for the General Use channels, and to have more licensees in the General Use channels."<sup>8</sup> Simply stated, this database is critical to implementation of the General Use channels that represent the majority of the spectrum and, by comparison, nearly all of the anticipated license volume. The NCC acknowledged during its January 2001 meeting that the information it provided the Commission stressed the need for the database to support the interoperability channels when, in fact, its far greater importance is for the General Use channels.

13. The Commission should amend Part 90 of its rules to reflect that the RPCs or states are given the responsibility to accurately reflect current planning efforts within their regions/states by entering requisite information into the pre-coordination database. The rules should further give Public Safety Frequency Coordinators the responsibility to collect and enter the requisite information into the pre-coordination database from RPCs, the several states and license applicants.

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<sup>8</sup> *Id.* at ¶19.

## **Trunking Channels**

14. In its Fourth Report and Order, the Commission designated eight 12.5 kHz interoperability channels where secondary trunking is permissible.<sup>9</sup> In selecting these channels, the Commission placed them all within one television channel pair instead of distributing them evenly within the two channel pairs as had been its prior practice and the recommendation of the NCC. I believe this was an oversight by the Commission and ask that the even distribution proposed by the NCC for all interoperability channels be restored.

## **Guard Channels**

15. In its Fourth Report and Order, the Commission stated it “did not discern among the commenters an overriding urgency to adopt a band plan that had guard channels; there was little discussion of adjacent channel interference.”<sup>10</sup> Rather the Commission adopted a band plan configured so that four 6.25 kHz channels could be aggregated into 25 kHz. Importantly, these two proposals do not necessarily differ. The NCC’s guard channel proposal addresses where the 12.5 kHz assignment is placed within a 25 kHz channel (at the edge or centered) and does not impact the potential to aggregate four 6.25 kHz channels into a single 25 kHz assignment.

16. Since the Commission released this Report and Order, the Telecommunications Industry Association (TIA) has reviewed the adjacent channel interference issue at the request of the NCC’s Interoperability Subcommittee. This review shows the potential for significant interference to interoperability users from other users on adjacent General Use channels in the same geographic area if the interoperability channels are not protected by a 6.25 kHz guard channel on either side (i.e., if not centered within the 25 kHz assignment). Exhibits 1 and 2 (attached to this Petition) are a summary of the information provided by the TIA and the pending NCC position resulting from this study. This information is being assembled for presentation at the March 2001 meeting of the NCC. It is important that the Commission defer its final decision on this issue pending a discussion of the TIA information and further recommendations from the NCC based upon the TIA study.

## **Channel Designations**

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<sup>9</sup> Fourth Report and Order at ¶44.

<sup>10</sup> Fourth Report and Order at ¶53.

17. In the Fourth Report and Order, the Commission determined the “Channel Designations” that the NCC recommended “would seem to defeat the main purpose of Interoperability, i.e., interagency cooperation.”<sup>11</sup> In its analysis, the Commission stated that a “hard and fast” table of assignments would limit system flexibility. In presenting its proposal for these mandatory designations, the NCC made it appear that these designations were to be hard and fast. However, as chair of the Interoperability Subcommittee throughout this discussion within the NCC, I can assure the Commission that a hard and fast table was not the intent of the NCC, rather the intent was to provide a “first place to go” for fast breaking operations of the primary emergency responders (emergency medical, fire and law enforcement) during the first critical minutes of a developing incident. The Commission must understand that such incidents are a routine, daily occurrence in many parts of the country, and a significant part of the “day-to-day” interoperability requirement that will constitute over 90% of the ongoing use of these interoperability channels, as detailed in the PSWAC *Final Report* discussion on the various types of interoperability. This “first place to go” concept does not dilute the importance of the Calling Channels that are needed for coordination of the larger, more slowly unfolding events that require significant channel management.

18. As detailed in the PSWN Petition, the process required to assign an interoperability channel to an event can be time consuming, requiring coordination between a field unit and several dispatchers. The required time and personnel needed to simply make a request for assignment of an interoperability channel is not available; safety concerns demand that this critical first few minutes be devoted to managing the incident, not the radio system. If a law enforcement field officer is in a pursuit or, even worse, an exchange of gunfire with an armed suspect, the single dispatcher in the officer’s small agency (as is the case with over 85% of this nation’s law enforcement agencies) must devote her/his time to managing the incident, requesting assistance from other nearby agencies and coordinating the response of all nearby officers and agencies. By the time the critical need for an interoperability channel is filled, the major part of the emergent situation has passed. In this same scenario using the methodology envisioned by the NCC, the originating agency dispatcher or, in the ideal case, the initiating field officer, would make a single radio call for help on the designated law enforcement interoperability channel that is being

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<sup>11</sup> Fourth Report and Order at ¶56.

monitored around the clock by all agencies in the area. In fact, as implemented in some areas of the country these service-specific channels would also be monitored in all of the like-service field units by either scanning them on the user radio or by a separate “interoperability receiver.” The response is immediate, with all enroute officers knowing that the incident is operating on one of the two law enforcement channels. Of critical importance to this concept, the initiating officer need not be a local officer or even an officer from that state; a call for assistance could go out immediately on the law enforcement channel with some hope of getting an immediate response from a law enforcement agency because the channels are standardized across the nation. Again, this concept does not dilute the importance of the Calling Channels that are needed for coordination of larger or more slowly unfolding events that require greater channel management.

19. For a number of years, the Fire and Emergency Medical Services have embraced the concept of “automatic aid” where the closest available appropriate apparatus, regardless of jurisdiction, responds to a developing incident. This concept is important both in dense metropolitan areas with varying political boundaries as well as in rural areas where minimal amounts of equipment may be stationed across great distances. It is a concept that has resulted in significant savings to lives and property due to immediate availability within the first few minutes of a developing incident. At least in the Western States, much of the coordination for these automatic aid events is initiated immediately on the VHF Fire channel 154.280 MHz.

20. In recent years, the law enforcement community has also begun to adopt this same philosophy, although it has embraced the concept for many years in rural areas where there is a reliance for officers from adjacent jurisdictions to provide backup in remote locations. In California, channels 154.920 and 460.025 MHz in the CLEMARS plan, along with 155.475 MHz (NLEMARS), have long been used for immediate law enforcement assistance in a similar manner to the fire “automatic aid” system.

21. The service-specific channel designations proposed by the NCC clearly support these concepts and significantly ease what could be an otherwise significant coordination load on both the Calling Channels and the designated coordination agency in major metropolitan areas. As stated previously, the NCC did not propose to make this a hard table of service-specific assignments, although this position is not clear in their documents. If law enforcement channels

are needed for a large operation such as a wildland fire, they must be available for such use based upon the priority system for channel assignments after other interoperability channel are committed. While the reality of a large incident is that all services will generally be involved to some degree and thus need interoperability channels, the access priority protocols must be followed if use is to be efficient and effective. I therefore urge the Commission to reconsider its decision with regard to channel designations.

### **Access Priority**

22. In the Fourth Report and Order, the Commission determined the priority access scheme that the NCC recommended differed from the Priority Access Service (PAS) levels that the Commission recently adopted in its rules, which allowed commercial radio services (CMRS) providers to use PAS for national security and emergency preparedness (NSEP) personnel.<sup>12</sup> The Commission declined to amend its rules to reflect an access priority scheme for the Interoperability channels. Rather, the Commission encouraged the states to adopt priority access schemes that would consider federal communications access levels in the event of a disaster or emergency situation.

23. There appears to be some confusion in the Commission's interpretation of Comments on this issue. For example, the Commission states that College Station, Texas, supports the ability of localities to devise appropriate access levels.<sup>13</sup> However, the College Station comments read:

“We endorse the National Coordinating Committee’s (NCC) recommended priority scheme, and believe that it is more appropriate for public safety interoperability than are the Priority Access Service levels adopted for the commercial mobile radio service. These levels have proven to be clear and workable for a long time in areas that have had considerable interoperability experience. In addition, we believe the Commission should codify this priority scheme to provide certainty and nationwide consistency.”<sup>14</sup>

24. I ask the Commission to reconsider the NCC’s recommended access levels. In so doing, the Commission should look to the overall NCC objective of a nationwide access system.<sup>15</sup>

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<sup>12</sup> Fourth Report and Order at ¶64.

<sup>13</sup> Fourth Report and Order, Footnote #151.

<sup>14</sup> Comments of City of College Station Texas, September 22, 2000, page 2.

<sup>15</sup> NCC 4<sup>th</sup> NPRM Comments at pp. 7-8.

Opposition to the NCC position by other entities such as the Public Safety Representatives<sup>16</sup> and the State of Florida<sup>17</sup> which believe that priority access should be designed and administered primarily at the state level do not consider the multi-state nature of many operations, much less the complex administration scheme that would create unnecessary confusion and fragmentation. In order to achieve nationwide interoperability at all levels of government, the Commission must establish priority access rules to allow agencies from outside a particular state to quickly engage during an emergency response situation. As stated by PSWN, “In emergency response situations, it is crucial that delays do not occur because access rules vary from state to state.”<sup>18</sup>

25. Task Force operations involving multiple agencies from multiple layers of government often move fluidly across state and Regional Planning boundaries, particularly in the congested Northeast where states are geographically small. The lack of common priorities, as well as service-specific assignments (as described earlier in this filing) will hamper effective communications and potentially put the lives of both innocent citizens and public safety officers at risk.

26. Likewise, transmitters located at high relative elevations such as the World Trade Center in New York City and the mountains of the western states often cover multiple states and Planning Regions; these transmitters see significant day-to-day use. These sites are essential for effective coverage within their service areas and are often selected because they do cover these larger areas for improved interoperability. To require the users of these stations to have to operate under multiple priority access definitions is simply an unworkable solution. At the same time, radio waves know no artificial boundaries; thus these varying and potentially conflicting priorities are going to flood across all regions/states within the coverage area regardless of whose definitions are being used. The Commission knows from experience in the NPSPAC Regional Planning processes that there is no way to ensure common and workable practices between adjacent Regions and states, even when there is every reason for them to cooperate. Thus, the only effective implementation must follow common nationwide definitions.

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<sup>16</sup> Public Safety Representatives 4<sup>th</sup> NPRM Comments at p. 10.

<sup>17</sup> State of Florida 4<sup>th</sup> NPRM Comments at p. 5.

<sup>18</sup> PSWN Program 4<sup>th</sup> NPRM Reply Comments, October 10, 2000, at Para. 6.

27. While I understand the Commission's hesitation in not wanting to amend its rules regarding priority access, there are simply some nationwide requirements that must be codified; channel designations (discussed above) and access priorities are two such requirements. I disagree with the Commission's belief that states are in a far superior position to devise, coordinate, and operate an appropriate access formula in the event of an emergency situation. As time passes, more and more interoperability situations involving multiple states and regions occur; emergency planners tell us that this is the wave of the future as these events become more frequent and more complex. Thus, the goal of nationwide interoperability at all levels of governments will be best served with the implementation of the NCC plan through the Commission's rules.

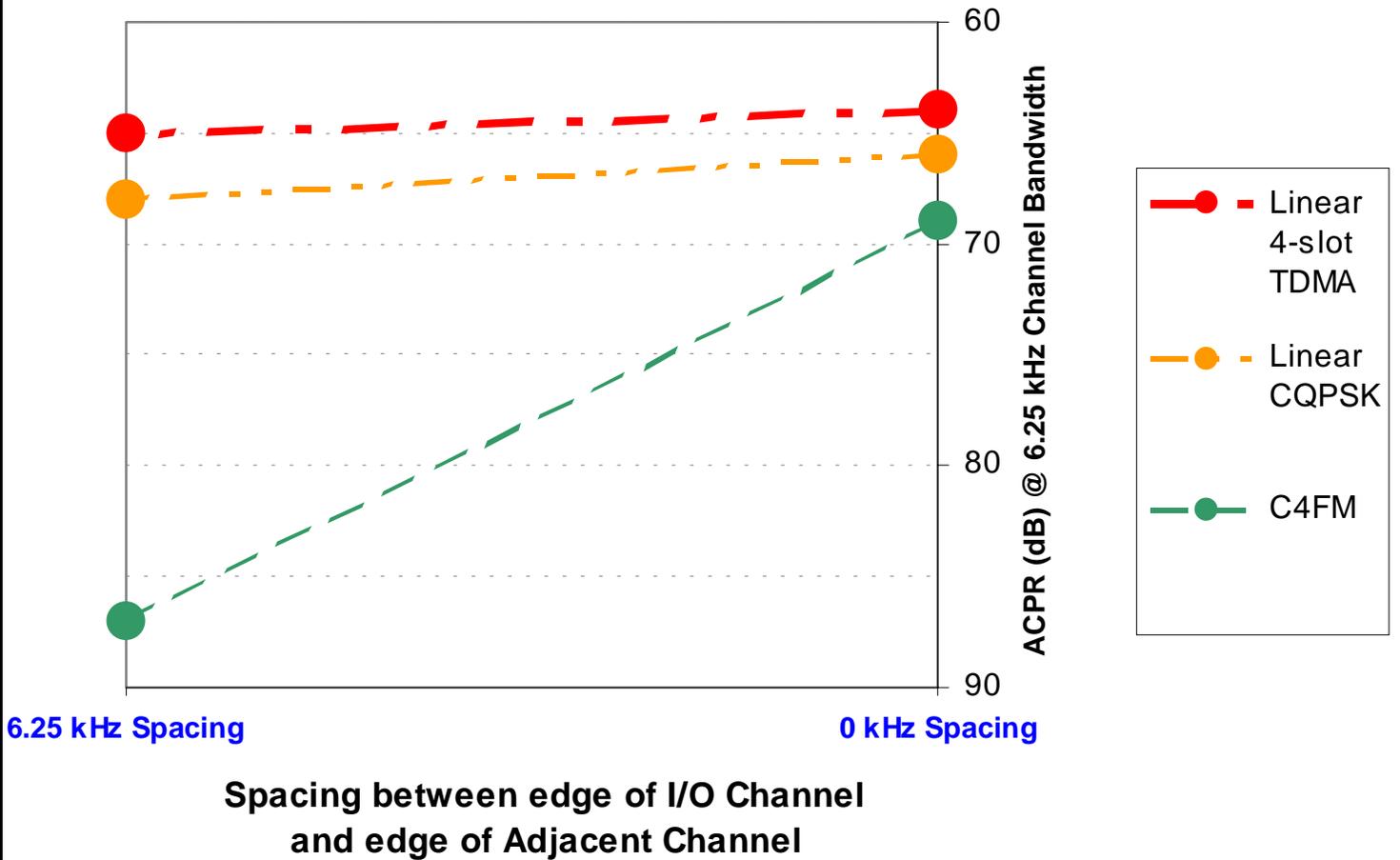
### **III. CONCLUSION**

28. For the reasons stated above, I hereby seek reconsideration of the Commission's determination in the Fourth Report and Order regarding the need for a pre-coordination database, trunking channel designation, guard channels, channel designations and access priority rules for public safety users. Further, I ask that the Commission consider the recommendations set forth above regarding these five vital issues. Thus, for the foregoing reasons, I respectfully requests that the Commission reconsider, and accordingly modify, its decision in the Fourth Report and Order to make it consistent with the views expressed herein.

Respectfully submitted,

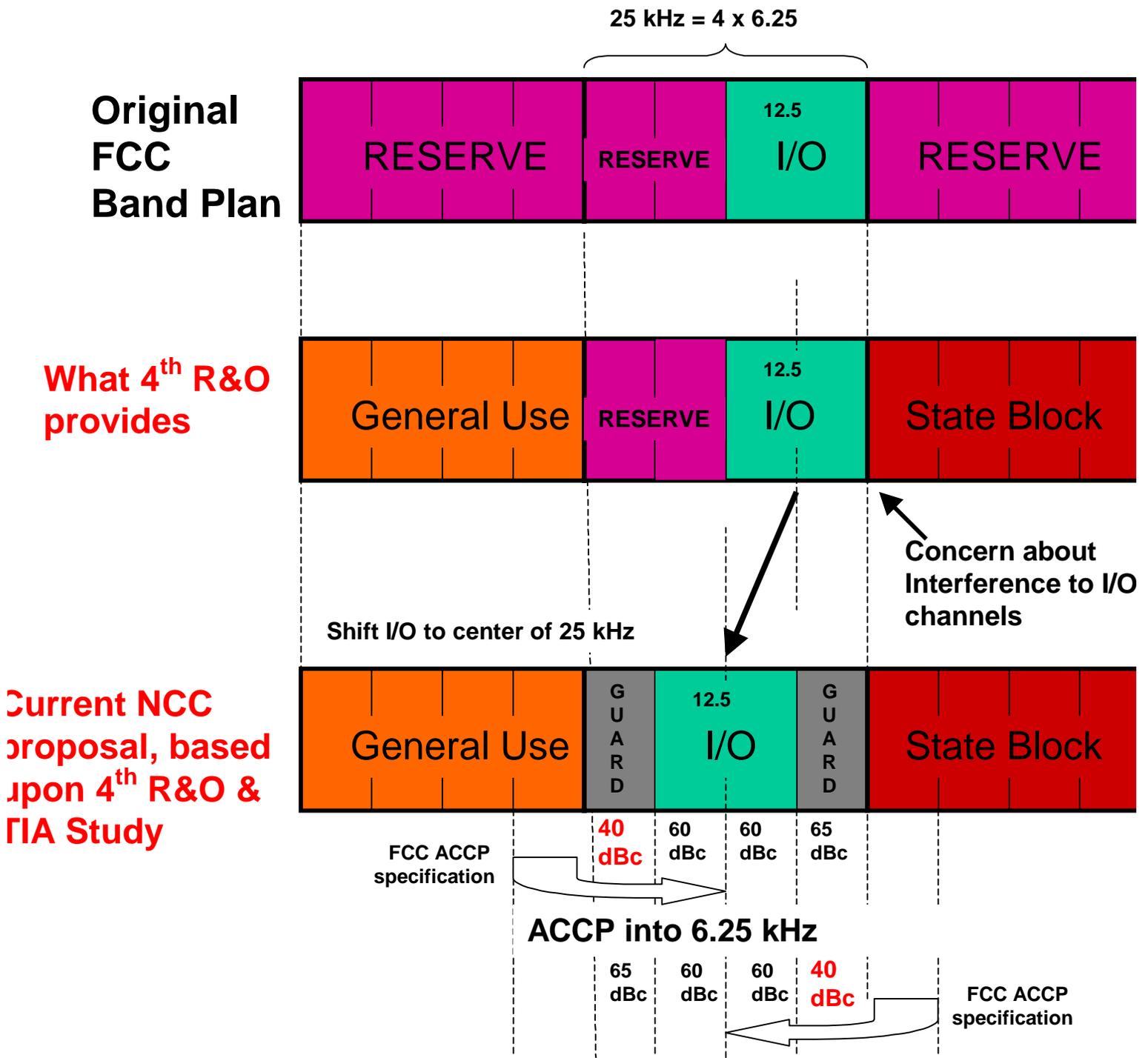
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# I/O Channel Spacing



## Exhibit 1

**ACPR from Various Technologies  
into Project 25 Phase I Receiver  
vs. Spacing between Channel Edges**



## Exhibit 2

### 700 MHz I/O Channel Shift With 4<sup>th</sup> R&O Changes