



Responses to Questions

517 through 666

*Special Notice D15PS00295 – Nationwide Public
Safety Broadband Network (NPSBN)*

6/30/2015

Overview

This document contains answers to questions submitted to either the Contract Officer or to specialnoticequestions@firstnet.gov. This document does not represent all questions. Subsequent documents may be released to respond to additional questions.

Responses to Questions 517 through 666

517. Would the Government consider changing the NAICS code to 517210 Wireless Telecommunications Carriers?

Reason: Financial sustainability, which requires financial stability, is a critical success factor for this effort. The 517919 size standard of \$32.5 in annual revenue represents a tiny fraction of the GAO's FirstNet cost estimate of \$12 billion to \$47 billion over its first 10 years. This represents a huge financial risk to contractors and FirstNet viability. If a large business is selected as a prime, in order to meet small business subcontracting goals, the current NAICS code forces them to choose small businesses with this high risk profile. The 517210 NAICS code would expand the small business pool to include companies with up to 1500 employees without excluding any of the 517919 companies. Companies in the 517210 NAICS code offer more capabilities and a lower financial risk while still meeting small business goals. A change to 517210 offers the potential that a small business could submit as a prime and offers large business primes a pool of subcontractors who can share the financial risk and still help them meet small business goals.

Document Reference: Special Notice

Answer:

FAR 19.102, Size Standard, subparagraph (c) states only one classification code shall be used in solicitations, whose definition best describes the principal nature of the product or service being acquired. However, when acquiring products or services that could be classified within more than one code, the size standard which accounts for the greatest percentage of the contract price shall apply.

FirstNet has reviewed the NAICS 517210, Wireless Telecommunications Carriers (except Satellite) and although the proposed solution may include satellite coverage, per the regulations, satellite would not account for the greatest percentage overall.

Therefore, the determination has been made to change the NAICS code from 517919, All Other Telecommunications, to 517210 Wireless Telecommunications Carriers (except Satellite). This change will be reflected in a subsequent RFP.

518. It is the State’s opinion that FirstNet’s approach is to encourage a broad application “ecosystem” without limiting the number of application developers. Can FirstNet please clarify if they are requesting that the RFP respondents are to offer applications directly or if they are to encourage and develop a broad application ecosystem?

Document Reference: C - SOO Page 3 Section / Paragraph: Section C.5

Answer:

FirstNet considers the most effective way of obtaining the largest selection of applications for the benefit of Public Safety Users at the lowest cost is through an open Application development environment. In response to a subsequent RFP, FirstNet expects offeror(s) to propose a solution demonstrating a broad Application Ecosystem to address SOO Section C.5 Objectives, objective 5 Application Ecosystem. Although the RFP may not require specific applications or require the offerors to identify already developed applications, such applications, if offered, may be incorporated into a resultant contract. With its statement of objectives, however, FirstNet requires an application ecosystem.

519. Item #7 in the statement of objectives refers to a User Service Availability of 99.9%, while Appendix C-6 refers to an availability of 99.99%. Please clarify.

Document Reference: C - SOO Page 0 Section / Paragraph: Section C.5, Appendix C-6

Answer:

As noted in SOO Section C.5 Objectives, objective 7 User Service Availability, the service availability figure “includes the reliability effects of all network components (core, gateways, eNodeBs, and backhaul) as well as the environmental survivability of the infrastructure and the benefits derived from deployable units.”

As of the release of the draft RFP documents, the 99.9% reliability figure set forth in SOO Section C.5 Objectives, objective 7 User Service Availability, is correct, but based upon feedback the government receives in response to the Special Notice and draft RFP documents, the reliability figure set forth in the draft RFP is subject to change.

520. Is just the number of Apps published the best measure of success of the Application ecosystem? Other metrics to consider include the availability of necessary APIs to the community and the number of application downloads by the public safety community.

Document Reference: C-6 QASP Page 0 Section / Paragraph: Appendix C-6: APP-4, APP-7

Answer:

The number of apps published is not the only metric by which the success of the Application Ecosystem may be measured. Additional metrics may include the number of apps downloaded, growth in apps developers, revenue growth for applications, and cyber security.

Also, the evaluation criteria will be included in the subsequent RFP in Section M. As required by the Federal Acquisition Regulation (FAR), specifically section 15.305, all factors and significant sub factors that will affect contract award, and their relative importance, will be stated clearly in the solicitation. FirstNet requests feedback with regard to metrics that may best measure the success of the Applications Ecosystem.

521. What cloud services are envisioned to be offered?

Document Reference: C-6 QASP Page 6 Section / Paragraph: Appendix C-6: APP-12

Answer:

FirstNet foresees cloud services and platforms that provide NPSBN users (PSEs, Application developers, Application hosting providers, etc.) with cloud services comparable to what are provided by commercial cloud providers (Infrastructure-as-a-Service (IaaS), Platform-as-a-Service (PaaS), Software-as-a-Service (SaaS)). FirstNet is seeking feedback from offerors with respect to how they would package, offer, and monetize cloud services for the benefit of Public Safety Users.

522. Is the 1000 data records breached metric on an annual basis?

Document Reference: C-6 QASP Page 7 Section / Paragraph: Appendix C-6: APP-19

Answer:

Yes, the data records breached metric is on an annual basis. However, FirstNet is seeking feedback on the quantity and metrics regarding data breaches, in accordance with the Special Notice.

523. The performance levels refer to 75% and 90% of agencies. What is the total that the percentage refers to?

Document Reference: C-6 QASP Page 7 Section / Paragraph: Appendix C-6: APP-27

Answer:

The percentage refers to the total number of PSEs in the 56 states and territories. FirstNet estimates there are approximately 60,000 PSEs. However, there is data gathering currently underway that may refine this estimate which may be reflected in the subsequent RFP.

524. FOC is said to occur 5 years post contract award. However, the Interim IOCs are all said to occur x number of months following completion of the previous IOC (12, 24, 36, 48). This suggests a much longer timeframe for FOC (126 months). Please clarify.

Document Reference: C-8 IOC / FOC Page 9 Section / Paragraph: Appendix C-8 IOC-FOC

Answer:

The information contained in Appendix C-8, IOC/FOC Target Timeline, table and Figure 1 IOC/FOC Timeline, is correct. The initial sentence in each section stating “this phase will begin x years after the completion of “the previous IOC is incorrect. The information issued in a subsequent RFP will be updated to reflect this correction.

525. Some of the phases of the Hardening/Security appear similar. Will these phases be further defined?

Document Reference: C-8 IOC / FOC Page 0 Section / Paragraph: Appendix C-8

Answer:

Appendix C-10 was intentionally omitted, as stated in the amendment to the Special Notice D15PS00295B posted on FBO on April 27, 2015 at 9:06 pm. Appendix C-10 is still being developed in consultation with states, tribes, territories, public safety stakeholders, and market participants, and may be provided at a later date or in a subsequent RFP.

526. When will the Government release the minimum throughput requirements and standards applicable when users are operating on a satellite network?

Document Reference: General

Answer:

The amended Appendix C-1 Baseline Coverage Objective Maps, posted to www.fbo.gov on May 13, 2015, contains maps that define the minimum persistent coverage areas and areas where deployables may be appropriate. Through the state consultation process, FirstNet is gathering public safety objectives and requirements. FirstNet expects offerors to propose solutions consistent with those objectives and requirements. Additional objectives may be included in the subsequent RFP.

527. [Company name removed] would like to receive national input map data (i.e., the 5 data sources). Is it possible for FirstNet to provide this in table format corresponding to each of the 1x1 mile grids (i.e. showing a unique ID for each grid block and the associated quality(ies) from each of the 5 data sources)? We understand that FirstNet has “equally weighted” each of the data sources. We would like to explore other weighting paradigms and the input map data will allow us to do so.

Document Reference: C-1 Coverage Objective Maps Page 0 Section / Paragraph: Sections 2,3

Answer:

FirstNet can provide a nationwide coverage objective map with the 1x1 mi grid overlay, each uniquely identified. Although FirstNet developed a “grid value” that represented the concentration of data within each grid, this was just used as preliminary information to assist states and territories in identifying coverage needs. Any type of final “grid value” released in the subsequent RFP may be based on state/territory inputs, not FirstNet’s original coverage objective baseline algorithm. Therefore, FirstNet does not consider providing the current grid values are beneficial to this process.

528. [Company name removed] would like to receive a national Geographic Information Systems (GIS) shapefile of the 1x1 grids (i.e., an aggregated map of the 56 different state/territory shapefiles). Is it possible for FirstNet to provide this? This shapefile should be attributed with the grid unique IDs as mentioned in Item 1.

Document Reference: C-1 Coverage Objective Maps Page 4 Section / Paragraph: Figure 2

Answer:

FirstNet may provide a nationwide coverage objective map with the 1x1 mi grid overlay, each uniquely identified, as a part of the subsequent RFP.

529. [Company name removed] would like FirstNet to publish a GIS shape file that specifically details what geography is considered rural and what is not. This is critical to allow existing commercial network providers to gauge the risk and costs associated with meeting rural build out milestones. Alternatively, if FirstNet publishes detailed grid block information (Item 1), it could flag rural grid block in that file.

Document Reference: C-1 Coverage Objective Maps Page 4 Section / Paragraph: Appendix C-8, Section 3

Answer:

FirstNet has not yet developed a map identifying rural and non-rural areas. FirstNet offered a preliminary conclusion regarding the definition of “rural” in Section II.B.3 of its first public notice that was published in the Federal Register on September 24, 2014 and is available at

<https://www.federalregister.gov/articles/2014/09/24/2014-22536/first-responder-network-authority-proposed-interpretations-of-parts-of-the-middle-class-tax-relief>. Additional input was received at the FirstNet SPOC meeting in April 2015. Based on all of those inputs, FirstNet intends to issue a final interpretation of the term “rural”, at which time FirstNet could develop a corresponding map. Identifying each 1x1 mile grid as either rural or non-rural will be taken under consideration.

530. We understand that FirstNet is using the Coverage Objective Map as a starting point for dialog with states. If state input will drive requirements, at what point in the RFP process will the RAN-offeror be made aware of any additional state requirements so they can adjust their bid accordingly (or choose not to bid at all if the state requests are not realistic)?

Document Reference: C-1 Coverage Objective Maps Page 0

Answer:

Specific state and territory input from the data collection through FirstNet’s consultation process pertaining to coverage objectives may be included in the subsequent RFP in order to afford potential offerors an opportunity to make a business decision with regard to participation in the NPSBN acquisition and prepare their proposed solutions accordingly.

531. What defines “FOC” from a coverage standpoint? Is FOC where all red/blue/green grids are covered in a state? Are there circumstances under which any grids will not be covered (e.g., modeled vs actual coverage issues)?

Document Reference: C-1 Coverage Objective Maps Page 0 Section / Paragraph: Appendix C-1, Section 4; Appendix C-8, Section 6

Answer:

As part of FirstNet’s consultation and outreach efforts, FirstNet is engaged in continuous dialogue with stakeholders about coverage objectives, including specific coverage requirements, and updated coverage maps may be released as part of the subsequent RFP, that could include the coverage with regard to FOC.

532. Is compliance with specific requirements mapped to particular IOC phases or just to FOC?

Document Reference: C-3 FCC Tab Page 0

Answer:

The IOC targets include expected completion dates for some features and functionalities. Not all requirements are mapped to specific IOC phases. FirstNet is seeking recommendations from the offeror(s) as to the compliance for specific requirements within Appendix C-8 IOC/FOC Target Timeline.

533. For the MVNO concept, is the intent that devices with both B14 and carrier network B2/B4 could start being sold to the public safety community, and public safety would start using the commercial network and then gradually use more of the NPSBN as it is built? Or is the intent a “hard swap” where at some point in the later IOC phases, existing B2/4 devices are swapped for B14 devices that operate on the NPSBN?

Document Reference: C-8 IOC / FOC Page 4 Section / Paragraph: Section 4.1.1.1

Answer:

The intent of the draft RFP documents released with the Special Notice is to show the option of deploying an MVNO solution quickly after contract award to speed initial deployment of the NPSBN. FirstNet expects devices to be capable for usage on the NPSBN as soon as it is available. Per the SOO Section C.5, objective 4 Device Ecosystem, FirstNet expects the device capabilities to evolve as needed to allow for adoption as early as possible while supporting device updates.

534. Under “Hardening and Security” the network hardening elements are broadly defined (e.g., “RAN and core hardening Phase 2”)? Will it be the responsibility of the offeror to propose the levels of hardening in each phase that makes sense both operationally and financially?

Document Reference: C-8 IOC / FOC Page 3 Section / Paragraph: Section 2

Answer:

Yes, it may be the responsibility of the offeror to propose the levels of hardening in each phase, both operationally and financially, subject to applicable laws and regulations. FirstNet seeks feedback pertaining to topics within this area in accordance with the Special Notice.

535. Who owns the assets associated with the network, particularly in the case of “shared” assets to capture synergy benefits? What happens with these assets if the contract is not renewed after the baseline period (e.g., first 5 years)?

Document Reference: Pricing Appendix Page 0

Answer:

FirstNet foresees a NPSBN that utilizes existing commercial and federal, state, tribal, and local government infrastructure, as appropriate, along with new construction to speed the deployment of the network and reduce costs. FirstNet does not anticipate owning assets and seeks a solution that maximizes value for Public Safety Users and provides a stable and sustainable NPSBN. However, the subsequent RFP would include any appropriate terms and conditions that would then apply to ownership of assets associated with the deployment and operation of the NPSBN. FirstNet seeks feedback as to the approach that will best meet FirstNet's objectives within this area in accordance with the Special Notice.

536. What does the “option to extend” mean (Special Notice section 5.1)? Is this option at the state level, or at the same level at which the offeror bid (i.e., if multiple states were bid and built, is it all-or-nothing)? Are any terms renegotiated at the time of the option?

Document Reference: Special Notice Page 9 Section / Paragraph: Section 5.1

Answer:

FirstNet’s goal is to provide certainty to and maximize value for Public Safety Users by entering long-term contractual relationships. As identified in the Special Notice Section 5.1, Proposed Period of Performance, FirstNet believes a long term contract with a base period from date of award through 2022 and two five-year option periods, with potential performance through 2027 and 2032, respectively, provides the certainty to, and maximum value for, Public Safety Users. The subsequent RFP will likely include an option clause which provides FirstNet with the right to extend performance under the contract past the base period of performance. FirstNet would have the authority to exercise the option and any such exercise would include the terms and conditions of the original contract, as related to either a category one or a category two concept. FirstNet seeks feedback on the period of performance as presented in the Special Notice or other mechanisms to meet FirstNet’s goals. Any details regarding the option clause will be provided in the subsequent RFP.

537. Coverage is defined as having a minimum of 768Kbps downlink and 256 Kbps uplink at the cell edge with 50% loading. Please provide definition of ‘loading’, i.e., is it number of users, throughput, or total cell throughput?

Document Reference: C-1 Coverage Objective Maps Page 1

Answer:

The 50% loading is the total cell throughput. The 768Kbps downlink and 256Kbps uplink per user defines the cell edge. FirstNet seeks feedback regarding this issue.

538. How is the throughput in the grid measured? Are the values indicated for the grid per user throughput? At what loading or number of users?

Document Reference: C-1 Coverage Objective Maps Page 1 Section / Paragraph: Table 1

Answer:

The evaluation criteria will be included in the subsequent RFP in Section M. As required by the Federal Acquisition Regulation (FAR), specifically section 15.305, all factors and significant sub factors that will affect contract award, and their relative importance, will be stated clearly in the solicitation.

539. Subtitle E Sec 6509(3)(A) of the Act preserves State authority over 9-1-1 Services as defined under Subt E Sec 158(d)(2)(1). Does FN expect offerors to provide FirstNet with an end-to-end NG 911 architecture to deliver civilian (i.e., non-NPSBN-user) 9-1-1 services?

Document Reference: C-7 Operational Architecture Page 80 Section / Paragraph: A.7.2.5.2; A.7.2.5.2.1; A.7.2.5.2.1.1 and A.7.2.5.2.2

Answer:

Offerors should propose all necessary functions and architectures needed to support their secondary users that would be provided services on Band 14 under a proposed Covered Leasing Agreement. FirstNet seeks feedback on the draft RFP documents and changes required to clarify this objective.

540. eMBMS is said to be required by FirstNet as part of the overall capability of the network. It is understood that implementation of eMBMS is slated for later in the timeline, but the question still remains as to what spectrum FirstNet would supply to the implementation team for this function? Is the intention of FirstNet to allocate portions of the “D-Block” for this purpose?

Document Reference: C-4 SV-1 and StdV-1 Page 0 Section / Paragraph: Appendix, C4 SV-1 6.1, SV-1 Device-Network;

Appendix, C5 SV-2, 6, StdV-2 Multimedia Broadcast Multi-Cast Services

Answer:

There is a need for Public Safety Users to do multicast or broadcast (e.g., for group communication). FirstNet seeks feedback on the draft RFP documents in accordance with the Special Notice as well as proposed solutions in response to a subsequent RFP.

541. What are the requirements of the ProSe service?

Document Reference: C-4 SV-1 and StdV-1 Page 8 Section / Paragraph: SV-1, 4.1, SV-1 Application Ecosystem

Answer:

The ProSe service shown in Appendix C-4 System and Standard Views SV-1 and StdV-1, Section 4.1, Figure 5 is related to the ProSe function and ProSe Application server network side elements which are part of the ProSe reference architecture. Refer to 3GPP TS 23.303, paragraph 4.2, Figure 4.2-1 for a diagram of the ProSe reference architecture. Appendix C-4 System and Standard Views SV-1 and StdV-1, Section 6, Figure 7 also shows ProSe within the NPSBN Core Network as part of the Device to Network system view. FirstNet is seeking feedback on the implementation of ProSe including these specific portions of ProSe and Group Communication System Enablers (GCSE):

=> ProSe Discovery (in and outside of network coverage)

=> ProSe Direct Communication (one to one and one to many)

=> ProSe UE Relay (relay only and relay plus active communication mode of relaying UE)

=> Coexistence of ProSe with GCSE and MCPTT features

542. It was mentioned at the Industry Day event that vendor communications with State SPOCs is permitted (and even encouraged for smaller businesses looking to partner), even though communications with the FirstNet Federal Team is restricted to Contracting Officers as stated in the RFP? Could you please confirm?

Document Reference: General

Answer:

State SPOCs will not have access to procurement sensitive data and/or information. Therefore, it is not prohibited for offerors to communicate with the state SPOCs at this time. However, any communication with FirstNet should be done through the Contracting Officer.

543. Section 6202(b)(2) of the FCC Tab states that “(1) A core network ... (B) Shall be developed, constructed, managed, maintained, and operated taking into account the plans developed in the State, local, and tribal planning and implementation grant program under section 6302(a).”

Certain of the national wireless carriers have made representations to Congress that public safety grade hardening of their networks can not be accomplished for both technical and business reasons. Will dependence on those networks for the national roaming capability disqualify a prime contractor?

Document Reference: General

Answer:

FirstNet’s objectives for hardening are covered in the overall system availability objective outlined in Statement of Objectives section C.5.7, User Service Availability. Offerors are encouraged to respond with their solution to accomplish these objectives as well as provide feedback on specific objectives, in accordance with the Special Notice.

544. The requirement for in building coverage is inadequately defined.

Document Reference: C-3 FCC Tab Section / Paragraph: 4.06.01

Answer:

As part of FirstNet’s outreach effort, FirstNet is having a dialogue about coverage objectives. Specific in-building coverage requirements will be a part of that discussion and will lead FirstNet to the coverage objectives and updated maps that may be released as part of the RFP. Offerors will ensure in-building penetration losses are accounted for in their design or provide in-building proposed solutions to achieve FirstNet's definition of coverage in areas requiring in-building coverage, consistent with the coverage objective maps, that may be released as a part of the subsequent RFP and financial sustainability objective.

545. Effective coordination between the government’s oversight function and the prime contractor’s execution function will be critical to meeting program milestones. Given the scale and complexity of the program, does FirstNet anticipate the need to have a third party provide staff augmentation/PMO support?

Document Reference: C - SOO Page 2 Section / Paragraph: 18

Answer:

Yes, FirstNet has a need to have PMO support for the NPSBN acquisition. Therefore, a Request for Quotation (RFQ) in support of Project Management Office (PMO) expansion was sent Friday, June 5, 2015 to all vendors listed on the Mission Oriented Business Integrated Services (MOBIS) Blanket

Purchase Agreement (BPA) via email. FirstNet is using GSA's BPA for Management and Continuous Process Improvement Services under Subpart 8.4 of the Federal Acquisition Regulation. This is one of a few early steps FirstNet is taking to ensure adequate PMO functionality in the run-up to solicitation.

546. Does FirstNet intend to assume the MVNO role and be responsible for the end user? Or, does FirstNet anticipate that the offeror(s) will provide a single MVNO or multiple MVNO services either nationally or by geographic region?

Document Reference: C-8 IOC / FOC Page 4 Section / Paragraph: Target Timeline / 4.1 / 2

Answer:

FirstNet seeks feedback on early service offerings, including non-Band 14 deployment in accordance with SOO Objective 6, including an MVNO solution as specified in Appendix C-8, the IOC/FOC Target Timeline.

547. According to FirstNet documents, FirstNet engaged in initial government-to-government consultation with Tribal authorities, while drafting the scoping document for historic preservation. What other Tribal consultations does FirstNet have planned to enable the historic preservation review of the Nationwide Public Safety Broadband Network (NPSBN)?

Document Reference: Special Notice Page 1 Section / Paragraph: 1/2

Answer:

FirstNet is consulting with federally recognized tribes on a government-to-government basis under the National Environmental Policy Act (NEPA) and National Historic Preservation Act (NHPA) to account for the potential effects of its actions on air, land, or water, as well as districts, sites, buildings, structures, or objects of historical significance, including those of traditional religious and cultural importance to tribes, in accordance with NEPA/NHPA regulations. A letter describing the process has been distributed to all federally recognized tribes; specific dates/engagements have not yet been determined.

548. What is FirstNet's plan to manage deployment for Tribes that may seek to opt-out but are located in opt-in states? How will FirstNet manage Tribes that may seek to opt-in but are located in an opt-out state?

Document Reference: Special Notice Page 1 Section / Paragraph: 1/2

Answer:

Under the Act, only the Governor of each state or territory has the authority to make a decision to undertake the responsibility to build, maintain and operate the RAN of the proposed NPSBN deployment by FirstNet and assume responsibility for building and deploying its own RAN; i.e. opt-in or

opt-out. Therefore, tribes would be included as part of the plan in either the FirstNet NPSBN or an opt-out State approved plan.

549. How does FirstNet plan to engage in government-to-government consultation with all 566 federally recognized Tribes during the projected program period of performance?

Document Reference: Special Notice Page 9 Section / Paragraph: 5.1/1

Answer:

FirstNet is engaging with tribes, in concert with SPOCs, through a host of outreach activities, public notice and comment solicitations, the draft RFP documents feedback process, and its Public Safety Advisory Committee's (PSAC) Tribal Working Group (TWG). The Act expressly requires that consultation with respect to certain network planning topics occur between FirstNet and the single officer or governmental body designated by each SPOC. FirstNet encourages tribes to engage with the SPOC in the state to discuss their coverage and user needs and likewise urges the SPOCs to encourage and incorporate tribal participation in network planning. Similarly, the coverage and other needs of tribes whose public safety response functions are provided by federal agencies are advised to confer with those agencies in assessing the implications of FirstNet in the provision of services on those tribal lands.

Additionally, FirstNet will consult with federally recognized tribes on a government-to-government basis as required under Section 106 of the National Historic Preservation Act (NHPA) to account for the effects of its actions on resources of cultural importance to tribes, in accordance with NHPA, as part of its initiation of the Programmatic Environmental Impact Statement (PEIS) process. To date, this has included sending letters out to the head of each of the 566 federally recognized tribal governments, as well as the Tribal Historic Preservation Officers, contacting tribal officials by telephone and email, and attending regional and national tribal organization meetings and conferences to meet with individual tribal officials. Meetings with individual tribal governments are being planned as well.

550. VoLTE is listed as a minimum services. Does this include the network needs to support VoLTE from day one?

Document Reference: C - SOO Page 3

Answer:

Traditional voice capabilities are expected for NPSBN users from day one. Offerors should identify in their proposed solutions support with regard to voice services in the IOC-1 and further IOCs. Additionally, the NPSBN must enable a set of Mission Critical voice services, which require specific 3GPP releases, as referenced in Appendix C-8 IOC / FOC Target Timeline.

551. What effect will the annual review process by NTIA have on any contractually established pricing and / or vendor’s revenue assumptions upon which any such pricing is based?

Document Reference: Special Notice Page 7 Section / Paragraph: Section 4.5

Answer:

Based on the pricing concept proposed in the Special Notice, FirstNet would have offerors propose fixed payments to FirstNet. 47 U.S.C. Section 1428(b) of the Act requires that the fees assessed by FirstNet under 47 U.S.C. Section 1428(a) for each fiscal year shall be sufficient and not exceed the amount necessary, to recoup FirstNet’s total expenses in carrying out its duties and responsibilities under the Act for that specific fiscal year. The Act further directs NTIA to review fees assessed under 47 U.S.C. Section 1428(a) on an annual basis. NTIA has informed FirstNet that it will soon release proposed interpretations of its fee review and approval obligations for public comment, which will provide details on the scope and limits of its review and approval process.

552. The RFP appears to give three definitions for coverage area: (1) “Coverage is defined as having a minimum of 768Kbps downlink and 256Kbps uplink at the cell edge with 50% loading.” (2) “Only those grid blocks that have more than 50% coverage will be considered acceptable.” (3) “[referring to a table in the text] Coverage requirements must meet and exceed the values below for each grid block (note these are average downlink values across the entire grid block).” Which of these are the actual requirement (We believe that an approach using (1) above can be used for each grid block, with suitable adjustments for required bit rate and % coverage availability as defined in Appendix C3, 4.6)?

Document Reference: C-1 Coverage Objective Maps Page 1 Section / Paragraph: Baseline Coverage Requirements

Answer:

Within SOO Appendix C-1 Baseline Coverage Objective Maps, FirstNet is currently defining coverage as:

(1) The cell edge is defined as the boundary of at least 768Kbps downlink and 256Kbps uplink with 50% loading.

(2) A one mile by one mile grid block will be deemed "covered" if more than 50% of the area meets or exceeds the cell edge criteria defined in (1) above.

(3) Please refer to Appendix C-1 for updated language regarding this topic. Through the state and territory consultation process, an updated Public Safety User throughput demand map/profile may be created and provided for the subsequent RFP.

FirstNet seeks further feedback on the definition of coverage, in accordance with the Special Notice.

553. There appears to be an inconsistency between the coverage definition for the downlink of 768 kbps for more than 50% of the grid block and the coverage throughput per square mile. If several samples are taken within a grid block to evaluate data rate, and these samples are used to evaluate both coverage requirements, then any grid that met the definition of coverage would have a downlink rate that was not less than half of 768 kbps or 384 kbps.

An alternative interpretation is that coverage throughput per square mile is a design criterion for minimum capacity. By this definition a serving cell sector coverage area is limited by RF coverage, but also be an additional requirement to allocate throughput on a grid block basis. By example a serving cell sector would allocate 3 Mbps (red grids) of its throughput to each coverage grid. Therefore the serving area of a sector might be limited not by coverage, but by the throughput capacity of the sector. Is this the correct interpretation of coverage throughput per square mile?

Document Reference: C-1 Coverage Objective Maps Page 1 Section / Paragraph: 1. Baseline Coverage Requirements

Answer:

FirstNet is currently defining coverage as:

(1) The cell edge is currently defined as the boundary of at least 768Kbps downlink and 256Kbps uplink with 50% loading.

(2) A one mile by one mile grid block will be deemed "covered" if more than 50% of the area meets or exceeds the cell edge criteria defined in number 1 above.

(3) Please refer to amended Appendix C-1 Baseline Coverage Objective Maps, posted to www.fbo.gov on May 13, 2015, for updated language regarding this topic. Through the state consultation process, an updated Public Safety User throughput demand map/profile may be created and issued with the subsequent RFP. The evaluation criteria will be included in the subsequent RFP in Section M. As required by the Federal Acquisition Regulation (FAR), specifically section 15.305, all factors and significant sub factors that will affect contract award, and their relative importance, will be stated clearly in the solicitation.

FirstNet seeks further feedback on the definition of coverage in accordance with the Special Notice.

554. Outdoor coverage (Bandwidth) requirements have been provided with Min bandwidth for downlink and uplink and minimum downlink for the Red/Blue/Green Grids. No requirement has been provided for the various indoor infrastructure including Airports, Hospitals, Public Safety agencies, correctional facilities. What assumptions on capacity and coverage should be followed?

Document Reference: C-1 Coverage Objective Maps Page 4 Section / Paragraph: 4

Answer:

In response to a subsequent RFP, offerors should demonstrate their proposed solutions meets the requirements set forth in SOO Appendix C-1 Baseline Coverage Objective Maps, and SOO Section C.5, objectives 1 (Build, Deploy, Operate and Maintain the NPSBN), 7 (User Service Availability), and 8 (Service Capacity). Offerors should ensure in-building penetration losses are accounted for in their proposed design or provide in-building proposed solutions to achieve FirstNet's definition of coverage in areas requiring in-building coverage, consistent with the coverage objective maps set forth in SOO Appendix C-1 Baseline Coverage Objective Maps and SOO Section C.5 objective 2 Financial Sustainability.

555. The “Commercial Carriers” interface illustrated is not shown in Figure 1; please clarify whether FirstNet intends to connect to commercial carriers in the absence of an MVNO.

Document Reference: C-4 SV-1 and StdV-1 Page 3 Section / Paragraph: 2.1 Fig 2

Answer:

Figure 1 is intended to represent interfaces in the IOC-1 or launch timeframe, in which multiple MVNO interconnections may be necessary, while the Core and RAN build out is being completed. Figure 2 is specific to state opt-out interconnections with the Core, and the direct interconnection with commercial carriers for roaming purposes is shown. In the IOC-2 timeframe, FirstNet does intend to have direct interconnections with commercial carriers (nationwide), even in the absence of an MVNO.

556. Latency – does the 100ms response apply to any location over any combination of transport? For example, a green grid in Guam over satellite > OTP (Internet) > Core Network > Data Center?

Document Reference: C-6 QASP Page 28 Section / Paragraph: Table 7

Answer:

Yes, the latency goal and objective applies to any combination of transport facilities from any eNodeB location nationwide.

557. Will all provided cloud services have to go through FEDRAMP accreditation?

Document Reference: C-7 Operational Architecture Page 77 Section / Paragraph: A7.2.3.5

Answer:

Cloud services are a potential revenue stream for the offeror(s) and a value-add for some PSEs. FirstNet expects that there are PSEs that will require the added security that comes with FedRAMP (www.fedramp.gov) certification and some PSEs that will neither require, nor be willing to pay a

premium for, FedRAMP certification. FirstNet seeks feedback with regard to benefits, and costs, of providing FedRAMP compliant cloud offerings to PSEs. FirstNet also considers it is in the best interest of all stakeholders to have as diverse a set of services, products, and applications as economically viable for the Public Safety User market.

558. “In this case, the agency has chosen to host their own IT infrastructure and not outsource it to FirstNet.” Does FirstNet envision Agency IT Infrastructure outsourcing as a service within the FirstNet portfolio?

Document Reference: C-9 Use Cases Page 5 Section / Paragraph: 4.7.3

Answer:

FirstNet envisions cloud services and platforms that provide NPSBN users (PSEs, application developers, application hosting providers, etc.) with secure cloud services comparable to what are provided by commercial cloud providers (IaaS, PaaS, SaaS). FirstNet welcomes proposals from offerors that provide a vision for what hosted services may be of value, together with best practices regarding creation, operations, and management of a hosted cloud for Public Safety infrastructure.

559. The wireless industry tends to have delayed payment terms with few, if any, having terms of less than net 60 with a trend to net 90 with no progress payments. Is there consideration of including required subcontractor payment terms?

Answer:

FirstNet does not anticipate any requirements affecting payment terms between contractors and subcontractors. However, if the determination is made it is in the best interest of the NPSBN program and/or required based on laws and regulations, the subsequent RFP may include terms and conditions as appropriate.

560. Is consideration being given to an evaluation criteria for support of small/minority or disadvantaged businesses?

Answer:

FirstNet is actively engaged in accepting feedback from all interested parties, and capabilities statements with regard to the proposed concept for Category One and Category Two.

This information will assist in any determination with regards to evaluation criteria and the acquisition approach that will yield the best nationwide comprehensive network solution for public safety, to include any potential consideration pertaining to small businesses.

561. Public safety relies on VPN and Mobile VPN technology today to securely transport responder traffic from mobile devices to application servers. For example, secure CJIS queries are encapsulated to provide confidentiality and integrity of the transported citizen information. With (M)VPN technology, a variety of applications (CAD, tactical video, surveillance video, etc.) are typically encapsulated into a single ‘tunnel’. Because LTE technology is expected to greatly expand the number and types of multimedia applications available, either multiple (M)VPN tunnels or multiple application flows encapsulated within a tunnel are needed per user to account for the different types of traffic.” Per [Question 158] and [Question 163] above a hierarchical tunnel strategy will need to account for overhead impact to Grade of Service?

Document Reference: C-3 FCC Tab Page 70 Section / Paragraph: 4.7.7

Answer:

FirstNet requires the (M) VPN tunnel to distinguish unique traffic (e.g., voice, data, etc.) in the LTE network, so that the NPSBN can deliver the GoS/QoS for different types of application flows. FirstNet is anticipating offerors will propose creative, standards-based solutions in this area.

562. The government states the longer period of performance would allow potential offerors to recoup over a longer period of time, the significant investments needed to deploy and operate the NPSBN. Will the government amend the RFP to clarify the, “longer period time” the government presumes that the offeror will use to calculate a breakeven point? Is it the base period plus one option period? Is it the base period plus two option periods?

Document Reference: Special Notice Page 9 Section / Paragraph: 5.1

Answer:

Section 5.1 of the Special Notice posits that the overall period of performance should run up to 2032 (base and all option periods if exercised). FirstNet anticipates a base period of performance of award through 2022, with an option to extend through 2027 and a subsequent option to extend through 2032.

FirstNet is seeking feedback as to the suitability of this proposed structure given the investment needed to deploy and operate a NPSBN as well as the proposed resources available, i.e. \$6.5 billion in budgetary authority, etc.

563. As Public Safety Demands increases for high-bandwidth applications such as real-time video via surveillance, traffic, drone, body or dash cameras, it is possible that the Public Safety Entities could render the spectrum unusable for secondary users. What provisions has the government made should this occur with an offeror(s) that has entered into a covered leasing agreement with FirstNet?

Document Reference: Pricing Appendix Page 2 Section / Paragraph: 1.1

Answer:

FirstNet expects that offerors would value anticipated public safety revenues under different adoption and usage scenarios, when developing their internal business model and proposed solutions. This is in addition to any value offerors may receive from building, deploying, operating and maintaining a NPSBN. Under any solution, Public Safety Users will have priority and preemption capability on a local basis.

564. The Government states it will enter into a covered leasing agreement with the successful offeror. The spectrum and excess capacity would be of greatest financial value to a carrier. Will the Government amend the RFP to elaborate how a non-carrier entity would realize financial benefit from entering into a covered leasing agreement with FirstNet? Additionally, will the Government amend the RFP to explain how FirstNet intends to enable fair, transparent, and open competition among carrier and non-carrier entities given the unparalleled significance of an offeror’s ability to monetize excess capacity in order to realize FirstNet’s financial sustainability objectives?

Document Reference: Pricing Appendix Page 4 Section / Paragraph: 1.3

Answer:

The subsequent RFP will not be restrictive with regard to proposed solutions from a carrier or non-carrier entity. The Special Notice presents FirstNet’s conceptual model for becoming financially sustainable as required by the Act. FirstNet anticipates proposed solutions will utilize all of its resources, including up to \$6.5 billion in budget authority, Public Safety User fees and excess network capacity in order to assist in achieving financial sustainability for FirstNet. However, FirstNet does not require that offerors incorporate all resources when developing a solution. Therefore, it would be up to the offeror (carrier, non-carrier, and/or a combination thereof) to propose the solution. This would include the offeror’s ability to monetize excess capacity, as well as other resources afforded to all potential offerors, in order to demonstrate FirstNet sustainability in their proposed solution.

565. Will FirstNet or the private partner hold the contract with the public safety entities? What provisions are being made to ensure efficient contracting with FirstNet or its partners? For example, will the private partner be required to establish state contracting vehicles for all of FirstNet's products and services?

Document Reference: Special Notice Page 7

Answer:

FirstNet foresees that the contractor(s) will hold the contract with public safety entities. Any agreements outside the NPSBN will be the responsibility of the contractor(s) and their partners.

566. Please explain what the Red Grid (3.0 Mbps), Blue Grid (0.6 Mbps) and Green Grid (0.1 Mbps) throughput requirements represent? Are these per user throughput levels, aggregate?

Document Reference: C-1 Coverage Objective Maps

Answer:

Please refer to SOO Appendix C-1 Baseline Coverage Objective Maps for updated language regarding this topic. Through the state consultation process an updated Public Safety User throughput demand map/profile may be created and provided for the subsequent RFP. A detailed explanation of the capacity per square may also be provided. Through the Special Notice and draft RFP documents, FirstNet seeks further feedback and comments on the definition of coverage.

567. Recommendation to provide additional details and clarification regarding various required services per IOC phase. Examples include but are not limited to the following:

a) 4.1.1.5 High Power User Equipment (UE) support: What is meant by “support”?

b) 4.1.2.1 COTS non-Band 14 devices available: Caution that the purchase of non-Band 14 devices will be a lost investment since they are not usable on the future Band 14 network.

c) 4.1.2.5.b FirstNet application store for public safety applications (mobile, server and desktop): Additional details is required to best frame the app store requirement.

d) 4.1.2.5.j Support for Over the Top (OTT) LTE Push-to-Talk (PTT) interoperability with LMR application(s): What is meant by “support”?

Document Reference: C-8 IOC / FOC

Answer:

a. FirstNet is expecting the RAN design will support High-Power UEs. FirstNet seeks further feedback in this area.

b. FirstNet seeks additional feedback in this area.

c. FirstNet seeds feedback on the feasibility of a FirstNet apps store or leveraging existing apps stores.

d. FirstNet expects this functionality to be a key capability of the NPSBN. FirstNet seeks additional feedback on solutions to meet this need.

568. Regarding the Category One, Nationwide Core Radio Access Network and Subscriber for All States:

1. Is the expectation that that Category One partner would integrate all required high level functions (Core, Applications ecosystem, RAN, Covered Lease Agreement, Deployables, Satellite, Devices, Subscriber adoption, Customer lifecycle management) into their respective proposals?

2. Since many of the high level functions could also be acquired from individual providers, many of which their core business is not as a commercial cellular carrier but who act as service/product providers to commercial carriers, and from who their services could be procured independently and potentially at less cost, is there consideration from FirstNet to form partnerships with the providers of these specialized services?

3. How would a Category Two partner interested in serving one or more states or regions, interact with a Category One national partner? What business relationship would be required between these two partnership structures? How does FirstNet propose to manage the boundaries between these partners?

4. There are potentially multiple partial state, single state and multiple state or regional partners that would add value to the business model, and who should be encouraged to participate. Therefore, the relationship between a Category One and Category Two partners needs to be mutually beneficial.

5. Would FirstNet consider partial State partners, such as rural telcos, utilities, tribal or other independent partners not interested in serving a full State geography? (#6 below)

6. Would FirstNet consider partnership options other than Category One and Category Two approaches?

Document Reference: Special Notice Page 42130 Section / Paragraph: Section 4.3

Answer:

1. Yes, the FirstNet expectation is that a Category One partner would integrate all required high level functions (Core, Applications ecosystem, RAN, Covered Lease Agreement, Deployables, Satellite, Devices, Subscriber adoption, Customer lifecycle management) into their respective solutions.

2. FirstNet expects Prime offerors to provide all functions in Category One, either through direct services, or potential other avenues, to include subcontracting or other agreements with providers of those services the Prime itself cannot perform.

3. It is not in the purview of FirstNet to dictate those relationships directly; however, companies wishing to be named as potential teaming participants may contact the Contracting Officer and indicate their desire to be added to FirstNet's teaming list. Category One offerors should expect to manage those relationships or establish them where they do not currently exist. Further information regarding the necessary interactions between Category One and Category Two contractors may be provided in the subsequent RFP.

4. FirstNet understands that relationships should be mutually beneficial and support the best solutions for Public Safety Users.

5. The Special Notice states that Category Two “would allow potential offerors to submit an offer for one or more State RANs.” These proposed solutions may be led by a single firm or a team. FirstNet is seeking feedback on the Special Notice and draft RFP documents, and encourages respondents to address potential other avenues to a nationwide comprehensive network solution if respondents believe alternatives exist to the proposed models.

6. See above (#5).

569. The data files supplied to States do not have any detail. They are just points defined by latitude and longitude. Without the detailed information (name and nature of the high risk/interest site) we cannot validate and verify to accuracy of the data and therefore cannot corroborate that the requirements are accurate or adequate. Also, what were the data sources for the information and where can we get the source files?

Document Reference: C-1 Coverage Objective Maps Page 2 Section / Paragraph: 3.2

Answer:

FirstNet anticipates posting the source data files (used to create the coverage objective maps set forth in amended Appendix C-1 and posted on www.fbo.gov on May 13, 2015) no later than the release of the RFP.

570. The description of the grid characterization process is too vague and as described is not replicable or measurable. As a result it cannot be used by the States to cross check or by vendors to be able to track performance. Please supply more detail with the actual data sets (not the accumulated multi-source version) the actual values used for normalization and the entire process with examples.

Document Reference: C-1 Coverage Objective Maps Page 3 Section / Paragraph: 4

Answer:

FirstNet can provide a nationwide coverage objective map with the 1x1 mi grid overlay, each uniquely identified. However, FirstNet may update the information throughout the acquisition process.

Although FirstNet developed a “grid value” that represented the concentration of data within each grid, this was used as preliminary information to assist states and territories in identifying coverage needs. Any type of final “grid value” released in the subsequent RFP will be based on state/territory inputs, not FirstNet’s original coverage objective baseline algorithm. Therefore, FirstNet does not consider sharing current grid values is beneficial to this process.

571. What are Individually Liable Accounts?

Document Reference: C-7 Operational Architecture Page 17 Section / Paragraph: A.2.1.6

Answer:

An individually liable account is a billing group configuration where each of the participants in the group receives and is responsible for its own portion of the monthly invoice. There are many different variations of such accounts.

572. Please describe a circumstance in which an “individually liable account” would be created and how it would differ from accounts that are not in this category.

Document Reference: C-7 Operational Architecture Page 17 Section / Paragraph: A.2.1.6.2

Answer:

One possible example of when an individually liable account could be used is for an all-volunteer fire department that wants to deploy FirstNet Band 14 devices to its members in exchange for members covering the monthly fees. In this model, the member does not need a personal device and a "work" device to support their community. In a typical business account hierarchy, all usage charges accrue to a single invoice with, most commonly, a single billing address and payer.

573. Would cloud services provided be subject to processing or review and authorization under FedRamp? B. Is the FirstNet Cloud Platform compliant with FBI CJIS policy for application that touch FBI data sources??

Document Reference: C-7 Operational Architecture Page 24 Section / Paragraph: A.3.4.2.9.3

Answer:

A) Cloud services are a potential revenue stream for the offeror(s) and a value-add for some PSEs. FirstNet expects that there are PSEs that will require the added security that comes with FedRAMP certification and some PSEs that will not require FedRAMP certification. FirstNet seeks feedback on the benefits, and costs, of providing FedRAMP compliant cloud offerings to PSEs. FirstNet also considers it is in the best interest of all stakeholders to have as diverse a set of services, products, and applications as economically viable for the Public Safety market.

B) FirstNet expects that an offeror proposing to offer cloud services would also address whether its platform can support security and interfaces that allow Criminal Justice Information System (CJIS) integration. An application that accesses FBI data sources must be compliant to the FBI CJIS Security Policy (<http://www.fbi.gov/about-us/cjis/cjis-security-policy-resource-center/view>).

574. Will ITIL certification be required for contractor(s) providing FirstNet O&M? B. If yes, which certifications will be required? C. To what level of contractor personnel will such certifications be required?

Document Reference: C-7 Operational Architecture Page 40 Section / Paragraph: A.3.8.2

Answer:

FirstNet does not anticipate requiring Information Technology Infrastructure Library (ITIL) certification for contractors. FirstNet anticipates requiring that any use of ITIL be done by individuals with the proper level of experience and expertise to ensure that it is utilized correctly. Comparable frameworks may be used as well.

575. Why are the proposed FirstNet data rates (e.g.: 3Mbs/.5Mbs/.1Mbs) so far below nation standards and current carrier service levels?

Answer:

Please refer to SOO Appendix C-1 Baseline Coverage Objective Maps for updated language regarding this topic. Through the state consultation process an updated Public Safety User throughput demand map/profile may be created and provided in the subsequent RFP.

FirstNet seeks further feedback and comments on the definition of coverage, in accordance with the Special Notice.

576. How are NIMS and incident command requirements being addressed in the proposed service offering?

Answer:

FirstNet is referencing NIMS ICS as a framework used by Public Safety for managing different types of incidents. Support for incident management is being addressed through many of FirstNet's key objectives, including SOO Section C.5 objectives 1 (Build, Deploy, Operate and Maintain the NPSBN), 4 (Device Ecosystem), 5 (Application Ecosystem), 7 (User Service Availability), 8 (Service Capacity), 9 (Cyber Security), and 10 (Priority Services).

577. What are the capabilities of the GIS software tool used to update the state wide coverage maps?

Answer:

FirstNet does not have a preferred or recommended geographic information system (GIS) software solution; however, FirstNet currently uses ArcGIS. Capabilities can be found at www.esri.com.

578. How will network speeds be defined relative to FCC broadband definitions? Red/Blue/Green grids as demonstrated do not appear to provide broadband level coverage at any location, either with the old 4 Mbps standard, or the current 25 Mbps definition. Given the likelihood of large amounts of data coming from user equipment, does FirstNet anticipate their speed requirements be symmetrical, or even asymmetrical up (opposite of typical consumer use)?

Answer:

Please refer to SOO Appendix C-1 Baseline Coverage Objective Maps for updated language regarding this topic. Through the state consultation process an updated Public Safety User throughput demand map/profile may be created and provided for the subsequent RFP.

FirstNet seeks further feedback and comments on the definition of coverage, in accordance with the Special Notice.

579. How do coverage projections in the draft RFP relate to FCC criteria for substantial deployment, particularly in rural locations?

Answer:

The FCC has not established build out milestones for the FirstNet spectrum license, with regard to substantial deployment within rural locations. However, in the Special Notice, FirstNet has preliminarily identified substantial rural coverage milestones that offerors would need to meet. FirstNet seeks feedback regarding this topic, in the Special Notice.

The draft RFP documents contain coverage objective maps, which provide a baseline of where coverage is expected to be needed in each State based on objective nationwide criteria. These maps are intended to capture PSEs' coverage requests as a starting point to be validated and updated through the consultation process. These coverage objective maps are not projections of actual coverage.

Section 1426(b)(3) of the Act requires "deployment phases with substantial rural coverage milestones as part of each phase of the construction and deployment of the network. To the maximum extent economically desirable, such proposals shall include partnerships with existing commercial mobile providers to utilize cost-effective opportunities to speed deployment in rural areas." The coverage objective maps provided in the draft RFP documents do not represent deployment phases.

580. Is it desired that components of the Applications Ecosystem are also included in deployables that contain LTE cores to maintain full capability in disconnected mode? If so, is there guidance as to which components should be included and to what level?

Document Reference: C-4 SV-1 and StdV-1 Section / Paragraph: 4

Answer:

FirstNet foresees that there will be a range of types of deployables that provide capabilities for different situations. For deployables that include a Core functionality, FirstNet anticipates offeror's proposals, in response to the subsequent RFP, will identify solutions pertaining to application capabilities that are cost-effectively and that minimize the operational impact to Public Safety Users.

581. How will FirstNet incentivize a contractor/offeror to offer true, and sustainable, speeds greater than this?

Document Reference: C-1 Coverage Objective Maps Page 1

Answer:

FirstNet desires a robust, high performance network service that provides Public Safety Users with the bandwidth, QoS, and latency necessary to support their mission requirements. FirstNet is seeking feedback from offerors discussing how they would measure and document where the service they provide meets or exceeds FirstNet's required minimum performance specifications, and what incentives FirstNet should offer to encourage contractors to meet or exceed these performance specifications.

582. Is FirstNet looking for speeds greater than this?

Document Reference: C-1 Coverage Objective Maps Page 1

Answer:

Please refer to SOO Appendix C-1 Baseline Coverage Objective Maps for updated language regarding this topic. Through the state consultation process an updated Public Safety User throughput demand map/profile may be created and provided for the subsequent RFP. FirstNet seeks further feedback and comments on the definition of coverage.

583. How will FirstNet ensure that, while each grid block has more than 50% coverage, a "dead spot" does not develop in adjacent grid blocks?

Document Reference: C-1 Coverage Objective Maps Page 1

Answer:

The evaluation criteria will be included in the subsequent RFP in Section M. As required by the Federal Acquisition Regulation (FAR), specifically section 15.305, all factors and significant sub factors that will affect contract award, and their relative importance, will be stated clearly in the solicitation.

584. What are corrective actions will be implemented if a contractor/offeror does not meet “targeted” timelines?

Document Reference: C-8 IOC / FOC Page 6 Section / Paragraph: 4.2

Answer:

If a contractor does not meet the subsequent contract’s terms and conditions, including the “targeted” timelines or any other obligations, FirstNet would determine the appropriate course of action in accordance with the contract’s terms and conditions and applicable laws and regulations. Appropriate courses of action may include applying disincentives for non-performance if identified in the quality assurance surveillance plan or issuing show case or cure notices.

585. What is the process, in detail, of this stop-go phased roll-out?

Document Reference: C-8 IOC / FOC Page 7 Section / Paragraph: 4.3

Answer:

FirstNet seeks comment on how to launch its services and systems to allow for public safety usage as quickly as possible while achieving financial sustainability, for FirstNet, as soon as possible. This includes building, deploying, and operating the NPSBN utilizing the FirstNet Band 14 spectrum.

The RFP IOC/FOC Target Timeline milestones are intended to be a growing or additive evolution of the FirstNet NPSBN and services offering. FirstNet considers this a phased approach where each IOC is reached and becomes the baseline for the next IOC, offering initial services in a model similar to a MVNO which is then is evolved to FOC and beyond.

586. How will the nationwide roll-out of each phase be affected if a problem arises in a single State, but goes to plan in the rest of the States and Territories?

Document Reference: C-8 IOC / FOC Page 7 Section / Paragraph: 4.3

Answer:

Phased deployment plans will be provided as part of each offeror(s) proposal. FirstNet expects that potential offerors would provide a robust deployment plan, to potentially include a risk mitigation plan

that would permit continued construction when certain sites become unavailable within the timeline originally projected.

587. Will a local Public Safety Entity be required to purchase the local control functionality or is it State based?

Document Reference: C-9 Use Cases Page 14

Answer:

Local control is one of the key value-adds required by PSEs. FirstNet is seeking feedback on how to best provide local control to a PSE for management of its users, devices, services, and Applications. FirstNet expects offeror(s) to balance the costs of providing services to PSEs with the goal of competitive pricing. Whether this type of cost is covered in the base price of a service plan or some other charging method is a part of what FirstNet would expect to see in an offeror's proposed solution.

588. What is the billing process for a Public Safety Entity to utilize the local control functionality and who will be paid?

Document Reference: C-9 Use Cases Page 14

Answer:

User fees are a key component of a sustainable FirstNet business model. FirstNet seeks for the recovery of costs of capabilities such as local control.

589. How will FirstNet determine which Public Safety Entity to bill in a multi-agency response with regards to local control as a service?

Document Reference: C-9 Use Cases Page 14

Answer:

Should an offeror propose local control as a service, FirstNet would expect the offeror to propose how the service might be billed. Regardless of charging model, FirstNet is not prescriptive with respect to how localities, states, or Tribal areas may share costs during mutual aid situations. FirstNet seeks feedback regarding desired capabilities to support cost sharing and potential charging models.

590. How is 50% coverage defined for a given square mile grid? Are multiple tests assumed for each square mile grid? If 100 tests were performed per square mile grid, would 50% coverage be met if 51 of the 100 tests met the 768Kbps DL and 256Kbps UL with 50% load and simultaneously met the average data rate for the color-coding of the grid under test?

Document Reference: C-1 Coverage Objective Maps Page 1 Section / Paragraph: Para 2

Answer:

Currently, for initial evaluation and assessment purposes, the assumption is a one mile by one mile grid block will be deemed "covered" (coverage objectives met) if more than 50% of the area meets the definition of coverage based on coverage prediction maps provided from the offeror. However, the evaluation criteria will be included in the subsequent RFP in Section M. As required by the Federal Acquisition Regulation (FAR), specifically section 15.305, all factors and significant sub factors that will affect contract award, and their relative importance, will be stated clearly in the solicitation.

591. Assuming FirstNet requires drive testing for coverage validation, will FirstNet require coverage testing for specific applications such as the services and systems listed in 4.3.2 and 4.3.3, namely: VoLTE, video, multi-cast and 3GPP ProSe.

Document Reference: C-8 IOC / FOC Page 7 Section / Paragraph: 4.3.2

Answer:

FirstNet's Test Strategy document is still being determined and documented. However, it will define testing procedures which will include services to be tested and the related methodology as a part of the subsequent RFP.

592. Performance standard is increasing number of applications published to the store, yet metric is those applications with at least 5% unique download adoption. Please clarify which goal applies

Document Reference: C-6 QASP Page 5 Section / Paragraph: Table 2

Answer:

The performance standard may be revised in the subsequent RFP to align it with the metric. FirstNet considers the actual download, purchase, and use of Applications, as noted by the metric, may be a significant indicator of success for the Applications store than raw numbers of published Applications.

593. 300 Mbps DL and UL at 70% loading does not agree with the coverage/throughput requirements listed in C-1 Coverage Maps. Please clarify.

Document Reference: C-6 QASP Page 14 Section / Paragraph: Table 2

Answer:

Q-RC-19, in Appendix C-6 Quality Assurance Surveillance Plan, is a fixed Core network performance metric and not a RAN design metric as noted in SOO Appendix C-1 Baseline Coverage Objectives Maps.

594. Can detailed references be given for where the FEMA use cases (SAFECOM, NPSTC, PSAC) are defined in detail?

Document Reference: C-9 Use Cases

Answer:

The following are reference documents that contain Public Safety use cases. They can be found at the links listed below.

1. The SAFECOM Program, “Public Safety Statement of Requirements for Communications and Interoperability”, Volume I, Version 1.2, October 2006.
http://www.pscr.gov/outreach/archive/safecom_archive/ps_sor/reqs/SoR1_v1.2_10182006.pdf
2. National Public Safety Telecommunications Council (NPSTC), "Use Cases & Requirements for Public Safety Multimedia Emergency Services (MMES)", Rev C, November 2012.
http://www.npstc.org/download.jsp?tableId=37 & column=217 & id=2354&file=Use_Cases_Rqmts_PS_MMES_Report_120531.doc
3. Public Safety Advisory Committee (PSAC), "Use Cases for Interfaces, Applications, and Capabilities for the Nationwide Public Safety Broadband Network", July 21, 2014.
<http://www.firstnet.gov/sites/default/files/PSAC%20Use%20Cases%20Report.pdf>

595. Does category 1 subsume all of category 2? Does FirstNet intend to entertain bids in both categories 1&2? Can bidders make offers in both categories?

Document Reference: Special Notice Page 5

Answer:

Yes, Category One contains all functionality, whereas Category Two contains RAN and CLAs as identified in Section 4.3, FirstNet’s Proposed Approaches – Prior to State RAN Decision Process. FirstNet's proposed acquisition approach considers both Nationwide Proposals (Category One) and Regional RAN Proposals (Category Two), the latter of which could be integrated into a nationwide solution. Under the Special Notice model, FirstNet seeks feedback with regard to Category One, Category Two, or a combination thereof.

596. FirstNet calls out for compliance to NIST cyber security standards. However, given that the NPSBN will include law enforcement traffic, which may have to have to maintain CJIS compliance, how does FirstNet envision the relationship between the NIST standards and CJIS on the NPSBN? Will NPSBN have to be CJIS compliant; or will there be separated domains and if so, what rules will be in place for exchanging data between those domains? How will exchanging data with CJIS compliant systems affect cloud solutions? What about BYOD UE envisioned in Use Case para 4.21?

Document Reference: C - SOO Section / Paragraph: C-4

Answer:

FirstNet anticipates leveraging existing system specific compliance requirements in concert with current NIST guidance and industry best practices to ensure end to end security. FirstNet seeks feedback on security objectives for the NPSBN. Detailed security requirements will be included in Appendix C-10, FirstNet Cyber Hardness Requirements.

597. Item 5: What operating systems will need to be supported (e.g., iOS, Android, Windows Mobile, etc.)?

What type of mobile applications will be developed?

- B2E/B2C or both?
- Mobile web/hybrid/native apps?

What skillsets do the staff developers have?

- Web development (HTML, JavaScript, CSS)?
- Windows development (C#)?
- Native development (Swift for iOS, Java for Android, etc.)?
- Other?

What type of enterprise back-end systems will the mobile applications need to integrate with?

Can you clarify what core services and application delivery platform are expected in 5g by providing examples?

What data and information exchange standards will be enforced for interoperability?

Document Reference: C - SOO Section / Paragraph: C-5

Answer:

SOO Section C.5 Objectives, objective 5 presents FirstNet's objectives for a robust Applications Ecosystem in which third parties would be expected to develop and support Applications of value to PSEs. FirstNet is not planning to develop Applications or create a team of staff developers.

Decisions regarding operating systems, types of Applications, whether to develop web/native/hybrid Applications, programming and markup languages, developer skills, and back end systems with which to integrate would be a part of the offerors' proposed solution.

FirstNet cannot ensure, and does not expect, that all Applications are interoperable. SOO Section C.5 objective 5 Application Ecosystem that stimulates a vibrant developer community implies creative Applications that are not bound by potentially restrictive data formats. Appendix C-3 Recommended Minimum Technical Requirements to Ensure Nationwide Interoperability for the NPSBN defines

interoperability at the network and RAN layers, not the Application layer. However, the need for Application and data interoperability will be key elements of Public Safety User satisfaction going forward.

FirstNet seeks feedback on solutions for these issues, in accordance with the Special Notice.

598. Figs. 3 and 4 show a mix of functions and products. Since this seems ambiguous what is the meaning of the QoS ‘box’?

Document Reference: C-4 SV-1 and StdV-1 Section / Paragraph: 3.1

Answer:

The QoS box in Figures 3 and 4 of Appendix C-4 System and Standard Views (SV-1 and StdV-1) represent a QoS function and not specific network elements.

599. Fig.6 shows mVPN going to FN’s cloud. Is FN’s intent to own a MVPN gateway? Are all the logical links bi-directional?

Document Reference: C-4 SV-1 and StdV-1 Section / Paragraph: 5.1

Answer:

FirstNet's intent is not to be prescriptive in how the logical interfaces displayed are implemented. FirstNet solicits feedback on how to create such interfaces while maintaining the implied security objectives of each PSE interface. The interface may be bi-directional, depending upon the design of an offeror's proposed solution for implementation.

600. If a common MVPN solution is sought what is the meaning of “compatible mVPN clients”?

Document Reference: C-4 SV-1 and StdV-1 Section / Paragraph: 5.2.2

Answer:

Table 11 refers to secure communications between a user device and the PSE. FirstNet's intent is not to be prescriptive toward the PSE as to which Mobile Virtual Private Network (MVPN) solution is required. FirstNet is merely stating that the solution utilized between the device and PSE must be compatible. The intent is not to imply that a single, universal MVPN solution is required. FirstNet seeks feedback regarding the use of MVPNs, in accordance with the Special Notice.

601. Please clarify the meaning of ‘true location’ .

Document Reference: C-7 Operational Architecture Section / Paragraph: A.3.4.2.2.4

Answer:

The description for the operational architecture function will be revised in the subsequent RFP to remove the word “true.”

602. Is this requesting CMAS support for the NPSBN?

Document Reference: C-7 Operational Architecture Section / Paragraph: A.7.2.3.2

Answer:

Yes. See Appendix C-8 IOC/FOC Target Timeline for the incremental levels of CMAS support that are expected in IOCs 1-3.

603. Appendix C1 Coverage Shape files posted FOB.gov on Apr 27, 2015, Maryland directory appears to be missing main FirstNet_Coverage_Objective_Baseline_Maryland.shp” file. Instead there is a “FirstNet_Coverage_Objective_Baseline_Maryland.sbn” that appears to be corrupt if changed to .shp file extension. Can the Maryland Shape files be reposted with appropriate shape files?

Document Reference: C-1 Coverage Objective Maps

Answer:

The .shp file for Maryland has been posted on www.FBO.gov.

604. How will network speeds be defined relative to FCC broadband definitions?

Answer:

Please refer to the amended SOO Appendix C-1 Baseline Coverage Objective Maps, posted to www.FBO.gov on May 13, 2015, for updated language regarding this topic. Through the state consultation process, an updated Public Safety User throughput demand objective map/profile may be created and issued with the subsequent RFP. Also, the evaluation criteria will be included in the subsequent RFP in Section M. As required by the Federal Acquisition Regulation (FAR), specifically section 15.305, all factors and significant sub factors that will affect contract award, and their relative importance, will be stated clearly in the solicitation.

FirstNet seeks feedback on the definition of coverage, in accordance with the Special Notice.

605. Red/Blue/Green grids as demonstrated do not appear to provide broadband level coverage at any location, either with the old 4 Mbps standard, or the current 25 Mbps definition. Given the likelihood of large amounts of data coming from user equipment, does FirstNet anticipate their speed requirements be symmetrical, or even asymmetrical up (opposite of typical consumer use)?

Answer:

Through the state consultation process, an updated Public Safety User throughput demand map/profile may be created and issued with the subsequent RFP. Therefore, FirstNet is still in the process of making the appropriate determination pertaining to anticipated speed and type. However, please refer to the amended SOO Appendix C-1 Baseline Coverage Objective Maps, posted to www.FBO.gov on May 13, 2015, for updated language regarding this topic. FirstNet seeks feedback on the definition of coverage, in accordance with the Special Notice.

606. How do coverage projections in the draft RFP relate to FCC criteria for substantial deployment, particularly in rural locations?

Answer:

The FCC has not established build out milestones for the FirstNet spectrum license, with regard to substantial deployment within rural locations. However, in the Special Notice, FirstNet has identified substantial rural milestones that offerors would need to meet within their proposed solutions.

607. Please explain why Q-APP-4 and -7 require continuous new application production and downloads.

Answer:

The standard is an ever increasing number of applications that have Public Safety User traction as measured by the rate of downloads. Offerors are being challenged to ensure that the Application store is growing with Applications that Public Safety Users want/need and are buying, not just to add raw numbers of Applications that include unused Applications.

608. How was the “acceptable” value of 1,000 breached records annually determined (Q-APP-19)? How are “records” defined?

Answer:

FirstNet’s goal and objective is to avoid any and all security breaches. This is an area of active investigation, and FirstNet seeks feedback on appropriate measures, in accordance with the Special Notice.

609. If “opting-in to the FirstNet solution” is not the best option for a state, should Q-BUS-5 require selected vendors to proceed with that approach anyway?

Answer:

Section 1442(e) of the Act sets forth the statutory requirements governing the state plan process. FirstNet is required to submit state plans to all 56 states and territories.

610. Please clarify the definition of “secondary users” on the NPSBN

Answer:

Per Section II.A.ii of the First Notice (<https://www.federalregister.gov/articles/2014/09/24/2014-22536/first-responder-network-authority-proposed-interpretations-of-parts-of-the-middle-class-tax-relief>), FirstNet preliminarily interprets a “secondary user” under the Act as an entity that enters into a CLA with FirstNet and accesses network capacity on Band 14 spectrum on a secondary basis for the provision of non-public safety services only.

611. How is the creation of an app ecosystem expected to be occur? Who will maintain it, manage developers, review submitted apps, etc.?

Document Reference: C-4 SV-1 and StdV-1 Page 8 Section / Paragraph: Section 4, Application Ecosystem

Answer:

FirstNet expects an offeror to propose an Application Ecosystem that minimally includes the components identified in SOO Section C.5 Objectives, objective 5 Application Ecosystem. Regarding operations, FirstNet is seeking feedback on the roles within the Application Ecosystem on Appendix C-7 Operational Architecture Functional Descriptions, in accordance with the Special Notice.

612. Is there an assumed method for enforcing Mobile VPN across all relevant operating systems or enforceable based on what each OS allows (e.g.- Per App VPN for iOS includes enforcement; AfW for Android will likely include enforcement of apps in the AfW container)?

Document Reference: C-4 SV-1 and StdV-1 Page 8 Section / Paragraph: Section 4, Application Ecosystem

Answer:

FirstNet is not implying an assumed method or that a single, universal Mobile Virtual Private Network (MVPN) solution is required per Application or per Operating System (OS). FirstNet expects offerors to propose solutions to meet FirstNet’s objectives and does not intend to be prescriptive toward the

Application developer as to which MVPN solution is required. FirstNet seeks feedback regarding the use of MVPNs, in accordance with the Special Notice.

613. Is access only based on user ID (e.g.- user name and password) and devices? Or are other contextual aspects considered (e.g.- location)?

Document Reference: C-5 StdV-2 Page 7 Section / Paragraph: Section 7

Answer:

In order to meet public safety requirements for QPP and local control, FirstNet foresees a need for access controls based on secure user authentication and dynamic authorization to network resources, data, and applications. Techniques to accomplish this include, but are not limited to, multi-factor authentication and Attribute-Based Access Control (ABAC). Possible attributes might include location, default role, user assigned to an incident, incident role, and assigned agency. However, it would be up to the offeror to propose the solution.

614. Are users, roles and devices the only attributes considered for access to applications? Are there others that might be included (e.g.- location)?

Document Reference: C-9 Use Cases Page 18 Section / Paragraph: Section 4.8.6.6

Answer:

FirstNet foresees a need for access controls based on dynamic authorization to network resources, data, and applications. One technique to accomplish this includes, but is not limited to, Attribute-Based Access Control (ABAC). Possible attributes might include location, default role, user assigned to an incident, incident role, and assigned agency. However, it would be up to the offeror to propose the solution.

615. FirstNet defines “substantial rural milestone” for an IOC phase as at least 20% coverage.” How was the 20% threshold determined? What is the rationale for declaring this as “substantial?”

Document Reference: C-8 IOC / FOC Page 0 Section / Paragraph: Definitions, bullet 3

Answer:

FirstNet sought comments regarding how to interpret “substantial rural coverage milestones” and how to implement the requirement in Section II.B.3 of its first public notice that was published in the Federal Register on September 24, 2014 and is available at <https://www.federalregister.gov/articles/2014/09/24/2014-22536/first-responder-network-authority-proposed-interpretations-of-parts-of-the-middle-class-tax-relief>.

In addition, as part of FirstNet’s consultation and outreach efforts, FirstNet is having a dialogue with stakeholders about coverage objectives. Public Safety User priorities will be a part of that discussion and will lead FirstNet to the coverage objectives, and updated maps may be released as part of the subsequent RFP. FirstNet seeks feedback regarding this topic, in accordance with the Special Notice.

616. What is “Connection manager support?”

Document Reference: C-8 IOC / FOC Page 0 Section / Paragraph: timeline, 4.2.2 (4)

Answer:

The "Connection manager support for local control" is related to the connection management functionality required of FirstNet devices to support mobility and QPP framework currently under development. Specifically, it is the additional functionality in the devices within the FirstNet device ecosystem required to support dedicated bearers which will be required to support the QPP framework.

617. Coverage Maps - How do the rural coverage requirements match up to the FCC criteria for coverage?

Answer:

The FCC has not established build out milestones for the FirstNet spectrum license, with regard to substantial deployment within rural locations. However, in the Special Notice, FirstNet has preliminarily identified substantial rural coverage milestones that offerors would need to meet. FirstNet seeks feedback regarding this topic, in accordance with the Special Notice.

The draft RFP documents contain coverage objective maps, which provide a baseline of where coverage is expected to be needed in each state based on objective nationwide criteria. These maps are intended to capture PSEs’ coverage requests as a starting point to be validated and updated through the consultation process. These coverage objective maps are not projections of actual coverage.

618. Coverage Maps - Will FirstNet consider determining 20% rural coverage on a state by state basis?

Answer:

As part of FirstNet’s consultation and outreach efforts, FirstNet is having a dialogue with stakeholders about coverage objectives. Public Safety User priorities will be a part of that discussion and will lead FirstNet to the coverage objectives, and updated maps will be released as part of the subsequent RFP. FirstNet seeks feedback regarding this topic, in accordance with the Special Notice.

619. Coverage Maps - Can the GIS software tool be used to prepare analytics at the State level?

Answer:

FirstNet did not provide states and territories with a geographic information system (GIS) software tool. The states and territories were provided with GIS layer packages that can be opened with tools such as ESRI's ArcGIS tools.

620. Devices - How will lost/stolen devices be handled?

Answer:

FirstNet expects that the NPSBN will include the functions of Mobile Device Management (MDM) and Local Control as detailed in Appendix C-7 Operational Architecture Functional Descriptions. FirstNet expects local agency administrators to have the capability to lock and/or wipe the lost/stolen devices as needed. As needed, the UICC could also be deactivated and the International Mobile Station Equipment Identity (IMEI) could be entered into the Equipment Identity Register (EIR) for blacklisting on the FirstNet network. FirstNet requests feedback regarding the development of the MDM and Local Control framework and the implementation options of this framework within the FirstNet services.

621. Bandwidth/Spectrum - What are the determining factors for large demands by public safety during response?

Answer:

The determining factors for large demands are based on the number of users and the types of applications utilized during the event by the PSEs.

622. Costs - Has FirstNet considered how state costs for the network operation consultation will be reimbursed until all costs are covered by the build out of the NPSBN?

Answer:

FirstNet assumes the intent of this question pertains to reimbursement of consultation costs as it correlates to the proposed solution. FirstNet does not intend to reimburse state costs for network operation consultation. However, states are encouraged to explore the possibility that the State and Local Implementation Grant Program for Public Safety Broadband Planning (SLIGP) may allow funding for such costs. SLIGP was created under the Middle Class Tax Relief and Job Creation Act of 2012, and is administered by NTIA to provide resources to assist regional, state, local and tribal government entities as they plan for the NPSBN being developed by FirstNet. SLIGP provides recipients with the resources to work with stakeholders throughout the state or territory to identify needs, gaps, and priorities for public safety wireless broadband. Further detail on the SLIGP can be found at NTIA's comprehensive website:

www.doc.ntia.gov/category/state-and-local-implementation-grant-program. To explore this possibility, states should contact NTIA's SLIGP staff directly.

623. Ongoing Support - How will FirstNet handle ongoing client support, once the NPSBN is launched?

Answer:

Appendix C-7 Operational Architecture Functional Descriptions defines tasks that must be accomplished in order to make the NPSBN operational. FirstNet has defined responsibility for a small number of these tasks but is soliciting input as to the most cost effective, efficient way to allocate responsibility and define processes associated with administering client support activities.

624. Ongoing Support - Will FirstNet have service centers within each state or at a regional level?

Answer:

FirstNet is seeking feedback on functions listed in Appendix C-7 Operational Architecture Functional Descriptions, to include customer service and support, in accordance with the Special Notice.

625. Ongoing Support - How long will it take for authentication and activation of a device on the network?

Answer:

FirstNet anticipates offeror's proposed solutions will identify support procedures and equipment to activate and deactivate subscribers on the network. FirstNet expects agencies will be able to manage provisioning of their own users.

626. Ongoing Support - How will the State interface with the carrier service provider?

Answer:

FirstNet expects offerors to propose solutions that meet FirstNet's customer care and customer service objectives. FirstNet seeks feedback on this topic as part of the Operational Architecture, in accordance with the Special Notice.

627. Ongoing Support - How will commercial users be managed when the network is needed strictly for public safety?

Answer:

FirstNet foresees that the scope of a preemption action should be limited to the area of the network where congestion or other triggering criteria are met and could be as contained as a single cell sector. In this instance, there would likely be alternative, non-Band 14 connectivity options to absorb the preempted users.

FirstNet foresees that preemption of users may occur either automatically or manually. In the automatic scenario, network policies based on usage, throughput, or congestion levels may trigger preemption. The precise details and conditions of these automated policies would be discussed between the offeror(s), user constituencies, PSAC and FirstNet as appropriate.

In the manual scenario, a planned event or incident may trigger preemption via local control. As in the automated scenario, the specific policies and procedures to be followed would be discussed with the key stakeholders, as appropriate. FirstNet seeks feedback regarding this issue in accordance with the Special Notice.

628. Must a Category 1 or Category 2 offeror have an office within the United States?

Answer:

Any geographic requirements as it pertains to the NPSBN solution will be stated in the subsequent RFP.

629. Will FirstNet be subject to Federal/State/Local taxes and mandatory service fees (9-1-1 surcharge, for example), similar to current commercial cellular service, or be exempt?

Document Reference: Special Notice Page 7 Section / Paragraph: 4.5

Answer:

Taxes and fees may depend upon the arrangements proposed by the offeror. However, if FirstNet determines taxes and fees are required based on laws and regulations, the subsequent RFP may include terms and conditions as appropriate.

630. Is spectrum management, planning and assignment a function of FirstNet, the Users, or an outside provider?

Document Reference: C-7 Operational Architecture Page 8 Section / Paragraph: A.1.13.3

Answer:

FirstNet foresees Spectrum Management to be a function of FirstNet, but FirstNet seeks feedback on this topic as part of the Operational Architecture, in accordance with the Special Notice.

631. What are the specific uplink and downlink capacity and speed requirements for the network?

Document Reference: C-1 Coverage Objective Maps Page 1

Answer:

Please refer to the amended SOO Appendix C-1 Baseline Coverage Objective Maps, posted to www.FBO.gov on May 13, 2015, for updated language regarding this topic. Through the state consultation process, an updated Public Safety User throughput objective demand map/profile may be created and issued with the subsequent RFP. Through the Special Notice, FirstNet seeks feedback on the definition of coverage, in accordance with the Special Notice.

632. What is FirstNet’s expectation for video resolution for the network?

Document Reference: C-1 Coverage Objective Maps Page 1

Answer:

FirstNet foresees support for multiple video resolutions. Video resolution will depend on the particular use case as well as an offeror’s proposed solution.

633. Please clarify which, if any, of the VoLTE services planned are required to be Public Safety Grade (Mission Critical) in nature.

Document Reference: C - SOO Page 3

Answer:

3GPP standards for VoLTE are expected to be met as they evolve, to meet the objectives set forth in FirstNet’s SOO Section C.5, which include but are not limited to reliability, resiliency, service quality, availability, security, and priority (Objectives 1, 7, 9, and 10).

634. This section shows that VoLTE is part of the roaming requirement, will this include:

A: VoLTE Dial-Up Services

B: VoLTE PTT following the 3GPP Standards

C: VoLTE PTT interface to existing LMR system?

Document Reference: C-4 SV-1 and StdV-1 Page 6

Answer:

FirstNet's SOO Section C.5, objectives 7 through 10, requires offerors to provide seamless nationwide public safety services. FirstNet is seeking feedback on those services that should be included, in accordance with the Special Notice.

635. Do the roaming partners need to have all of the capabilities noted in [Question 634] and be 100% fully compatible with FirstNet for roaming services?

Document Reference: C-4 SV-1 and StdV-1 Page 6

Answer:

Standard interfaces to support inbound and outbound roaming between FirstNet and a commercial carrier will be required. However, the requirements mentioned in the roaming section of Appendix C-4 Systems and Standard Views (SV-1 and StdV-1) are for LTE network roaming, whereas the roaming partnership could also be with networks of other technologies.

636. Each city/county and state will have multiple types of dispatch: law, fire, EMS, OES, etc. How does FirstNet view local control being provided to all of these different entities?

Document Reference: C-4 SV-1 and StdV-1 Page 9 Section / Paragraph: 4.4.2

Answer:

FirstNet assumes this question refers to Appendix C-4 System and Standard Views (SV-1 and StdV-1) Section 4.2.2 vs. Section 4.4.2. FirstNet foresees that each individual agency will have local control of its own users, devices, services, and applications.

637. Please explain the words in the diagram: “federation Access Control.”

Document Reference: C-4 SV-1 and StdV-1 Page 12 Section / Paragraph: Section 4

Answer:

FirstNet foresees that in order for a PSE to share data and applications with other visiting users, it will require the PSE to support federated access controls to authenticate and authorize visiting users. FirstNet seeks feedback with regard to Identity, Credential, and Access Management (ICAM) that enable the federation of user identities and credentials from across the full range of PSEs, in accordance with the Special Notice.

638. While the section before this one seems to indicate that the public Internet can be utilized to connect each PSE to the FirstNet back-end, this section seems to make it clear that these connections must NOT be via the public Internet, please explain which is required.

Document Reference: C-4 SV-1 and StdV-1 Page 13 Section / Paragraph: 5.2

Answer:

In case of database access and other critical access, the use of the public Internet is not recommended. However, FirstNet seeks feedback on how to best meet the objectives stated in the Special Notice.

639. Please explain the FirstNet definition of “Priority Preemption.”

Document Reference: C-7 Operational Architecture Page 1 Section / Paragraph: Figure 1

Answer:

Section 4.7 of Appendix C-3 Minimum Technical Requirements for Interoperability of the NPSBN provides extensive details regarding priority and preemption. “Preemption” is also defined in the draft RFP Terms of Reference as “A network capability that during an emergency permits authorized high priority traffic, e.g., coming from public safety or first responders, to take over network resources assigned to lower priority traffic, e.g., private traffic”.

640. It is intended to be ruthless preemption? If not, how quickly are first responders to be given priority access to the network when needed?

Document Reference: C-7 Operational Architecture Page 1 Section / Paragraph: Figure 1

Answer:

FirstNet foresees that the scope of a preemption action should be limited to the area of the network where congestion or other triggering criteria are met and could be as contained as a single cell sector. In this instance, there would likely be alternative, non-Band 14 connectivity options to absorb the preempted users.

FirstNet foresees that preemption of users may occur either automatically or manually. In the automatic scenario, network policies based on usage, throughput, or congestion levels may trigger preemption. The precise details and conditions of these automated policies would be discussed between the offeror(s), user constituencies, PSAC and FirstNet.

In the manual scenario, a planned event or incident may trigger preemption via local control. As in the automated scenario, the specific policies and procedures to be followed would be discussed with the key stakeholders. FirstNet seeks feedback regarding this issue.

641. Is it sufficient to provide each subscribed public safety entity with an outward facing web page that provides each and every element of the required management as well as local control and the setting of QOS and priority settings?

Document Reference: C-7 Operational Architecture Page 12 Section / Paragraph: A.2.1.3

Answer:

Specific local control references can be found in Appendix C-7, Operational Architecture Functional Descriptions sections A.2.1.3, A.2.13.3.1, A.3.4.2.1.2.2.1, and A.3.9 as well as in Appendix C-9 NPSBN Use Case Definitions, section 4.8. QPP references can be found in Appendix C-9, section 4.10 and in Appendix C-7 sections A.3.5.1 and A.4.3. Agency home page references can be found in Appendix C-9, section 4.17 as well as in Appendix C-7, section A.3.4.2.9.1.

As this is a SOO-based RFP, not all elements for PSEs have been enumerated.

FirstNet seeks feedback regarding this topic, in accordance with the Special Notice.

642. How is FirstNet prepared to assist successful partner(s) in obtaining access to non-commercial sites that are federal, state, or local Public Safety owned sites?

Document Reference: C-7 Operational Architecture Page 21 Section / Paragraph: A.3.2.3

Answer:

It is FirstNet's expectation that an offeror must have the resources and expertise to identify and obtain permission to utilize commercial and non-commercial sites and be able to comply with all regulations, including environmental, without reliance on FirstNet for assistance.

643. What is the exact FirstNet definition of the various levels of priority and in terms of preemption is FirstNet expecting ruthless preemption or priority preemption?

Document Reference: C-7 Operational Architecture Page 22 Section / Paragraph: A.3.3.1

Answer:

Section 4.7 of Appendix C-3 Minimum Technical Requirements for Interoperability of the NPSBN provides extensive details regarding priority and preemption. “Preemption” is also defined in the draft RFP Terms of Reference as “A network capability that during an emergency permits authorized high priority traffic, e.g., coming from public safety or first responders, to take over network resources assigned to lower priority traffic, e.g., private traffic”.

FirstNet foresees that the scope of a preemption action should be limited to the area of the network where congestion or other triggering criteria are met and could be as contained as a single cell sector. In this instance, there would likely be alternative, non-Band 14 connectivity options to absorb the preempted users.

FirstNet foresees that preemption of users may occur either automatically or manually. In the automatic scenario, network policies based on usage, throughput, or congestion levels may trigger preemption. The precise details and conditions of these automated policies would be discussed between the offeror(s), user constituencies, PSAC and FirstNet.

In the manual scenario, a planned event or incident may trigger preemption via local control. As in the automated scenario, the specific policies and procedures to be followed would be discussed with the key stakeholders. FirstNet seeks feedback regarding this issue.

644. Is it FirstNet’s expectation that the winning vendor (s)/partners will set up and certify new devices for use on the network or will this function be accomplished by the PSCR, INL, or other contracted entity?

Document Reference: C-7 Operational Architecture Page 23 Section / Paragraph: 3.4.1.1.3

Answer:

FirstNet expects that industry standard and specific specialized public safety focused testing and certification will be required for the allowance of devices on the NPSBN. These functions are outlined in Appendix C-7 Operational Architecture Functional Descriptions. FirstNet seeks feedback on the operational architecture set forth in Appendix C-7, in accordance with the Special Notice.

645. Please explain the intention of this section. NIMS ICS is the Incident Command structure used for incidents and communications channels enhance the information flow but generally do not impact ICS activities as long as they function properly.

Document Reference: C-7 Operational Architecture Page 25 Section / Paragraph: A.3.4.2.1.1.2

Answer:

FirstNet is referencing NIMS ICS as a framework used by PSEs for managing different types of incidents. Support for incident management is being addressed through many of FirstNet's key objectives, including SOO Section C.5 Objective 1 (Build, Deploy, Operate and Maintain the NPSBN), 4 (Device Ecosystem), 5 (Application Ecosystem), 7 (User Service Availability), 8 (Service Capacity), 9 (Cyber Security), and 10 (Priority Services).

646. A. Will direct-mode devices be available during the term of this contract?

B. Will direct-mode devices have higher LTE power output than current LTE handheld devices?

C. Will direct-mode support all-call, groups, and sub-groups? Is direct-mode required to interface with LMR direct-mode equipment?

D. Could direct-mode make use of 700-MHz LMR channels instead of LTE?

E. Will direct-mode be required to operate both inside and outside of Band 14 network coverage?

Document Reference: C-7 Operational Architecture Page 28 Section / Paragraph: A.3.4.2.2.8.1

Answer:

A. FirstNet expects the availability of these services to be dependent upon the appropriate 3GPP standards bodies' definition and acceptance as well as when they are implemented into production.

B. It is unknown at this time if direct mode devices will be supported on the higher LTE output power while operating in ProSe direct mode. It is expected that high power user equipment (UE) devices will provide support of direct mode but the high power transmit levels may be limited to on-network mode only. FirstNet seeks feedback regarding the use of high transmit power in direct mode.

C. The call group management functionality for direct mode will be addressed by the following two 3GPP features

GCSE - 3GPP Release 12

MCPTT - 3GPP Release 13

It is expected that these features will be defined within the standards bodies and implemented based on the proposed solution. A standards-based group management functionality is expected to be deployed within the FirstNet network. Interworking and support of legacy group management functionality may be defined in the subsequent RFP.

There is no direct requirement to interface with LMR direct mode equipment. The ProSe direct mode will support direct communication between ProSe devices only.

D. ProSe direct mode is based on using a LTE band framework so the channel structure used for ProSe must fall within a specific LTE band. Since the 700MHz LMR channels do not fall within a currently defined LTE band, the 700MHz LMR channels cannot be used in the standard ProSe mode for direct communication. Using an LMR radio channel as an alternate direct connection radio link is currently not part of the ProSe standard.

E. Yes, ProSe is being standardized to support both in-coverage and out-of-coverage modes.

FirstNet is seeking feedback for details related to defining, implementing and supporting these features and functions, in accordance with the Special Notice.

647. Can FirstNet provide any capacity planning parameters?

Document Reference: C-7 Operational Architecture Page 30 Section / Paragraph: A.3.4.2.4.3

Answer:

FirstNet made the determination that utilizing a SOO approach for this acquisition is in the best interest of the program. This SOO lists high level objectives, with minimum requirements, allowing latitude for contractors to define implementation details. This comprehensive approach allows contractors to be highly innovative in proposing solutions that ensure nationwide interoperability with both opt-in and opt-out states. Through the state consultation process, an updated Public Safety User throughput demand map/profile may be created and issued with the RFP.

648. Is this design to follow the stated data speeds and capacities listed in Appendix C-1?

Document Reference: C-7 Operational Architecture Page 30 Section / Paragraph: A.3.4.2.4.3

Answer:

Through the state consultation process, an updated Public Safety User throughput demand map/profile may be created and issued with the subsequent RFP. Therefore, FirstNet is still in the process of making the appropriate determination pertaining to anticipated speed and capacities. However, please refer to the amended SOO Appendix C-1 Baseline Coverage Objective Maps, posted to www.FBO.gov on May 13, 2015, for updated language regarding this topic.

FirstNet seeks feedback on how to best define coverage, in accordance with the Special Notice.

649. Capacity solutions for overloaded sites are generally not the same as those for commercial networks. What exactly does FirstNet have in mind for this section?

Document Reference: C-7 Operational Architecture Page 31 Section / Paragraph: A.3.4.2.6.4

Answer:

Offerors should propose a solution that meets all FirstNet coverage and capacity requirements. FirstNet seeks feedback on this topic as part of the Operational Architecture, in accordance with the Special Notice.

650. What is the timeframe projected for these demonstrations? Many of the elements listed in this section are not ready for network deployment and there are uncertain dates for when and if they will be ready, please clarify this timeline.

Document Reference: C-7 Operational Architecture Page 41 Section / Paragraph: A.3.8.2.1.2

Answer:

FirstNet anticipates the offeror may demonstrate capabilities to potential subscribers and stakeholders as part of a marketing and sales effort as outlined in Appendix C-8 IOC/FOC Target Timeline.

651. It appears as though FirstNet’s intent is to provide full dial-up services including directory assistance, call forwarding, call conferencing, and other typical telephony features. Is this correct?

Document Reference: C-7 Operational Architecture Page 0 Section / Paragraph: A.7.2.5

Answer:

The SOO Section C.5, objective 3 states "COMPELLING AND COMPETITIVELY PRICED SERVICES: Establish pricing structures to support service packages. NPSBN services, at a minimum, include data, voice over LTE, messaging, machine-to-machine, VPN, video, and location services, while promoting subscribership and maintaining financial sustainability."

In addition, based on Appendix C-8, IOC/FOC Target Timeline, FirstNet expects IOC-1 to include both telephony voice and data services. Please refer to section 4.1.2.7 where offers are expected to provide "Commercially available data and voice services," including VoLTE and 3G fallback.

Based on these statements, FirstNet expects offerors to provide voice features and services in line with existing commercially available voice services and features.

652. In Sections 4.1.1 through 5.4, is it FirstNet’s intention that these timelines be followed or are they designed to serve as examples and guidelines only?

Document Reference: C-8 IOC / FOC Page 4

Answer:

Appendix C-8 IOC/FOC Target Timeline outlines the major features and functionalities, services and systems FirstNet considers essential to meet the needs of Public Safety Users. This target timeline is anchored by the latest 3GPP standards release schedule and is expected to be adjusted as the standards body work progresses and vendors develop products based upon those standards. This list is not exhaustive and FirstNet seeks concepts identified within the proposed solutions on which products, features, functionalities, services and systems should and should not be included in the FirstNet product portfolio. FirstNet seeks a more detailed features and functionality availability timeline along with feedback and innovative solutions as to how the timeline can be met.

To implement and make these products available, FirstNet expects to use standards-based solutions, and seeks to continue to do so for the target IOC/FOC Target Timeline as well as for future products unanticipated at this time and beyond the FOC milestones.

653. Item 6 indicates that FirstNet expects the network to be 100% complete in 6 years, is that correct?

Document Reference: C-8 IOC / FOC Page 9

Answer:

Appendix C-8 IOC/FOC Target Timeline outlines the major features and functionalities, services and systems FirstNet considers essential to meet the needs of Public Safety Users. This target timeline is anchored by the latest 3GPP standards release schedule and is expected to be adjusted as the standards body work progresses and vendors develop their products based upon those standards. This list is not exhaustive and FirstNet seeks concepts identified within the proposed solutions on which products, features, functionalities, services and systems should and should not be included in the FirstNet product portfolio. FirstNet seeks a more detailed features and functionality availability timeline along with proposals and innovative solutions as to how the timeline can be met. To implement and make these products available, FirstNet expects to use standards-based solutions, and seeks to continue to do so for the target IOC/FOC Target Timeline as well as for future products unanticipated at this time and beyond the FOC milestones. FirstNet seeks feedback in this area in accordance with the Special Notice.

654. Will FirstNet assist with tower siting on federal government property?

Document Reference: C-8 IOC / FOC Page 10

Answer:

It is FirstNet's expectation that an offeror must have the resources and expertise to identify and obtain permission to utilize commercial and non-commercial sites and be able to comply with all regulations, including environmental, without reliance on FirstNet for assistance.

655. FirstNet mentions the inclusion of satellite usage on Page 5. Can some additional information be provided regarding the target systems and use-cases?

Document Reference: Pricing Appendix Section / Paragraph: 2.1

Answer:

Offeror(s) should reference FirstNet use cases and on-demand coverage objectives that may be included in the subsequent RFP that are suitable for satellite solutions.

656. Low-cost commercial Band 14-enabled devices are mentioned. What is the criteria for low-cost devices?

Document Reference: C-8 IOC / FOC Section / Paragraph: 4.2.2

Answer:

FirstNet expects a rich and diverse device ecosystem with price points that meet the needs of Public Safety Users per SOO Section C.5 Objectives, objective 4 Device Ecosystem. FirstNet is seeking feedback as to meeting objective 4, in accordance with the Special Notice.

657. The App Store concept is a very complex solution. In order to ensure more directed/accurate feedback, please provide more functional detail, and possibly list 4-5 leaders in this area.

Document Reference: C-9 Use Cases Page 9 Section / Paragraph: 4.8

Answer:

Functional details on the FirstNet Application store can be found in Appendix C-4 System and Standard Views (SV-1 and StdV-1), Appendix C-7 Operational Architecture Functional Descriptions, Appendix C-8 IOC/FOC Target Timeline, and Appendix C-9 NPSBN Use Cases Definitions. Many public sources exist that list providers of Application store solutions.

658. Can FirstNet give more detail on the Homepage Situational Awareness?

Document Reference: C-9 Use Cases Page 31 Section / Paragraph: 27.b

Answer:

Appendix C-7 Operational Architecture Functional Descriptions sections A.3.4.2.9.1 and A.7.2.3.5.3 provide detailed functional descriptions. An agency information homepage is anticipated which is used to provide information to Public Safety Users about their local agency. The information can include agency alerts, information about incidents that are in progress, etc. It is to serve as a landing page for a PSE's users. The page must include the ability to authenticate users and restrict access to information based on user attributes. Additionally it must be able to expose agency incident and situational awareness information, as well as agency and network status and alerts.

659. Can FirstNet give examples of these services?

Document Reference: C-9 Use Cases Page 33 Section / Paragraph: 4.14

Answer:

FirstNet foresees cloud services and platforms that provide NPSBN users (PSEs, Application developers, Application hosting providers, etc.) with cloud services comparable to what are provided by commercial cloud providers (Infrastructure-as-a-Service (IaaS), Platform-as-a-Service (PaaS), Software-as-a-Service (SaaS)). FirstNet is seeking feedback from offerors with respect to how they would package, offer, and monetize cloud services for the benefit of Public Safety Users.

660. Can FirstNet provide more information on the expected CAD operation/ requirements for FirstNet systems integration?

Document Reference: C-9 Use Cases Page 34 Section / Paragraph: 4.17

Answer:

CAD systems are an important component of public safety operations. As such, FirstNet encourages CAD developers to explore system enhancements that leverage the unique capabilities of the NPSBN such as QPP and local control. FirstNet foresees that offerors' proposed solutions will include exposing APIs that will enable CAD developers to enhance their system's value to public safety.

661. Can FirstNet provide a detailed data flow for the expected operations.

Document Reference: C-5 StdV-2 Page 9 Section / Paragraph: Table 4

Answer:

The draft RFP follows a SOO-based approach that encourages creative solutions from offeror(s). FirstNet seeks feedback regarding the type of detailed solution architecture for ICAM, in accordance with the Special Notice.

662. According to the document, “Coverage is defined as having a minimum of 768Kbps downlink and 256 Kbps uplink at the cell edge with 50% loading.”

**Is there any special reason for defining coverage under the condition of 50% loading?
Is it enough to meet public safety needs?**

Document Reference: C-1 Coverage Objective Maps

Answer:

The 50% loading and minimum cell edge throughput figures are design requirements to be utilized as a part of the offeror’s link budget. The loading value was derived from market research and typical industry implemented LTE networks. In addition to designing to the definition of cell edge coverage, FirstNet expects offeror(s) to meet public safety capacity needs outlined in SOO Section C.5 Objectives, objective 8 Service Capacity.

663. And the document also says, "Only those grid blocks that have more than 50% coverage will be considered acceptable."

What is the reason for guiding 50% coverage for acceptance level?

Document Reference: C-1 Coverage Objective Maps

Answer:

A one mile by one mile grid block will be deemed "covered" (coverage objectives met) if more than 50% of a grid block meets the coverage definition. This is a part of a comprehensive nationwide coverage requirement. The evaluation criteria will be included in the subsequent RFP in Section M. As required by the Federal Acquisition Regulation (FAR), specifically section 15.305, all factors and significant sub factors that will affect contract award, and their relative importance, will be stated clearly in the solicitation.

664. What is the main purpose for grid characterization?

Does the color of grid mean that there would be more eNodeB in Red Grid than in Blue Grid?

or just indicates interest for public safety in that area in order to provide information to the region?

Document Reference: C-1 Coverage Objective Maps

Answer:

The maps that FirstNet released show the initial coverage objectives and serve as a tool to create dialogue through state consultation. In addition, FirstNet anticipates use of temporary on-demand coverage as outlined in the SOO. The colors identified the concentration of areas that are likely to require a public safety response and provide an indicator of public safety's potential interest in coverage based on all of the evaluated datasets as outlined in SOO Appendix C-1 Baseline Coverage Objective Maps.

665. Could you let us know the score policy for 5 datasets to characterize grids? for example, U.S. population has low weighted score than amount of users, like that.

Document Reference: C-1 Coverage Objective Maps

Answer:

The grid was calculated as described in SOO Appendix C-1 Baseline Coverage Objective Maps. It is intended to create a dialogue for defining coverage objectives through state consultation.

666. I am looking for information on the actual base station radio hardware requirements, specifically the output power levels and most importantly, if there is any requirement on the minimum energy efficiency of the hardware. Since the efficiency of the radio strongly affects the cost to both build and to operate a wireless base station, I'm trying to determine what the requirements are. Is this type of information available anywhere?

Answer:

FirstNet anticipates the offerors' solutions will identify how to best meet the framework including availability laid out in the SOO. FirstNet does not want to limit possible solutions, however offerors must comply with FCC rules on maximum transmission power requirements.