

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of: )  
Transition Process for 700 MHz Public )  
Safety Broadband Waiver Recipients ) PS Docket No. 12-94  
 ) PS Docket 06-229  
 )  
 )

To: Chief, Public Safety and Homeland Security Bureau

**COMMENTS OF THE CITY AND COUNTY OF SAN FRANCISCO, CALIFORNIA  
AND THE BAY AREA REGIONAL INTEROPERABLE COMMUNICATONS  
SYSTEMS AUTHORITY**

**EXECUTIVE SUMMARY**

The City and County of San Francisco and the Bay Area Regional Interoperable Communications Systems Authority, (collectively “BayRICS”) appreciates the opportunity to submit the attached comments in response to the Federal Communications Commission (“Commission”) Public Notice (“PN”) in the above-captioned proceeding.<sup>1</sup>

In the PN, the Commission seeks comments on the most expedient and cost-effective way to transition the public safety spectrum authorizations of the waiver recipients. BayRICS proposes that the most expeditious and cost-effective way for the Commission to effect this transition would be to grant interim spectrum rights to waiver recipients until such time as the FirstNet Board becomes capable of making a more permanent determination. Extending these rights would foster confidence and certainty for early builders to continue with current build-

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<sup>1</sup> Public Notice: Public Safety and Homeland Security Bureau Seeks Comment on Transition Process for 700 MHz Public Safety Broadband Waiver Recipients, DA 12-555, released April 6, 2012.

outs, fulfill funding and contractual obligations, and ensure that the significant efforts accomplished thus far are not diminished. Extending the spectrum rights for BayRICS and other waiver recipients best serves the public interest and is consistent with the Spectrum Act.

In the PN, the Commission proposed several alternatives that would be neither expedient nor cost-effective, such as a stay to halt deployment by waiver recipients, rescission of the waiver authorizations; or simply allowing the leases to expire or declining to renew them. Each of these proposed actions would hinder the waiver recipients' early build-outs, deny to FirstNet valuable initial deployment data, and frustrate the planning of many local public safety officials who intend to soon use networks currently being built.

BayRICS , which is responsible for the overall governance of the Bay Area network, and Motorola Solutions Inc. ("Motorola"), which is responsible for building the network, have each invested a great amount of time, effort and resources in organizing and establishing positive momentum for the project. Any actions that cause a material delay or outright termination of the waiver will have an adverse impact on network deployment and put at risk the BTOP stimulus funding provided by the American Recovery and Reinvestment Act of 2009. The waiver is a fundamental requirement of the BTOP grant, and NTIA has indicated to the recipients that the grants will be terminated if this material requirement is not met. BayRICS and Motorola are positioned to meet all necessary grant requirements. The network is poised to be deployed, tested and made ready for use within the grant period timelines. Loss of spectrum rights would disrupt this momentum.

The Spectrum Act provides that both the public safety broadband spectrum currently licensed to the Public Safety Spectrum Trust ("PSST") and the D Block spectrum (a total of 20 MHz of available spectrum) is allocated to FirstNet. Therefore, in extending the spectrum rights

of waiver recipients, the Commission should also extend these rights include the additional 10 MHz of D Block spectrum.

Finally, BayRICS welcomes the opportunity to provide information about the significant accomplishments made in the Bay Area. Motorola, BayRICS and the many jurisdictions providing sites, backhaul, and other infrastructure to support the system have worked tirelessly over the past twenty months to finalize the system design. BayRICS and the other early builders, have developed, and will continue to develop, a wealth of valuable information about best practices and lessons learned for wireless public safety broadband deployments—information that will be critical to the success of FirstNet. By allowing these early build-outs to proceed, the NTIA and eventually the FirstNet Board could gain significant empirical knowledge, thereby allowing FirstNet to jumpstart its work on the nationwide network.

**COMMENTS OF THE CITY AND COUNTY OF SAN FRANCISCO, CALIFORNIA  
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THE CITY AND COUNTY OF SAN FRANCISCO, CALIFORNIA AND THE BAY  
AREA REGIONAL INTEROPERABLE COMMUNICATONS SYSTEMS AUTHORITY**

**I. INTRODUCTION**

The City and County of San Francisco and the Bay Area Regional Interoperable Communications Systems Authority (collectively “BayRICS”) submit these Comments in response to the Federal Communications Commission (“Commission”) Public Notice (“PN”) in the above-captioned proceeding.<sup>2</sup> BayRICS joins in and supports the Comments of the Operators Advisory Committee to the Public Safety Spectrum Trust (“OAC”), as well as the Comments of City and County of San Francisco, City of Oakland and City of San Jose and the Bay Area Regional Interoperable Communications Systems (“BayRICS”) Authority, (collectively the “Bay Area Cities”), and offers these additional comments to address issues of specific importance to BayRICS member jurisdictions.

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<sup>2</sup> Public Notice: Public Safety and Homeland Security Bureau Seeks Comment on Transition Process for 700 MHz Public Safety Broadband Waiver Recipients, DA 12-555, released April 6, 2012.

BayRICS applauds the Commission for addressing the status of waiver recipients now, in advance of the spectrum license transition to the First Responder Network Authority (“FirstNet”). BayRICS also applauds the enactment of Title VI of the Middle Class Tax Relief and Job Creation Act of 2012 (“Spectrum Act”<sup>3</sup>), which established spectrum allocations, funding and governance structure for FirstNet, a nationwide wireless broadband network for public safety. For several years, public safety associations have pressed for this legislation in response both to the 9-11 tragedy and subsequent reports that identified the critical need for a nationwide, interoperable broadband network for first responders.

Although FirstNet represents a great opportunity for public safety in the Bay Area, the details of the plan to allocate spectrum to the FirstNet Authority have raised significant and time-sensitive concerns for BayRICS and the Bay Area Wireless Enhanced Broadband (“BayWEB”) broadband wireless project. The City and County of San Francisco, City of Oakland and City of San Jose<sup>4</sup>, applying jointly, were one of 21 original jurisdictions to receive a waiver from the Commission to use the 700MHz public safety broadband spectrum to build BayWEB, a regional network that will eventually become interconnected and interoperable with FirstNet.

BayRICS also benefits from stimulus funding through Broadband Technology Opportunities Program (“BTOP”) grants to use the 700MHz spectrum to immediately build BayWEB.<sup>5</sup> Seven of the 21 waiver recipients received or benefit from similar BTOP funding.

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<sup>3</sup> See Pub. L. No. 112-96, 126 Stat. 156 §6101 (2012).

<sup>4</sup> The original waiver was granted to the City and County of San Francisco, City of Oakland and City of San Jose. However, the BayRICS Authority is a California Joint Powers Authority established primarily to oversee the deployment of the wireless broadband network and represent the jurisdictions that intend to participate in the network. BayRICS seeks Commission approval to become the lease-holder of the spectrum as part of the transition process. See section IV, *infra*.

<sup>5</sup> The National Telecommunications and Information Administration (“NTIA”) is the Department of Commerce agency with oversight over BTOP grant program (and will also oversee the FirstNet Authority).

These projects are in various stages of completion, with BayRICS and Motorola Solutions Inc. (“Motorola”) nearing the completion of the planning and design phase and about to begin network deployment.<sup>6</sup>

BayRICS respectfully requests that the Commission consider our comments and grant the relief we request herein.

**II. THE COMMISSION, AS PART OF ITS SPECTRUM TRANSFER TO FIRSTNET, SHOULD EXTEND INTERIM SPECTRUM RIGHTS, INCLUDING RIGHTS TO THE D BLOCK SPECTRUM, FOR WAIVER RECIPIENTS; THE COMMISSION SHOULD NOT RESCIND THE WAIVER AUTHORIZATIONS, ALLOW THESE RIGHTS TO LAPSE, NOR STAY THE DEPLOYMENTS CURRENTLY TAKING PLACE**

**A. The Commission Should Extend the Spectrum Rights Granted to BayRICS and Other Waiver Recipients on an Interim Basis Until the FirstNet Board Can Develop a More Permanent Solution**

In the PN, the Commission is seeking comments on the most expedient and cost-effective way to transition the Waiver Recipients’ authorizations.<sup>7</sup> BayRICS proposes that the most expeditious and cost-effective way for the Commission to effect this transition would be to grant interim spectrum rights to waiver recipients. Extending these rights would foster confidence and certainty for early builders to proceed with current build-outs, funding and contractual obligations, but with the understanding that the FirstNet Board would take more permanent action on these temporary extensions at a time most convenient for the newly-formed Board.

As discussed in detail below, extending the spectrum rights for BayRICS and other waiver recipients best serves the public interest and is consistent with the Spectrum Act.

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<sup>6</sup> Motorola was awarded a BTOP grant which, combined with over \$20M of private matching money, comprises over \$70M that can be used to create the network and jobs.

<sup>7</sup> DA 12-555, released April 6, 2012.

## **1. Extending the Spectrum Rights of Waiver Recipients Serves the Public Interest**

In the Waiver Order<sup>8</sup>, the Commission granted, with conditions, the waiver petitions of various public safety entities (“Petitioners”) seeking early deployment of statewide or local public safety broadband networks in the 700 MHz public safety broadband spectrum (763-768 MHz and 793-798 MHz). The Commission found (Order, ¶ 14) that the intent to begin building regional networks by the waiver recipients served the public interest:

We find that we may still advance the goal of nationwide interoperability by granting the waiver requests with appropriate conditions. In this regard, we note that our recent decision to establish the Emergency Response Interoperability Center (“ERIC”) will promote appropriate technical requirements that will ensure interoperability for these early deployments from their inception, as well as for any future deployed networks. Moreover, the public interest is served by allowing jurisdictions to begin deployment and speed services to the public safety community. This will also allow Petitioners to take advantage of available or potential funding, either through grants or planned budgetary expenditures, as well as to take advantage of economies of scale and other cost saving measures for deployments that are already planned.

In the same way, the Commission can serve the interests of the public safety community by extending the spectrum rights through the FirstNet transition. The benefits to public safety the Commission identified as the basis for granting the original waivers are within reach today, but they can only be achieved by continuing the work of the waiver recipients. In the Bay Area region, police, firefighters and first responders are currently making plans to use BayWEB by planning back-end applications and securing funding for end-user devices.

For example, the City and County of San Francisco has developed a plan to deploy end user devices to replace existing commercial data service with BayWEB over the next three years. In some cases, access to the BayWEB network is already being incorporated into strategic emergency management planning for response to natural or man-made disasters and for

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<sup>8</sup> Order, FCC 10-79, released May 12, 2010.



protection of security and safety of participants and spectators attending large-scale, public events. Public safety officials have been waiting for many years to enjoy the benefits of this new technology, and confusion and uncertainty over spectrum rights in the Bay Area region should not frustrate these plans or cause significant delays in bringing these valuable services to our public safety community.

The FirstNet Board and the nationwide network deployment will also benefit from extending these rights. As described in more detail in Section III below, the efforts of BayRICS and other “early builders” of networks has generated, and will continue to generate a wealth of technical and operational best practices and lessons learned for the future nationwide network. This real-world information will be critical to the initial success of FirstNet. In addition, extending the spectrum rights for waiver recipients now will mean one less urgent task for the newly established FirstNet Board to resolve. It is unlikely that the Board will be established until mid-August 2012. The Board will immediately be inundated with a multitude of administrative, technical and planning tasks and decisions. The Commission, by crafting a temporary solution for the waiver recipients and early builders, can give the Board some freedom to concentrate on other important initial tasks, while taking time to review and evaluate the status of waiver recipients prior to crafting a more permanent solution.

Finally, the waiver recipients themselves will benefit from extending the spectrum rights. As described in Section III below, jurisdictions such as BayRICS have invested a great amount of effort and resources in organizing and establishing positive momentum for these projects. This investment of time, energy and money is at risk of being wasted if their efforts are not allowed to continue.

## **2. Extending the Spectrum Rights of Waiver Recipients is Consistent with the Spectrum Act.**

The Spectrum Act directs the Commission to: (i) “reallocate and grant a license to the First Responder Network Authority for use of the 700 M Hz D block spectrum and existing public safety broadband spectrum;”<sup>9</sup> (ii) “take all actions necessary to facilitate the transition of the existing public safety broadband spectrum;”<sup>10</sup> (iii) “take any action necessary to assist the First Responder Network Authority in effectuating its duties and responsibilities;”<sup>11</sup> and (iv) “implement and enforce this title as if this title is part of the Communications Act.”<sup>12</sup>

However, the Act is silent on what to do with the existing leases during the transition to FirstNet. The Commission has authority under the Act to fill this gap. In fact, the Commission is required to address the status of waiver recipients as part of its mandate to “take all actions necessary” to transition the spectrum to FirstNet. Furthermore, the FirstNet Board is not yet in existence and may not be capable of making an informed decision on the waiver recipient’s status for some time. Therefore, the Commission may take “any action necessary” to assist the FirstNet Board, which includes extending the spectrum rights of waiver recipients.

The Spectrum Act gives the Commission broad authority to determine the status of waiver recipients as part of the license transition. Thus, the Commission may take any action that assists the FirstNet Board and serves the public interest. In this case the public interest is best served by extending the spectrum rights of the waiver recipients until such time that FirstNet is able to take more permanent action.

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<sup>9</sup> Spectrum Act §6201 (a).

<sup>10</sup> Spectrum Act §6201(c).

<sup>11</sup> Spectrum Act §6213.

<sup>12</sup> Spectrum Act § 6003.

**B. Do No Harm: The Commission Should Take No Action That Would Disrupt the Existing Revenue Commitments and Infrastructure Development Currently Underway to Prepare Sites and Networks for the Earliest Practicable Deployments**

In the PN, the Commission has proposed several alternatives as potentially the most expedient and cost-effective way to transition the waiver recipients' authorizations.<sup>13</sup> However, three options proposed by the Commission—a stay to halt deployment by waiver recipients; rescission of the waiver authorizations; or simply allowing the leases to expire or decline to renew them—would be neither expedient nor cost-effective. Each one of these proposed actions would be detrimental to waiver recipients currently building networks, to FirstNet, and to local public safety officials who are now making plans to use networks currently being built.

In the Waiver Order (Order, ¶ 62), the Commission contemplated that the networks built by Petitioners would eventually be integrated into a nation-wide public safety broadband network, and made clear that the waiver rights granted to Petitioners was subject to the eventual deployment of such a nationwide network:

While the need for prompt access to this spectrum to begin deployment motivates our action here, it does not affect the overarching goal of ensuring a nationwide interoperable public safety broadband network is available to all public safety personnel. In this respect, and as recognized by the Petitioners themselves, any deployment or other expenditures made by the requesting jurisdictions pursuant to this Order is undertaken at their own risk and with the understanding that any deployments will be subject to the outcome of the larger proceeding, *including possible integration* into a nationwide network and compliance with future technical requirements adopted by ERIC or the Commission.

Thus, the Commission clearly anticipated the *integration* of the Petitioners' fully operational projects into a nationwide network—not a suspension or halting of productive work that will contribute to the success of the nationwide network. The efforts of early builders such

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<sup>13</sup> DA 12-555, released April 6, 2012.

as BayRICS demonstrate that the Commission's decision to issue these waivers has served the public interest, and that the public interest will be served by allowing build-outs to continue until such time as they may be integrated into the FirstNet network.

Rescission, expiration or other loss of spectrum rights would not be in the public interest, and would likely be harmful to waiver recipients. This is a significant concern for BayRICS and the six other waiver recipients benefiting from BTOP grants. A material condition of the BTOP grant requires each grant recipient to receive and maintain waiver authority from the FCC to use the 700 MHz public safety broadband spectrum. If the FCC does not transition these spectrum rights, BTOP grantees will be at risk of losing their grant funding provided by the American Recovery and Reinvestment Act of 2009.<sup>14</sup>

Rescission, expiration or long delays could also create a highly confusing and uncertain start for the FirstNet network. There is currently no FirstNet Board in place, and it will likely be many months before the Board will be in a position to provide meaningful guidance or direction concerning the status or future of the projects currently being deployed. In addition, by delaying these projects now, the Commission would deprive the FirstNet Board of the ability to determine for itself how to use the wealth of valuable information that is just beginning to flow from the planning, development and operation of early networks such as BayWEB. The many benefits of the early build-outs to FirstNet deployment are discussed in Section III, *infra*.

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<sup>14</sup> On April 3, 2012, the BayRICS Authority received information that the NTIA may impose a temporary, partial suspension of grant funding allocated specifically for LTE equipment (core servers, eNodeB antenna and equipment, end user devices), to give the FirstNet Board time to consider technology design and solutions. Motorola and BayRICS are very concerned about this potential delay, and are working with the NTIA to better understand this request and determine the best way to satisfy the NTIA's concerns.

**C. The Commission Should Allow Waiver Recipients to Use the D-Block Spectrum**

The Spectrum Act allocates to FirstNet both the public safety broadband spectrum currently licensed to the Public Safety Spectrum Trust ("PSST") and the D Block spectrum (a total of 20 MHz of available spectrum). In extending the spectrum rights of waiver recipients, the Commission should also make clear that these rights include authority to use the additional 10 MHz of D Block spectrum. As early builders, the waiver recipients should be afforded an opportunity to use the entire available spectrum for their networks. It makes little sense to prohibit the early builders from using the D Block spectrum if these networks will eventually be integrated into a nationwide network that operates on the D Block. Withholding the D Block at this point will simply limit the value of the technical and operational data that will be available from the early builders.

The legislation reassigning the D Block to public safety envisions construction of a single network using the full 20 MHz of spectrum. Accordingly, the right to use this full 20 MHz of spectrum should be available to waiver recipients and included as part of any interim extension of spectrum rights.

**III. BAYRICS HAS EXPENDED SIGNIFICANT RESOURCES AND COMPLETED SUBSTANTIAL WORK TOWARD THE DEPLOYMENT OF THE NETWORK, AND CONTINUES TO DEVELOP BEST PRACTICES AND LESSONS LEARNED THAT WILL BE VITAL TO THE SWIFT, EFFICIENT AND EFFECTIVE DEVELOPMENT OF A NATIONWIDE NETWORK; EXTENDING THE SPECTRUM RIGHTS OF BAYRICS WILL ALLOW THIS WORK AND THESE BENEFITS TO CONTINUE**

**A. The Commission Should Respect and Preserve the Extensive Investment in Time, Money, and Experience Made by BayRICS, Motorola and the Bay Area jurisdictions**

BayRICS , which is responsible for the overall governance of BayWEB, and Motorola, which is responsible for building the BayWEB communications network, have each invested a

great amount of time, effort and resources in organizing and establishing positive momentum for the project. For example BayRICS, Motorola and the many jurisdictions that are providing sites, backhaul, and other infrastructure in support of the system have worked tirelessly over the past twenty months to finalize the system design. The network has been optimized to take advantage of available existing infrastructure and other resources. Major accomplishments achieved to date include:

- The establishment of the BayRICS Joint Powers Authority supported by Bay Area jurisdictions was a significant achievement aimed at reversing the shortcomings of a previous governance structure and is now recognized and accepted as a model for regional public safety communications governance.
- The formalization of a Technical Advisory Committee within the BayRICS, staffed by engineers and experts, which is charged with evaluating and preserving the JPA members' technical needs for performance and interoperability.
- Identifying and securing additional funding and resources to supplement the BTOP grant to pay for certain site and backhaul costs necessary to support the network.
- Evaluating hundreds of sites and conducting countless site visits to develop the engineering studies necessary to advantageously use the antenna site resources already in existence in the region, as well as to perform the required environmental and historic preservation analyses.
- Refining the system design to the best collocation sites available, entering into detailed Site Access & Use agreements with each site's owner/controller, and creating over 200 Lease Exhibit Drawings, Permit and Zoning Analyses and other collateral to support the efforts of the owners in making sites available for use in the system.
- Beginning the process of obtaining zoning approval, permits and, where necessary, lease modifications to allow the build out of the network on the sites.
- Selecting an equipment provider by a competitive bidding process.
- Negotiating with the Bay Area Rapid Transit (BART) to provide needed resources for high-performance backhaul and additional radio sites to enhance system coverage and performance.
- Negotiating with other fiber providers, such as the Corporation for Education Network Initiatives in California (CENIC), to provide additional backhaul and regional connectivity solutions within California and the western United States.

- Beginning the planning, authoring and documentation of a device and fixed-network maintenance and support plan.

To achieve these milestones, the BayRICS Authority and the technical, legal and administrative staffs of the member jurisdictions have invested thousands of hours of staff time and other resources to evaluate infrastructure, design and plan system integration, coordinate site review and inspections and negotiate and secure approval of contractual agreements among all stakeholders. For example:

- The BayRICS negotiating team, made up of nine representatives of member jurisdictions, met several times each week for most weeks between May and November 2011 to negotiate a “Build, Own, Operate and Maintain” (“BOOM”) agreement with Motorola spanning a ten-year operation cycle, as well as the transfer of all assets provided by the BTOP Grant to BayRICS Authority at the end of the BOOM period. A conservative estimate of 3,520 staff hours was contributed by members to this effort;
- Alameda County estimates that it contributed in excess of two full time staff for one year to handle administrative and legal support for the establishment of the BayRICS Authority.
- The City and County of San Francisco estimates another two-plus full time staff toward BayRICS Authority startup, site identification and evaluation, and negotiation of the Site Use Agreement with Motorola.
- The examples of Alameda County and San Francisco above can be multiplied by similar efforts and contributions in the other member jurisdictions, who also contributed significant staff time for site visits, contract negotiations and legal review.

Finally, the BayRICS Authority has been contacted by geographically contiguous non-member agencies (e.g., the City of Sacramento and Sacramento County) who have expressed strong interest in expanding system to their region and adding end users. The result, if successful, would enhance interoperability between regions and improve system coverage within the State.

Additional benefits for the Bay Area that will result from extending the current spectrum rights include:

- All stakeholders will continue their current high focus on the deliverables that will cause the system to be deployed and placed into operation as designed for the benefit of the public safety jurisdictions in the Bay Area region. Public safety users in the region need and expect these services now, and are currently making plans to use them sooner rather than later—they are not prepared to wait for the national deployment, which could be several years away.
- Interoperability with BayWEB will be assured as FirstNet’s nationwide system is deployed using standard 3GPP LTE technology and worldwide best practices in network design are utilized.
- BayWEB will benefit from the existing, fully-funded BTOP Grant and can be completed as designed without dependence on any yet to be appropriated D-Block funding
- Continuing with BayWEB as currently designed will minimize the risk to public safety associated with having no broadband communications in the Bay Area region until First Net is established, formulates its plan and actually starts deploying. No other network system in the region has been conceived, designed or funded.

**B. BayRICS, like other BTOP Grantees, has Begun Building the BayWEB Network with BTOP Funding that will Preserve \$90 million in FirstNet Funding for Other Uses—Terminating Spectrum Rights or Delaying Deployment would Threaten this Funding**

Any Commission actions that would delay or deny the Bay Area the ability to use the public safety broadband spectrum would have an adverse impact on BayWEB and put at risk the stimulus funding provided by the American Recovery and Reinvestment Act of 2009. Motorola was awarded a BTOP grant which includes \$50 million in BTOP Grant funds plus an estimated \$40 million from Motorola in grant matching funds and site improvement funds outside the grant can be used to create the network and jobs. The Federal portion of the grant is fully funded. However, the waiver is a fundamental requirement of the BTOP grant, and NTIA has indicated to the recipients that the grant will be terminated if this material requirement is not met.



The risk associated with the potential loss of the spectrum rights threatens the many positive and productive elements of BayWEB. Over the past few months, much positive momentum has been established in the Bay Area region. BayRICS and Motorola are positioned to meet all necessary grant requirements. The BayWEB system was poised to be deployed, tested and made ready for use within the grant period timelines. Termination of spectrum rights of long delays would disrupt this momentum.

C. **There is Minimal Risk of Waste or Additional Cost from Continuing the BayWEB Deployment Because LTE Standards and the Commission's Interoperability Showings Preclude Investment in Infrastructure and Equipment that Could Not be Incorporated into the Nationwide Network**

The existing legislation pertaining to the waiver requires the use of commercial technology and major commercial operators at 700 MHz have committed to LTE. The public safety community and the Commission have also already endorsed LTE as the technology platform for both the early build networks and FirstNet. Thus, waiver recipients are required to use LTE. Equipment being implemented in BayWEB complies with 3GPP LTE standard and will interoperate or integrate with the nationwide network, unless First Net deviates from LTE standards or best practices. Accordingly, any risk associated with additional waiver grants to deploy prior to First Net decisions should be minimal.

The early builders operating under waivers will continue to be subject to the existing interoperability and technical requirements established by the Commission, with the understanding that the waiver recipients will abide by future requirements issued by the Commission and/or adopted by FirstNet. For these reasons, there is no “downside “ to extending the spectrum rights of waiver recipients and continuing BayWEB deployment until the FirstNet Board is capable of developing a more permanent integration plan.

**D. Early Builders Such as BayRICS, Should be Considered as “Phase One” of FirstNet, a Real-World Test-Bed for the Nationwide Network**

BayRICS’s BayWEB network, along with Charlotte, Texas, Mississippi, Adams County (and perhaps others) are currently building public safety networks. These projects, while considered to be “production” projects for the jurisdictions, could easily serve as FirstNet “Phase One Production” implementations. These projects include a diverse range of urban and rural jurisdictions, geographic distribution, terrain and population density.

The projects also represent a range of potential business models and levels of public private partnership. For example, the Motorola/BayRICS project is a major urban/suburban deployment with a major port, global technology center, and represents a vendor-led partnership with collaboration of many government entities. In particular, the unique BOOM agreement with Motorola offers an important public-private joint venture model as FirstNet evolves. The Authority and Motorola have built a solid foundation in creating a public/private partnership that can serve as a framework for future endeavors as FirstNet continues the evolution from isolated regional LTE networks to a national system.

Other early build projects demonstrate much different deployment challenges and opportunities. These projects have developed, and will continue to develop, a wealth of valuable information about best practices and lessons learned for wireless public safety broadband deployments—information that will be critical to the success of FirstNet. By allowing these controlled Phase One deployments to proceed, the NTIA and eventually the FirstNet Board could gain significant empirical knowledge, thereby allowing FirstNet to jumpstart its work on the nationwide network.

These Phase One jurisdictions are learning more than just technology deployment. They are also learning and testing project management techniques, governance, state/local coordination, public/private partnerships, network management and applications. All of these best practices and lessons learned should be captured for the benefit of FirstNet, states and local users. These lessons learned could inform:

- FirstNet architecture based on city, county and statewide architectures in the Phase One jurisdictions.
- RFPs and contract specifications.
- Further end-user device development, particularly multi-band devices.
- Roaming technologies and contracts.
- Applications, standards for applications, and application optimization to efficiently utilize available network bandwidth.
- Requirements for security and network management, provisioning, priority and authentication.
- Technical assistance support and customer care.
- Training and support.

The Phase One approach would also validate and refine interoperability standards in the following ways:

- Mirrors the approach taken by national telecommunications carriers, e.g. Verizon created extensive pilot networks in Boston and Seattle before architecting and building out its nationwide network. Failures and mistakes would occur in local, small-scale settings, not the nationwide setting.
- Presents a live testbed for real life in-the-field testing of interoperability across regions, not just in a laboratory setting.
- Gives vendors field operational testbeds for their equipment networks, including interoperability with other vendors.
- Allows public safety to show what works and what doesn't work in a crisis.

#### IV. CONCLUSION

For the reasons stated above, BayRICS urges the Commission to extend interim spectrum rights, including rights to the D Block spectrum, to BayRICS and other waiver recipients as part of the 700 MHz public safety broadband spectrum transition process. In addition, BayRICS strongly supports the Comments of the Bay Area Cities and urges the Commission to grant the Bay Area Cities Petition of December 23, 2011 in the name of the BayRICS Authority and to provide for the Authority to succeed to the existing lease with PSST, pending ultimate review and approval of the lease by FirstNet. Alternatively, BayRICS asks that the Petition be granted in the names of the Core Cities, with approval for them to assign the existing PSST lease to the Authority.

Dated: April 20, 2012

Respectfully submitted,

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