Those in our industry who commit their considerable skill and dedication to the administration of radio communication and information systems have been monitoring the progress of FirstNet — the dedicated national wireless broadband network for public safety users.

Despite the potential for vast improvements that FirstNet will bring to public safety, the law creating FirstNet has also created challenges for radio system managers in some of the nation’s largest cities by threatening critical radio spectrum relied upon by thousands of responders across those regions.

A BRIEF HISTORY

Years of debate and lobbying for improved communications networks took place in the aftermath of 9/11 and the recommendations of the 9/11 Commission. In February 2012, Public Law 112-96, the Middle Class Tax Relief and Job Creation Act, went into effect. Included in this legislation was the allocation of frequency spectrum in the 700 Megahertz band, along with initial funding for an oversight agency to bring a secure, reliable LTE (Long Term Evolution) broadband network to fruition.

The First Responder Network Authority has moved with diligence to establish a long-term network operating agreement with AT&T, obtain “opt-in” commitments from the 50 states and 6 U.S. territories, and begin the process for deployment of network infrastructure, including mobile apps and other online tools. Detailed information on FirstNet is available at firstnet.gov.
THE UNFORESEEN IMPACT

Buried in the 2012 legislation is Section 6103, a provision requiring the FCC to reallocate the public safety “T-Band” spectrum within the 470-512 Megahertz band. This process starts with an auction of that spectrum, required to begin by February 22, 2021. Public safety users are to vacate the T-Band within 2 years of that auction’s completion.²

The UHF T-Band, so named because it incorporates TV channels 14-20, is used by both public safety and business/industrial users in a 50-mile radius around eleven major metropolitan areas, including Boston, Chicago, Dallas, Houston, Los Angeles, Miami, New York City, Philadelphia, Pittsburgh, San Francisco and Washington, DC. As of 2016 there were over 900 public safety licensees on the band in these regions, which account for approximately 90 million residents. The business and industrial users of the T-Band are not required by law to be included in the auction and relocation process.

The public safety radio systems on the T-Band include active and comprehensive voice communication networks that serve mission critical functions across wide swaths of these urban centers. In Allegheny County, Pennsylvania, T-Band spectrum comprises a significant amount of the primary and tactical operations channels used by a majority of the county’s public safety agencies.

In the greater Boston area, T-Band frequencies serve as the critical backbone for Boston and surrounding towns’ primary operations, but also a robust interoperability framework used successfully during numerous critical incidents over the past several years. According to one administrator of the system, “The greater Metro Boston area has over 200 licensees ... many of which are system licenses with multiple channels. To
re-locate all of the public safety users operating on T-Band at this time would reverse progress and diligent work achieved over more than forty years."³³

**THE HUE AND CRY**

The apparent purpose for this section of the law was to generate revenue from the auction of the T-Band spectrum, which would be used in part to fund the relocation of public safety users to other frequencies.

The genesis of this concept, and how it made its way into an ill-conceived section of the otherwise groundbreaking FirstNet legislation, was well summarized in 2017 by radio systems consultant Andrew Seybold:

Many in Congress made it clear they expected public safety to “give back” spectrum in exchange for the (700 Megahertz) “D” block. In several of the bills introduced by Congress, various portions of the spectrum were mentioned.

The final bill that designated the give-back of the T-Band was introduced on a Tuesday and passed that same Friday, precluding much discussion or many objections from the public safety community.

Unfortunately, those who wrote this portion of the bill did not fully understand several things:

The T-Band allocation is for 1, 2 or 3 channels in each city but not for all of the spectrum, so there are TV channels on either side of the (Land Mobile Radio) allocations. This makes auctioning this spectrum for broadband use next to impossible and certainly deflates the value of the spectrum.

The auction would not be scheduled until 2021 and public safety would have to vacate the spectrum within two years. This is not a realistic amount of time to relocate large communications systems from one portion of spectrum to another (assuming there was somewhere else to build these systems).

There appears to have been a misconception in Congress by some that the FirstNet system would be able to accommodate all voice traffic in the T-Band, even though at that point in time there were no voice standards for either push-to-talk or off-network communications for LTE.⁴

Since 2012 many other end users, consultants and advocacy groups have expressed significant concerns regarding the inability of this transition to properly accommodate the need for mission-ready communications in these major urban centers.

In June 2012 the National Public Safety Telecommunications Council (NPSTC) formed a T-Band working group. The group produced an initial report in 2013 that expanded upon these and other concerns in great detail. NPSTC staff then compiled an updated report in 2016, which provided additional detail on the impact to the public.

Both reports supported several key conclusions, including: "Given the lack of alternative spectrum, cost of relocation, major disruption to vital public safety services and likelihood that the spectrum auction would not even cover relocation costs, NPSTC believes implementing the T-Band legislation is not feasible, provides no public interest benefit and the matter should be re-visited by Congress."³³

The NPSTC body of work on the T-Band issue, along with a frequently updated blog, is available at npstc.org.
THE SOLUTION
As the T-Band “give back” is directly tied to an act of Congress and not an FCC action, the Commission is unable to provide regulatory relief. The governing board of NPSTC (which includes APCO) and other industry stakeholders have been able to convince members of Congress to begin direct action. In January, Rep. Eliot Engel (D-NY) introduced the Don’t Break Up the T-Band Act (H.R. 451). As of June, the bill has 9 co-sponsors and is awaiting consideration in committee.

The text of the bill is succinct, and surgical in its intent: “Section 6103 of the Middle Class Tax Relief and Job Creation Act of 2012 (47 U.S.C. 1413) is repealed.”

In a comprehensive report released June 21, the U.S. Government Accountability Office (GAO) also recommended repeal of the auction requirement. If FCC conducts such an auction, it is unclear that all public safety users in the affected areas will be able to relocate. If alternative spectrum is not available, public safety would be jeopardized in some of the nation’s largest metropolitan areas.

LEARNING AND MOVING FORWARD
With less than two years remaining before the law requires the auction of the public safety T-Band, continued diligence is needed on the part of not only key stakeholders but the public safety community at large, to encourage congressional action on the repeal legislation. The bill’s progress can be monitored at congress.gov.

Support of and active participation in organizations such as APCO, which in turn partner in industry alliances such as NPSTC, offer the potential of assuring that those advocating for and legislating long-term positive change for our industry are not endangering successfully administered legacy systems in the process.

John L. Linko has worked in emergency communications since 1983, as a telecommunicator, supervisor and volunteer in Pennsylvania and Colorado. This includes experience in the health care sector, air medical services, and search and rescue operations. A Pittsburgh area native, he is currently a Telecommunications Officer with Allegheny County (PA) Emergency Services and a member of the APCO Editorial Advisory Committee.

REFERENCES
1 First Responder Network Authority, FirstNet: The History of our Nation’s Public Safety Network, http://firstnet.gov/about/history
3 Reardon, G., Metro Boston Area Public Safety T-Band Dilemma, https://www.dhs.gov/safecom/blog
6 National Public Safety Telecommunications Council, NPSTC Member Organizations, http://npstc.org/memberOrganizations.jsp