

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)
)
The Development of Operational, Technical)
and Spectrum Requirements for Meeting) WT Docket No. 96-86
Federal, State and Local Public Safety)
Communications Requirements Through the)
Year 2010)

To: The Commission

**COMMENTS ON BEHALF OF THE
COALITION FOR WIDEBAND DATA DEPLOYMENT**

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SUMMARY

The Coalition for Wideband Data Deployment supports the Commission's decade-long effort to promote use of the 700 MHz band for a wide variety of public safety communications needs. The FCC's decision to allocate portions of this band for various types of narrowband and wideband applications, and to set aside a substantial portion of each allocation specifically for interoperability purposes, will serve the public safety community and the public it serves.

The Coalition agrees with the FCC's previous decision to require all narrowband 700 MHz radios to be capable of operating on the narrowband interoperability channels. Interoperability in a voice environment is an important and technically reasonable goal. However, the Coalition does not believe the record supports adoption of the Commission's tentative conclusions that: 1) it should adopt the TIA-902, Scalable Adaptive Modulation ("SAM") standard for 700 MHz wideband Interoperability channels; and 2) the rules should be modified to require all wideband radios to be capable of operating on the Interoperability channels, thereby requiring that all 700 MHz wideband radios be SAM-capable.

There are a number of reasons the Coalition recommends against adoption of the proprietary SAM standard. First, the public safety community has not identified any genuine communications need that would be met by having interoperable 700 MHz wideband data equipment. Moreover, as the FCC determined in respect to requests for a 4.9 GHz standard, data systems "do not readily lend themselves to standardization or interoperability." Meaningful interoperability among data systems will require standards for all layers of messaging, including applications.

Second, there is no commercially available SAM-capable equipment today and it is unclear when it will be available. The public safety community should not be denied the

opportunity to deploy wideband data systems while it is determined whether this technology will be brought to market.

Third, SAM technology will present significant cost and complexity challenges for public safety licensees. It is expected to exceed the economic means (and operating needs) of a significant number of public safety entities, particularly those outside core urban areas. Finally, the similarities of SAM to the Nextel Direct Connect function justify careful FCC technical review to ensure that SAM does not have comparable interference potential.

The Coalition believes it is premature and counter-productive to adopt any 700 MHz wideband interoperability standard at this time. However, if the FCC determines that a standard is necessary, it should direct the public safety community and the manufacturing industry to develop an open, not proprietary, standard with minimum architecture requirements. Such a standard would promote the FCC's objective of expanding the number of public safety entities able to afford 700 MHz wideband system deployment while also preserving opportunities for technical innovation.

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The Coalition for Wideband Data Deployment (“CWDD” or “Coalition”), in accordance with Section 1.415 of the Federal Communications Commission (“FCC” or “Commission”) rules and regulations, respectfully submits its comments in response to the Commission’s Seventh Notice of Proposed Rulemaking in the above-identified proceeding.¹ The NPR proposes a number of actions intended to promote the timely and efficient use of this important spectrum that was first proposed for public safety use almost ten years ago.

The Coalition supports many of the decisions reached by the Commission in this decade-long proceeding. However, the CWDD recommends against adoption of the proposed interoperability standard for 700 MHz wideband spectrum, in particular the tentative conclusion that all 700 MHz wideband radios, including those intended to operate on channels designated for General Use rather than Interoperability, be required to conform to the proposed standard. For the reasons detailed herein, adoption of a 700 MHz wideband standard is premature and potentially counter-productive at this time. Adoption of the particular standard proposed by the

¹ *Fifth Memorandum Opinion and Order, Sixth Report and Order, and Seventh Notice of Proposed Rulemaking*, WT Docket No. 96-86, 20 FCC Rcd 831 (2005) (“NPR” or “Notice”).

Public Safety National Coordination Council (“NCC”) is likely to have a profoundly negative impact on the deployment of systems on this spectrum, in terms of timing, cost and utility.

I. INTRODUCTION

The CWDD is a coalition of land mobile manufacturers engaged in the development, manufacture and sale of wireless data systems and products to the mobile radio industry, with an emphasis on the public safety community. These entities either have participated in or have actively followed the Commission’s efforts to make 700 MHz spectrum available for important public safety communications purposes. In fact, CWDD members are believed to be the only companies which have actually deployed data systems in the 700 MHz band. The Commission is to be commended for recognizing that this spectrum could support the types of longer-range wireless transmissions that are typical of public safety systems. Its decision to mandate the use of spectrum-efficient technology and to designate portions of the allocation for both narrowband and wideband applications ensures that this band will play a meaningful role in meeting public safety requirements through the end of this decade and beyond.

Thus, the Coalition supports the key regulatory objectives for this band:

(1) enable the development of a national interoperability plan; (2) allow Regional Planning Committees (RPCs) maximum flexibility to meet state and local needs, encourage innovative use of the spectrum, and accommodate new and as yet unanticipated developments in technology and equipment; (3) provide the spectrum management and planning mechanisms necessary to develop multiple user public safety communications systems and local and regional interoperability systems that effectively incorporate all public safety services providers; (4) adopt licensing rules for eligibility, permissible use, and coordinated spectrum planning for the 700 MHz band; and (5) adopt such competitively neutral technical standards as are required to efficiently achieve interoperability in designated spectrum.²

² *First Report and Order and Third Notice of Proposed Rulemaking*, WT Docket No. 96-86, 14 FCC Rcd 152 at ¶ 5 (1998) (“1st R&O”).

To date, the FCC's approach has supported each of these objectives in a balanced regulatory framework. The 700 MHz rules designate spectrum for both narrowband and wideband applications and within those two allocations provides channels for Interoperability, General Use and other defined purposes.³ Well before the tragedies of 9-11 alerted those outside the public safety community to the importance of communications between and among emergency responders, the Commission had identified interoperability as the "crowning achievement" of the instant proceeding.⁴ The Commission set aside a significant amount of 700 MHz spectrum for the express purpose of enabling governmental entities to exchange information in critical situations.

However, the FCC also recognized and provided for other public safety communications requirements on this spectrum. It noted that the 700 MHz band was expected to meet a growing demand for additional voice communications in larger metropolitan areas, as well as providing a home for data applications that were expected to grow exponentially in the coming years and for emerging technology applications.⁵ It specifically determined that "for both nationwide interoperability and general use spectrum, our band plan is designed with sufficient flexibility to accommodate all four types of operational modes currently identifiable in use, and should also be able to keep pace with technological innovation."⁶ Thus, the Commission intended to maintain a careful regulatory balance that would provide a vehicle for interoperability while still allowing public safety entities to meet other important communications requirements.

The Commission determined that all narrowband radios would be required to be capable of operating on the narrowband Interoperability channels and subsequently adopted Project 25

³ 47 C.F.R. §§ 90.531(b)(1) and (6) and (c)(1) and (3).

⁴ 1st R&O at ¶ 70.

⁵ Id. at ¶ 24.

⁶ Id.

Phase I (“APCO 25”) as the standard for 700 MHz narrowband interoperability at earlier stages in this proceeding.⁷ However, while it charged the NCC with responsibility for developing a wideband interoperability standard,⁸ the FCC also concluded that it was premature to adopt one and declined to conclude that whatever standard was adopted in the future should be mandated for all wideband equipment, stating that: “We believe it is not appropriate at this time to adopt a similar requirement for the wideband interoperability channels because different and unrelated applications could be used on different channels.”⁹

The NCC subsequently reached a “qualified consensus” and recommended adoption of the TIA-902, Scalable Adaptive Modulation (“SAM”) standard for wideband Interoperability channels.¹⁰ However, its recommendation went further. It suggested not only that SAM be the standard for equipment operating on those channels, but that all wideband radios, even those intended to operate on General Use channels only, be SAM-capable. Thus, in the instant Notice, among other matters, the Commission has requested comment on its tentative conclusions that: 1) it should adopt the SAM standard for 700 MHz wideband Interoperability channels;¹¹ and 2) the rules should be modified to require all wideband radios to be capable of operating on the Interoperability channels, thereby requiring that all 700 MHz wideband radios be SAM-capable.¹²

The Coalition does not believe that the record in this proceeding supports either of these tentative conclusions. Their adoption would substantially delay deployment of 700 MHz wideband systems and would significantly increase their cost and complexity. As detailed

⁷ 1st R&O at ¶ 135; *Fourth Report and Order and Fifth Notice of Proposed Rule Making*, WT Docket No. 96-86, 16 FCC Rcd 2020 at ¶ 70 (2001) (“4th R&O”).

⁸ 1st R&O at ¶ 113.

⁹ *Id.* at ¶ 135.

¹⁰ *Ex parte* letter dated July 25, 2003, WT Docket No. 96-86, from Kathleen M. H. Wallman, Chair, National Coordination Committee to Chairman Michael Powell.

¹¹ NPR at ¶ 50.

¹² *Id.* at ¶ 53.

herein, the FCC should postpone adoption of a wideband interoperability standard unless and until the public safety community has identified a cognizable need for one. Even then, the record must confirm that the standard adopted will not contravene important policy objectives in this proceeding, including facilitating deployment of innovative spectrum uses and technologies, promoting participation by all public safety providers, and maintaining competitive neutrality in respect to interoperability standards.

Alternatively, if the Commission concludes that a standard is necessary, and that it should apply to all 700 MHz wideband radios, then it should direct the public safety and manufacturing communities to develop a non-proprietary standard, based on minimal architecture requirements, that is compatible with the operating needs and budgets of the broad range of public safety entities.

II. THE CRITICAL IMPORTANCE OF PROMOTING INTEROPERABILITY NEED NOT COMPROMISE THE SATISFACTION OF OTHER IMPORTANT PUBLIC SAFETY COMMUNICATIONS NEEDS.

The need to facilitate, in some instances even mandate, public safety interoperability capability is beyond question in the post-9-11 world. The Commission's decision to focus on this vital, but all too often missing, aspect of public safety communications as early as the mid-1990s was prescient. While there may be practical limits to the interoperability levels that can be achieved retroactively in the 150 MHz, 450 MHz and 470-512 MHz bands, all of which are used intensively by local government entities, the FCC's determination to promote that capability in new allocations is well-founded.

This is true even though there is an inherent tension between mandating interoperability and allowing public safety entities the flexibility to make individualized decisions based on their particular operating requirements and budget constraints. History teaches that radios which must

conform to a government-imposed technical standard may not serve other needs effectively and likely will be more costly. The technical standards that permit interoperability also have the potential of retarding innovation, to the ultimate detriment of governmental entities and the public they serve. This is particularly true in a wireless environment that is driven largely by an expanding consumer marketplace that demands both low price and ceaseless technological improvements.

For these reasons, the FCC should use a light regulatory hand when adopting interoperability requirements. Consistent with the FCC objectives identified above, it should mandate a technical standard only if the standard: 1) will serve an identifiable communications need; 2) will permit deployment throughout the nation at a cost that is achievable for small as well as large and rural as well as urban users; 3) does not stifle technological innovations; and 4) permits a competitive supplier marketplace that will protect the economic interests of public safety purchasers and the public that funds their systems.

The proposed SAM standard does not meet any of those criteria. Moreover, even if it were an appropriate standard for the wideband Interoperability channels, which it is not for the reasons discussed below, the Commission should not require all wideband radios to be SAM-capable.

The FCC previously drew an important distinction between its approach for narrowband versus wideband applications. It recognized that interoperability is valuable for voice applications where all parties speak a common language. The cost of mandating an interoperability standard is outweighed by the benefits of ensuring that different agencies will be able to talk with one another should the need arise.

That is not the case on wideband channels used for data. The variety of operating systems and applications is as broad as the ingenuity of our most advanced technologists. Mandating interoperability at the radio specifications level provides no assurance that public safety entities will be able to share their data easily or quickly, if at all. This fundamental distinction argues against imposing a standard on wideband radios generally, and, in particular, on radios that are not intended for wideband interoperability use. Adoption of the tentative conclusions in the Notice will not serve any identified public safety communications need and will compromise the ability of agencies to acquire equipment designed to satisfy other important wideband data requirements.

III. THE SAM STANDARD RAISES SIGNIFICANT QUESTIONS AS TO ITS SUITABILITY FOR THE INTENDED PURPOSE.

Reallocation of this 700 MHz spectrum from broadcast to public safety use is a singular FCC achievement. While the continued presence of broadcast operations remains an obstacle in many major markets, public safety agencies outside those areas already are making use of this much-needed capacity. In particular, the availability of wideband channels allows users to deploy advanced digital data systems that could not be implemented easily, if at all, in other public safety allocations. Agencies are able to design data systems specific to their requirements, to acquire equipment in a competitive marketplace, and to implement their choices as permitted by budgetary and other restrictions. These activities, which are consistent with the FCC's intentions in reallocating this spectrum, will be jeopardized by adoption of the NPR's tentative conclusions regarding the SAM standard

A. It is Premature to Adopt the SAM Standard

The FCC's proposed adoption of the SAM standard is based on the recommendation of that standard by the NCC. Similarly, the Commission's tentative conclusion that all wideband

radios should be SAM-capable is based on the NCC's assessment "that wideband data compatibility was readily achievable at little additional expense."¹³ The Coalition is at a loss to understand on what facts the NCC based its conclusions.

In fact, little is known about either the timing or the cost of SAM-capable technology. There is no such equipment available today. A prototype system was tested in a pilot program in Florida; however, it is believed that the pilot was terminated without operational deployment. There is nothing in the record either at the FCC or the NCC that indicates when the equipment will be available in the commercial marketplace. The CWDD members understand that it has been in development for several years; there is no assurance that commercial availability can be guaranteed at anytime, or expected in the near-term future.¹⁴ In fact, the foreword of TIA-902-BAAB-A, the standard document for the SAM physical layer, says, "Some aspects of the specifications contained in this document may not have been fully operationally tested; however a great deal of time and good faith effort have been invested in the preparation of this document to ensure the accuracy of the information it contains. While all reasonable efforts have been made to ensure the accuracy of this document, it be [sic] understood that significant work remains in fully developing the standard series and this document will be updated as necessary"¹⁵ Based on the information to date, it is difficult to understand how this technology could be considered "readily achievable."

The conclusion about its additional cost also is unsupported by publicly available information. Members of the Coalition participated in the NCC deliberations and are unaware of

¹³ Id. at ¶ 52.

¹⁴ Public safety entities in markets where 700 MHz spectrum is unavailable due to incumbent broadcast stations may be unconcerned about a delay in equipment availability. For entities outside those areas that are interested in or already in the process of deploying 700 MHz wideband systems, the uncertainty associated with SAM-capable equipment availability is unacceptable and unnecessary

¹⁵ TIA Standard, Wideband Air Interface: Scalable Adaptive Modulation (SAM) Physical Layer Specification – Public Safety Wideband Data Standards Project – Digital Radio Technical Standards (Sept. 2003) (emphasis added)

any cost information disseminated during that process. Indeed, although one NCC participant suggested that the technology would be made available at no cost, that individual is not an employee of Motorola, Inc., the company that owns this proprietary technology.¹⁶ It is by no means clear what licensing fees might be assessed for the use of SAM technology, in particular for radios operating on other than the Interoperability channels as would be required under the proposed rules.

The Coalition recognizes that these uncertainties, although highly significant to public safety users and manufacturers, might be counterweighed by a compelling and immediate need for wideband data interoperability. However, the record supports no such finding. The single potential application identified by the NCC to justify adoption of a wideband interoperability standard was to permit short messaging among individuals at an incident scene, at best, an improbable scenario given the communications options available in such an event. That it was the **only** application for which data interoperability was deemed potentially useful confirms that it is premature to adopt a wideband interoperability standard.

The FCC recently reached a similar conclusion in respect to the 4.9 GHz band which also is available for broadband, public safety, short-range communications. In that instance, the National Public Safety Telecommunications Council (“NPSTC”) had warned that differing technologies could cause interference and recommended that the Commission adopt a wireless broadband standard for that spectrum.¹⁷

The FCC declined to do so for reasons that are equally applicable to the 700 MHz wideband spectrum:

¹⁶ See Transcript of July 16, 2003 Meeting of the Interoperability Subcommittee of the Public Safety National Coordinating Committee at pp. 46-7.

¹⁷ *Memorandum Opinion and Order*, WT Docket No. 00-32, 19 FCC Rcd 22325 at ¶ 15 (2004).

We believe that there is an insufficient record to justify adoption of technical standards that would provide interoperability in the 4.9 GHz band. Moreover, the band is likely to be used for a variety of services that do not readily lend themselves to standardization or interoperability. . . . Also, were we to adopt a standard, it likely would cement the 4.9 GHz band in 2004 technology, such that public safety would be denied the benefits of emerging broadband technologies. Finally, even were a standard realizable in eighteen months, as NPSTC suggests, we see no point in depriving the public safety community of the use of the 4.9 GHz band in the interim in the hope that a useful standard could be adopted by that time.¹⁸

The record in this proceeding does not support a need for an interoperability standard at this time either. Unlike voice communications for which there is a *lingua franca* that makes interoperability feasible, the 700 MHz wideband channels, like their 4.9 GHz counterparts, will support a broad range of data applications that will not be rendered interoperable simply by establishing a single standard for the underlying radio technology. Interoperability will require standards for all layers of messaging, including applications, a requirement substantially beyond the scope of this proceeding.

In light of the uncertain timing and cost of equipment capable of satisfying the SAM standard, the absence of any identified public safety communications need for wideband interoperability, and the immediate need of public safety entities to deploy wideband systems for a variety of purposes specific to their individual requirements, the Commission should not adopt the SAM standard either for 700 MHz wideband Interoperability or General Use channels.

B. The SAM Standard is Expected to Increase Equipment Cost and Complexity

In addition to the issues detailed above, adoption of the SAM standard is expected to increase both the cost and the complexity of 700 MHz wideband systems. First, aspects of SAM are a proprietary technology owned by Motorola. The availability of the technology will be entirely dependent on Motorola's adherence to the ANSI self-policing patent policy that requires

¹⁸ Id. at ¶ 16.

that proprietary intellectual property rights must be licensable either without compensation or under reasonable terms and conditions demonstrably free of unfair discrimination.¹⁹ This approach is surprising, given the Federal Government's avowed preference for the competitive benefits of non-proprietary technology for its own use. This was described recently in the Federal Integrated Wireless Network bid solicitation which stated the following:

It is the government's objective to evolve to an operating environment that fosters competition to the fullest extent; that is, solutions that are either independent of intellectual property rights restrictions, or if not independent, are permanently, equitably, and universally available to all.²⁰

The Federal Government adopted this strong, pro-competitive stance because proprietary standards, irrespective of their licensing arrangements and any unique technical benefits they are perceived to provide, inevitably dampen marketplace competition. They present time-to-market issues, licensor-unique features and capabilities that are not part of the standard, and other advantages for the license holder. Once adopted, they deter innovation, sometimes even by the licensor and certainly by manufacturers that have access to the technology only by virtue of secondary licensing rights. Absent a compelling technical rationale, adoption of proprietary standards is a lose-lose situation for all but the patent holder.

Even if SAM was not a proprietary standard, the technology involved would present significant cost and complexity challenges for public safety licensees. SAM is an Orthogonal Frequency Division Multiplex ("OFDM") spread spectrum technique that uses Quadrature Amplitude Modulation ("QAM"). This system design requires high power, highly linear power amplifiers, as well as other specialized circuitry and software such as peak to average power

¹⁹ *Memorandum Opinion and Order on Reconsideration*, WI Docket No. 96-86, 15 CR 1008 at ¶ 20 (1999). Whether the licensing arrangement applicable to proprietary SAM technology satisfies that policy will not be known until it is tested.

²⁰ U.S. Dept. of Justice, 2 RFP, DJJK05RFP0318, 7-8 (Jan. 4, 2005).

reduction technologies that are not readily available and are costly. Together, these factors will have a profound impact on the ability of licensees to deploy 700 MHz wideband systems.

Additionally, the SAM technology is expected to markedly reduce the range of public safety transmitters; equivalent system coverage could require 3 to 4 times the amount of infrastructure with a commensurate cost increase. There will also be substantial recurring cost penalties for site leases and telco costs. This may not be as significant a factor for urban systems that routinely require dense deployment. It will be highly problematic for public safety entities serving more outlying and rural communities that do not need high throughput, but rather large area coverage at a low cost. The characteristics of the SAM technology run counter to these requirements.

The Commission may be unaware that a number of such entities already have deployed and are in operational public safety use, or are in the process of building wideband General Use 700 MHz systems using equipment that has been certified by the FCC without SAM-capability. These public safety users are taking advantage of their first meaningful opportunity to upgrade to wideband digital data technology and the public safety communications capabilities made available thereby. Unlike their urban counterparts, their spectrum often is not encumbered with broadcast facilities and is available for use today. Imposing a SAM-capability on all their radios would both delay system implementation for an indeterminate period until equipment is commercially available and substantially increase their deployment and overall lifecycle costs.²¹ Neither result is consistent with the public interest, particularly in light of the paucity of applications that have identified as justifying a need for wideband interoperability.

²¹ Motorola itself has urged the FCC not to mandate a migration to 6.25 kHz bandwidth technology on the basis that it “would impose a substantial and unnecessary financial burden on public safety entities by forcing these licensees to purchase equipment with features that far exceed their needs” and further noted the lack of equipment availability. NPR at ¶ 10. The same arguments support the Coalition’s position in respect to the proposed SAM standard.

C. The SAM Technology Warrants Careful FCC Review

The SAM technology is very similar to the Direct Connect function of Nextel Communications, Inc.'s ("Nextel") iDEN network. Both use a QAM modulation scheme and combine various functions, including two-way radios, in a single device.

Because of this strong similarity, the Coalition would expect the FCC to proceed with caution before adopting SAM as the 700 MHz wideband interoperability standard. The Commission is well aware of the interference problems that developed in the 800 MHz band between Commercial Mobile Radio System ("CMRS") cellular architecture networks operated by Nextel and other carriers, and the high-site systems operated by public safety and other 800 MHz incumbents.²² It now is addressing the need for appropriate interference standards in the 900 MHz band, since Nextel is deploying its iDEN network in that band as well.²³

In the course of its analysis, the FCC considered a number of different aspects of the 800 MHz interference situation. The interleaving of different system architectures, the "near-far" issue, was viewed as fundamental to the problem, but the Commission identified both intermodulation and OOBE as causative factors.²⁴ The impact of these types of potential interference in the more typical high-site, high-power public safety radio environment has not yet been explored by the Commission. It is incumbent upon the FCC to assure itself and the public safety community that, if it adopts a wideband interoperability standard, the Commission has fully vetted its technical features and has confirmed that it will not be the source of harmful interference.

²² *Report and Order, Fifth Report and Order, Fourth Memorandum Opinion and Order, and Order*, WT Docket No. 02-55, 19 FCC Rcd 14969 (2004) ("800 MHz Order"); *Supplemental Order and Order on Reconsideration*, WT Docket No. 02-55, 19 FCC Rcd 25120 (2004).

²³ *Notice of Proposed Rulemaking and Memorandum Opinion and Order*, WT Docket No. 05-62, 20 FCC Rcd 3814 (2005).

²⁴ 800 MHz Order at ¶¶ 89-91.

IV. ANY WIDEBAND INTEROPERABILITY STANDARD SHOULD BE OPEN AND BASED ON MINIMAL ARCHITECTURE REQUIREMENTS.

The CWDD believes that the record is clear; no current need for 700 MHz wideband interoperability has been identified. Adoption of any standard would be premature and would foreclose the opportunity to capture technical advances that will be developed in the commercial wireless marketplace. Adoption of the proposed SAM standard, a standard that is not included in any commercially available equipment today, would preclude public safety entities from using even existing wideband technologies to meet existing needs. That result cannot be consistent with the FCC's intention to create wideband data opportunities in the 700 MHz band.

However, if the FCC nonetheless determines that a standard is appropriate, and if it further elects to require all wideband radios to conform to it irrespective of their intended use, then the Coalition urges the Commission to mandate development of an open standard with minimal architecture requirements. An open standard, one that is accessible and affordable, will facilitate the deployment of public safety networks that are capable of interoperability. It will encourage innovation from a variety of sources and at a variety of price points. By contrast, if the standard is skewed technically toward urban markets only, or if it is so costly and complex to implement that only a very limited number of local governments are able to afford it, the cornerstone of this proceeding will be ill-served. Public safety organizations unable to justify the cost of systems that exceed their operating requirements will simply forego utilization of this spectrum for data applications. They will migrate instead either to the 4.9 GHz band if their range requirements can be satisfied, or to commercial systems if they provide adequate coverage and reliability. The very purpose of the 700 MHz wideband allocation will be compromised.

The CWDD believes there is a better alternative, and one that could be available on a timely basis. The industry should be directed to work collaboratively through NPSTC to agree

upon a more robust, cost-effective and already proven wide-area data technology. It could build on existing FM (4 level FSK) technology and yet maintain flexibility for soft upgrades to meet an interoperability requirement when appropriate. The elements of such a technology are well known to technical experts within the industry and to the FCC and are not likely to be a matter of dispute. The Commission might want to recommend that this minimal architecture standard be added to the TIA-902 SAM standard suite. Alternatively, the FCC could designate some portion of the wideband "Reserve" spectrum for systems using this alternative interoperability technology. Either solution would be preferable to adoption of a proprietary standard that is not yet available and the cost of which will far exceed the resources of the majority of public safety entities.

V. CONCLUSION

For the reasons detailed above, the CWDD urges the FCC not to adopt a standard for wideband interoperability, and certainly not to impose such a standard on equipment that will be used only on the wideband General Use channels. There is no record evidence indicating any identified need yet for wideband data interoperability. Moreover, the SAM standard proposed is inherently too costly and complex for all but a limited number of public safety organizations. Its adoption would deny the broader public safety community the benefits of innovation likely to come from the commercial wireless industry and would discourage the use of any 700 MHz wideband spectrum by most potential applicants.

If the Commission nonetheless determines that adoption of a wideband interoperability standard would not be premature, the standard it endorses should be open, not proprietary, and should not delay ongoing utilization of this important spectrum. A minimum architecture

standard that builds on existing, available technologies is achievable and would advance the FCC's interest in promoting use of the 700 MHz band by a wide range of public safety entities.