**Update on Priority and Quality of Service for the NPSBN**

April 9, 2015

This week, FirstNet’s Public Safety Advisory Committee (PSAC) is receiving a briefing on recommendations for Priority and Quality of Service (PQoS) for the Nationwide Public Safety Broadband Network (NPSBN). The FirstNet board requested guidance on PQoS from the PSAC, and the PSAC sought recommendations from the National Public Safety Technology Council (NPSTC) which has a Working Group focused on PQoS.

The NPSTC Working Group has reviewed public safety operational requirements and use cases and also considered the current state of LTE technology and the standard developments. The Working Group’s recommendations also recognize that the NPSBN will support public safety and first responder users, as well as other users without a public safety mission who may have been granted service on the network through leasing agreements that provide revenue to help support and operate the NPSBN. The goal of the Working Group’s PQoS recommendations is to ensure public safety and first responder users have priority access to the network’s resources to support their critical mission.

The Working Group has concluded that the current LTE standards provide mechanisms to control a user’s access to the network’s resources based on the priority of the user and the particular application in use. However, while the mechanisms are present to control priorities and quality of service, there are currently no provisions to track all of the attributes associated with a public safety user to completely prioritize access to the resources of the NPSBN to adequately handle day-to-day activities as well as special events and emergencies.

The Working Group therefore recommends that consistent policies be established by FirstNet to establish priority attributes based on pre-determined conditions. To accomplish this, the Working Group recommends establishing both static and dynamic priority attributes. The static or default priority attributes will change infrequently and will include fixed priority of applications. The dynamic priority attributes will be situational and will take into account a user’s operational status, incident role, and any declaration of an emergency or urgent situation. The Working Group also stresses the improtance that changes to the dynamic priority attributes occur automatically in most cases so as not to divert a responder’s attention.

To implement these recommendations, the NPSTC Working Group recommends FirstNet establish a Priority and QoS Control Service (PQCS) framework to enable the support of a set of public safety specific capabilities. This framework will be used to:

* + Track priority attributes for users, groups, and applications;
  + Support priority, pre-emption, and QoS services for users and applications;
  + Collect the correct information to automatically (in real-time) select the correct priority and pre-emption behavior;
  + Support all types of users sharing the NPSBN (Public Safety Entities and other lower priority users and uses).

The Working Group is also updating the Priority and QoS requirements document, which is expected to be complete this summer.