

State of Washington Interoperability Executive Committee (SIEC)  
Comments for  
First Responder Network Authority Proposed Interpretations of Parts of  
the Middle Class Tax Relief and Job Creation Act of 2012<sup>1</sup>  
October 27, 2014



Submitted with response code **1jy-8f61-6wv3**

1. These are the comments of the Washington State Interoperability Executive Committee (SIEC). Direct remarks and replies about these comments to Bill Schrier, Chair, SIEC, [bill.schrier@ocio.wa.gov](mailto:bill.schrier@ocio.wa.gov) 206-255-2156.

### Public Safety Entities

2. Legal basis. FirstNet cites the Communications Act of 1934 and the Homeland Security Act of 2002 as the basis for a broad definition of which using entity and users have access to FirstNet. The Washington SIEC agrees with a broad definition and recommends:

***FirstNet, in its consultation with each State, agree upon which kinds of governmental, non-governmental and private entities and users would be allowed to use the network.***

3. Public Safety entities. FirstNet and a state should, at a minimum, consider use by all entities who staff Emergency Support Functions (ESFs) in Emergency Operations Centers (EOCs). These entities would include, for example:
  - 3.1. First responders: law enforcement, firefighting (including volunteer firefighters), emergency medical services responders, 911 Centers and Public Safety Answering Points (PSAPs). Such responders would include private firefighters (e.g. Boeing) and private ambulance services.
  - 3.2. Transportation, as many events occur on or near transportation arteries, and as transportation is vital to evacuation and movement of response after disasters;
  - 3.3. Public works departments;
  - 3.4. City, county and state planning departments which oversee codes and building construction, an especially important function in earthquake-prone areas such as Washington;
  - 3.5. Electric and water utilities, public and private; Electric utilities are vital to public safety because any unplanned outage or even unannounced planned outage causes potential public safety risk for dark neighborhoods over night or for vulnerably populations depending upon medical machines in their homes; water utilities are vital for

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<sup>1</sup> The Middle Class Tax Relief and Job Creation Act of 2012 ([Pub. L. 112-96](#), Title VI, 126 Stat. 256 (codified at [47 U.S.C. 1401 et seq.](#))).

firefighting and public health – even small contaminants produce major public safety concerns<sup>2</sup>;

- 3.6. Medical and medical surge capabilities including hospitals, clinics and even physician's offices, which will be key to combatting contagious disease outbreaks such as Ebola;
  - 3.7. Public transit agencies and departments, on which the public depends for transportation both in normal times and during emergency incidents; in addition crimes and traffic collisions sometimes occur on transit;
  - 3.8. Elected officials, city and county administrators and other senior officials who will be in charge or consulted during disaster response and recovery;
  - 3.9. Schools and teachers; unfortunately too often teachers are first responders during school incidents, and schools are sometimes locked-down in response to nearby incidents; such entities and individuals are extraordinarily important to child safety;
  - 3.10. Non-governmental organizations (NGOs) important to relief efforts such as the Salvation Army and Red Cross;
  - 3.11. Volunteers; citizens who are acting in an official or semi-official capacity during an incident, e.g. mountain search-and-rescue or private citizens such as loggers and heavy equipment operators who support responders after disasters such as the State Route 530 landslide.
4. The list above is not definitive or complete, but indicates the breadth of potential using entities which often or sometimes have a public safety mission and are potential FirstNet users.
  5. Local Management of Dynamic Priority is important. Local management of priority and pre-emption on FirstNet is essential, as it is locally-based public safety units which will form the core of response to every public safety incident and disaster. The local incident commander or Emergency Operations Center must be able to dynamically direct FirstNet's capacity and capabilities to the users, devices, teams, applications and services which are most vital during the course of an incident or disaster.
  6. In making these comments, the Washington SIEC is not advocating that all such using entities will be users of FirstNet in Washington. The SIEC understands robust commercial wireline and wireless networks are also important to public safety of citizens

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<sup>2</sup> <http://blogs.seattletimes.com/today/2014/10/mercer-island-remains-on-a-boil-water-alert-monday/>

## Definition of Rural and Frontier

7. Why does FirstNet need definitions of “rural” and “frontier”?
  - 7.1. The Act creating FirstNet states FirstNet “... shall require deployment phases with substantial rural coverage milestones as part of each phase of the construction and deployment of the network . . . [and] utilize cost-effective opportunities to speed deployment in rural areas.”
  - 7.2. There is no similar legal requirement for defining “frontier”, however, presumably, FirstNet would not build permanent installations (cell towers) in such areas.
8. Rural defined.
  - 8.1. Finding a single definition for “rural” is very difficult and has many policy implications<sup>3</sup>. There are probably at least 15 different definitions of “rural” used by various federal programs. The Washington SIEC recommends:

***States should be allowed, during the consultation process, to help specify which areas are rural for setting coverage milestones and other purposes required by FirstNet.***

Rural areas could be specified on an entire county geography<sup>4</sup>, i.e. each county would be specified as rural or not. The State of Washington’s Office of Financial Management specifies any county with 100 or fewer inhabitants per square mile, or a county of less than 225 square miles, as rural<sup>5</sup>. While this is a baseline definition, there are counties in Washington which are densely urban on one end, rural in the center, and uninhabited on the other side. Hence the recommendation under 8.1 above, and the need for a list of exceptions as specified in paragraph 10 below

9. Frontier defined. FirstNet proposes any geography with five or fewer inhabitants per square mile is “frontier”. It is unclear why a definition of “frontier” is required, unless FirstNet does not intend to make permanent installations (i.e. cell towers) to support such areas. Certainly there are many such areas which do not need permanent coverage. The Washington SIEC recommends:

***States should be allowed, during the consultation process, to help specify which areas are frontier for setting coverage milestones and other purposes required by FirstNet.***

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<sup>3</sup> *Choosing Rural Definitions: Implications for Health Policy*, Issue Brief #2, March, 2007, Rural Policy Research Institute Health Panel, [www.rurpi.org/ruralhealth](http://www.rurpi.org/ruralhealth)

<sup>4</sup> <http://www.ers.usda.gov/topics/rural-economy-population/rural-classifications/what-is-rural.aspx#.VDMQVcRDv1o>

<sup>5</sup> <http://www.ofm.wa.gov/pop/popden/rural.asp>

10. Exceptions. In the case of both “rural” and “frontier” FirstNet, in consultation with states, need to consider factors other than simple population density, for examples:
  - 10.1. Heavily visited parks and national parks, e.g. Mackinac Island, Michigan;
  - 10.2. The presence of coastlines with recreational and commercial shipping, boating and fishing.
  - 10.3. The presence of an international border;
  - 10.4. The presence of events, either temporary or permanent, e.g. the Gorge Amphitheater in Grant County, Washington;
  - 10.5. Transportation corridors such as railroad rights of way, electric transmission lines and pipelines.
  - 10.6. The density of incidents or potential incidents as shown by computer-aided dispatch calls or other incidents such as wildfires.
11. For “rural coverage milestones”, FirstNet and the states, during their consultation process should negotiate both which areas of the state are rural and what milestones FirstNet should set for its build-out.

### **User Fees**

12. FirstNet clearly has the authority to charge user fees to users of an authorized public safety entity (see above). However FirstNet should look at a broader set of fees and services beyond simple user fees for, say, smart phones, tablet computers and in-vehicle computers.
  - 12.1. FirstNet needs to offer multiple service and pricing packages. Usage-tiered pricing would not, in general, be used for devices carried by public safety responders on the person (smartphone, tablet, smartwatch) or in their vehicle in most urban and suburban areas. This comment is primarily market-driven, as several commercial carriers have “all you can eat” pricing packages.
  - 12.2. Usage-tiered pricing might be useful in fixed and deployable video camera configurations (e.g. surveillance) to encourage frugal use of bandwidth during the vast amounts of time when those devices will see little use. Usage-tiered pricing would also encourage locally-installed (i.e. next to the remote camera) recording devices, as opposed to streaming high-speed video across the wireless network. Using priority and other management controls, using entities could “turn up” the video frame-rate when an incident occurs.
  - 12.3. Usage-tiered pricing or pooled devices pricing would be useful for public safety volunteers such as volunteer firefighters and search-and-rescue. These individuals

would primarily use the commercial networks of their devices, but would switch to the FirstNet network when called to function in an official capacity. Such pricing capability, along with having Band 14 in a consumer device, encourages use and thereby encourages more volunteerism, improving overall public safety.

12.4. Usage-tiered pricing would definitely be useful when connecting most Internet-of-Things machine-to-machine devices which use telemetry or relatively low bandwidth, e.g. electric meters or traffic signals.

12.5. In pricing, FirstNet should also consider putting Band 14 in all devices and having fixed pricing for consumer devices with Band 14 capability (with costs collected via the carriers), for example 50 cents per device per month.

13. Infrastructure Fees. FirstNet should plan to charge infrastructure use fees for use of any infrastructure it leases or controls, e.g. fiber. Acquisition and use of such infrastructure as potential secondary benefits. In rural areas of a state, for example, it may be uneconomical for a commercial entity or government to build a fiber network to serve a Native American tribe or remote town and its schools and other public services. FirstNet, in acquiring capacity to serve such a location, might “tip the balance” so a sufficient economy of scale exists. Any excess capacity so acquired could be used to serve schools or other public needs at the location, for a fee.

### **Additional Uses**

14. In making the following comments, the Washington SIEC is not necessarily advocating such uses for FirstNet, but suggests FirstNet might consider such uses insofar as they support the public safety mission and also serve as potential additional revenue sources:

15. FirstNet should consider licensing Band 14 for use in every smartphone, tablet computer and similar device which has cellular wireless capabilities. If so licensed, Band 14 would only be used in those devices when the user is making a 911 call to communicate with public safety entities or sending data (images, video, text) to a 911 call center. At other times the device would use the normal spectrum licensed by the carrier for commercial purposes. Such a proposal would help volunteers such as firefighters, search and rescue and also NGOs relying on volunteers such as the Red Cross to use FirstNet for their public safety purposes. Washington understands FirstNet is prohibited by law from offering such use of its spectrum directly to consumers and businesses, but might consider negotiating with telecommunications carriers to provide such use.

16. Machine-to-machine (M2M) communications. Such uses might include:
  - 16.1. Smartgrids under construction by many electric utilities where transformers, substations, generators, electric meters and so forth are wirelessly enabled;
  - 16.2. SCADA (system control and data acquisition) networks used by water utilities, wastewater utilities, gas companies, and oil pipeline companies;
  - 16.3. Video surveillance, card-key control, intrusion detection and similar devices used by public safety entities.

**End of Washington SIEC Comments on FirstNet Public Notice**