

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

In the Matter of:)	
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Comment Sought on NPSTC Broadband)	WT Docket No. 06-150
Task Force and Public Safety Spectrum)	PS Docket No. 06-229
Trust Technical Recommendations For 700)	
MHz Public Safety Broadband Deployments)	
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COMMENTS OF MOTOROLA, INC.

Motorola, Inc. (“Motorola”) hereby responds to the Federal Communications Commission’s (“Commission”) public notice seeking comment on the recommendations of the Public Safety Spectrum Trust (PSST) and the National Public Safety Telecommunications Council (NPSTC) Broadband Task Force (BBTF) regarding technical aspects of the operation and interoperation of regional wireless broadband networks proposed to be developed on the 700 MHz public safety broadband spectrum.¹ Motorola supports the work done by the BBTF and PSST as providing an effective framework for the evaluation and grant of the public safety broadband waivers.

As Motorola has previously stated, “[i]n considering whether to grant the pending waiver requests, the main issue is to determine whether the regional broadband networks specified in the waiver requests will be compatible with future public safety broadband

¹ See Comment Sought on NPSTC Broadband Task Force and Public Safety Spectrum Trust Technical Recommendations For 700 MHz Public Safety Broadband Deployments, *Public Notice*, DA 10-458 (rel. March 17, 2010); see also Letter from Harlin McEwan to Chairman Julius Genachowski, PS Docket No. 06-229, WT Docket No. 06-150 (Dec. 15, 2009) (“PSST Report”); NPSTC, *700 MHz Public Safety Broadband Task Force Report and Recommendations* (Sept. 4, 2009) attached to PSST Report (“BBTF Report”).

network deployment nationwide,”² to that end, the BBTF and PSST reports should be used as guidelines for identifying the core required applications and functionalities of regional public safety broadband networks and for ensuring that interoperability is maintained at all levels. Beyond ensuring interoperability, however, the Commission should not attempt to use the waiver and condition processes to detail every operational aspect of the regional public safety broadband networks, as the requirements of these networks are likely to vary and some key technical aspects are still in development.

As a threshold matter, the waiver grants should only authorize operation on the 700 MHz public safety broadband spectrum licensed to the PSST (763-768/793-798 MHz). Authority should not be granted to deploy broadband operations on the narrowband 700 MHz spectrum (768-775/799-805 MHz). The narrowband spectrum should be maintained to provide for a common band across the U.S. in which interoperable mission critical voice operations are being deployed.

I. THE COMMISSION SHOULD FOCUS PRIMARILY ON ENSURING INTEROPERABILITY

The Commission’s primary focus, both with respect to the present waiver requests and through the Emergency Response and Interoperability Center (ERIC), should be on ensuring interoperability among 700 MHz public safety broadband networks nationwide, while also promoting fast and efficient deployment. The best path to achieving this goal is through setting forth a limited number of key requirements that all networks should adhere to regarding technical standards and network functionalities. The most essential condition to ensuring interoperability is that all proposed networks should be based on the Long

² See Comments of Motorola, Inc. at 4, PS Docket No. 06-229 (filed Oct. 16, 2009) (“Motorola Oct. 16 Comments”).

Term Evolution (LTE) radio access network standard. In addition to being the choice of the PSST and NPSTC, LTE has been endorsed by APCO and NENA for use in developing the nationwide public safety broadband network,³ and was also acknowledged to be the emerging consensus among the public safety community in the Commission's National Broadband Plan.⁴ Beyond this, however, the Commission should only set minimal technical requirements upon the public safety broadband networks, as are required for interoperability.

Both the PSST and the BBTF reports outline two sets of operational requirements, those that should be "required" and those that are "desired."⁵ Motorola generally supports this approach. The Commission should mandate that the ability to meet the "required" capabilities be included in any systems to be developed pursuant to the instant waivers. However, depending upon the specifics of the deployment, it may not be necessary or advisable for all of the required capabilities to be operational immediately. Thus, in order to avoid delays in deployment, the waivers should be conditioned on systems having the capability to activate the required functionalities, as they become available and necessary, not on these features being fully active immediately.

In many cases, the operational functionalities designed as "desired" will rely upon technical standards that require further development. Each of these features would be useful to public safety users moving forward, and an ideal public safety broadband

³ See "APCO & NENA Endorse LTE as Technology Standard for the Development of Nationwide Broadband Network," APCO Press Release (June 9, 2009), *available at* http://www.apco911.org/new/news/vena_endorse_lte.php.

⁴ See Federal Communications Commission, CONNECTING AMERICA: THE NATIONAL BROADBAND PLAN at 86 (March 16, 2010) *available at* <http://www.broadband.gov/plan/> ("NBP").

⁵ See PSST Report at 3-4; BBTF Report at 13-15.

network would be able to support them, however they are not essential to ensuring the core functionality and interoperability of these networks. Therefore, including these features as a requirement of the new systems would unnecessarily delay deployment. Accordingly, grant of the waivers should not be conditioned upon the ability to provide the desired capabilities.

As the pattern and timing of network deployment and the progression of technology development become clear, waiver conditions can be modified to require implementation of features deemed necessary and endorsed by local and state public safety leaders. This further consideration of how and when the desired applications should be incorporated into the public safety networks can be addressed by the PSST or ERIC as more experience is gained with actual public safety LTE deployments. This approach allows local and regional public safety organizations to begin their network deployments immediately in order to address their pressing needs for these communications abilities. Grant of the waivers should not be delayed until ERIC is fully established and operational, as under this proposal the core interoperability-focused conditions identified by the PSST and BBTF would likely be a part of any set of requirements developed by that body.

In all cases, conditions placed on the waivers, as well as the work of ERIC, should focus on interoperability. Neither the Commission nor ERIC should attempt to design the entire system public safety waiver grantees would deploy or to outline an overly extensive list of applications and features. Implicit in the waiver requests is the fact that the environment, economic situation, mission-related challenges, and other key issues faced by public safety, as well as the solutions to meet them, vary across different regions of the country. Consequently, waiver grantees require sufficient flexibility to design networks

that are responsive to their regional needs, while still adhering to a minimum set of requirements for interoperability.

As was recognized in the National Broadband Plan and at the Commission's March 2, 2010 ERIC Public Forum, the PSST will continue to have an important advisory role as a representative of public safety that is deeply involved in these issues and as the public safety broadband licensee.⁶ Given this continued role, which Motorola supports, a stable mechanism to fund the PSST's work must be identified. For example, a nominal amount of funding needed to support the responsibilities of the PSST could be included as an addition to the overall funding requirements for system deployment and operation that must be addressed by Congress in legislation yet to be introduced.

II. PROPOSED CONDITIONS

To implement the recommendations and observations made above, Motorola proposes that the Commission include the following conditions on any waiver grant.

1. Grantees must deploy LTE to ensure a common public safety wireless broadband air interface across the country.
2. Grantees must enter into a spectrum access agreement with the PSST to operate their 700 MHz public safety wireless broadband networks under the authority of the PSST's license as the PSBL.
3. Pending a more specific definition of the set of basic features and applications that all public safety broadband systems will include for interoperability, waiver grantees must, at a minimum: (1) offer eligible public safety users that roam on to their network the capability for Internet access, to facilitate communication with the roaming user's home territory; and (2) provide the capability for both local and roaming eligible public safety users to access applications through an intranet on an authorized basis as needed to enable interoperability during incidents.

⁶ See NBP at 317; Emergency Response and Interoperability Center, *Public Forum* (March 2, 2010) *transcript available at* http://www.fcc.gov/pshs/summits/eric_transcript.pdf.

4. Upon the definition of a specific set of basic features and applications for interoperability by the PSST and ERIC, waiver grantees must make these applications available on the public safety broadband system in their area within a specified time after becoming operational. This period should provide sufficient time for procurement, installation, testing and training for these essential applications. Agencies who have requested waivers and the PSST should address the specific period of time that would be reasonable.
5. Grantees must make their broadband system available for use by any eligible public safety agency within the system's footprint that requests access. Host public safety agencies may charge a fee to those regional agencies accessing the system who have not contributed a requisite amount of funding to shared deployment of the network.

In summary, Motorola reiterates its support of the requested 700 MHz public safety waivers to use the broadband spectrum licensed to the PSST, with certain conditions designed to ensure compatibility with the nationwide public safety broadband network. Those regions that are able to begin deployment of their networks sooner than others should be allowed to do so, as long as they conform to a limited number of essential technical and operational requirements, including the basic requirement that all systems authorized under waiver should be based upon the LTE radio access network standard. The PSST and NPSTC reports offer an effective outline of the types of features and applications agencies should strive to include in these networks. Actions on the waiver requests currently on file, as well as on any filed in the future, should ensure that any mandates do not go beyond the essential requirements for interoperability. Decisions on features and applications beyond a very basic set established for interoperability are best left to public safety agencies deploying the systems in response to their specific needs and circumstances. Further, conditions on the waivers should be tempered by the fact that experience gained through deployment and operation will undoubtedly help clarify the operational requirements for interoperability.

Respectfully submitted,

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