That definition aptly describes the situation with the “T-Band.” The T-Band spectrum, 470-512 MHz, is used by public safety and industrial/business licensees in and around eleven top metro areas in the U.S. However, Public Law 112-96, enacted February 22, 2012, requires the Federal Communications Commission (FCC) to start auctioning the spectrum no later than February 2021 and to relocate public safety from the band within 2 years after the auction concludes. The proceeds from the auction can be used toward the cost of relocating public safety systems.

To some, that timeline may seem far away. However, to public safety agencies that have planned and deployed T-Band communications systems, building regional interoperability in the process, it is relatively near-term. Furthermore, the legislation did not identify the spectrum to which current T-band licensees would move, nor did it estimate if the funding from the auction proceeds would be sufficient to cover the cost. The legislation also made no mention of industrial/business licensees in the band that could be impacted by an auction. In April 2012, the FCC imposed a freeze on new T-band licenses or modifications to existing licenses that would expand the spectrum or geographic footprint. The freeze impacts both public safety and industrial/business users. The challenge now is either to find ways to comply with the legislation, or to change it.

NPSTC Responds

Given this conundrum, in June 2012 the National Public Safety Telecommunications Council (NPSTC) chartered a T-Band Working Group to study the issue, assess and document the impact of the legislation to public safety, evaluate the viability and cost of potential options and form recommendations to the NPSTC Governing Board. This is a complex and intricate initiative. A high level of T-Band deployment has occurred in most of these metro markets since the spectrum was first made available in 1971, and systems are designed to meet the specialized operational requirements of the public safety community. Fortunately, response to the NPSTC initiative has been significant and approximately 60 public safety users and members of industry volunteered as members of the working group. Also, a liaison was established with the Enterprise Wireless Alliance (EWA) which advocates for industrial/business users and the Land Mobile Communications Council (LMCC) which covers all land mobile users.

T-Band Usage

FCC license information shows approximately 1000 public safety and 700 industrial/business licensees in the T-Band. The eleven metro areas in which the T-Band spectrum is allocated are Boston, Chicago, Dallas/Ft. Worth, Washington DC (including parts of Virginia and Maryland), Houston, Los Angeles, Miami, New York City/Northeast NJ, Philadelphia, Pittsburgh and San Francisco/Oakland. Not all the spectrum in 470-512 MHz (which also comprises TV channels 14-20) is authorized in each of the 11 markets. Each market has only a portion of the T band for land mobile operation, and the specific channels and amount of spectrum vary by market. The Los Angeles and New York metros each have 18 MHz of T-Band spectrum, Dallas, Houston and Miami have 6 MHz each and the remaining six metros each have 12 MHz. The breakout of land mobile channels between public safety and industrial/business licensees also varies by market.

For the most part, T-Band operations will be found within an 80 mile radius of each of the eleven metro areas. The rules allow base stations to be located within 50 miles of a set of reference coordinates in each metro and mobiles/portables are allowed to operate up to 30 miles around the base stations. Some licensees have obtained waivers to locate farther away from the metro centers and in contrast, operation on some channels in some metros is more restrictive in certain directions to protect specific co-channel or adjacent channel TV stations.

NPSTC Engaged the Public Safety Community

As part of the initiative to assess the impact of the legislation, the NPSTC T-Band Working group developed a web-based questionnaire in mid August 2012, invited public safety users to respond and provided about a two month window to do so. For example, the questionnaire asked for information on the amount of equipment deployed, whether systems are conventional or trunked, whether a licensee had identified spectrum alternatives and/or funding, and whether the T-Band system was used to provide interoperability among multiple departments or jurisdictions in a region. Information was collected from over Approximately 80% of the agencies responding to the NPSTC questionnaire said interoperability with other agencies will be impacted if they have to move out of the T-Band.

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300 public safety licensees in the band, either through direct responses to the questionnaire or population of partial data taken from other work being conducted in parallel by public safety T-Band working group members.

Using and extrapolating the information collected, the NPSTC T-Band Working Group developed assessments of the impact of the legislation to public safety. This includes a study of the viability of various alternative spectrum homes should public safety be displaced from the T-Band as directed in the legislation, as well as an estimate of the cost for such a relocation. At the time this article was submitted, those studies were not yet completed. However, as of press time in February 2013, we expect much of the analysis of the T-Band Working Group will be available. Therefore, we encourage you to check the NPSTC web site at www.npstc.org/TBand.jsp

Summary
The T-Band is a key spectrum resource for public safety, as well as industrial business users, in the eleven top metropolitan areas. NPSTC engaged to determine the impact of legislation passed in February 2012 that directs the FCC to start auctioning that spectrum by February 2012 and to clear public safety from the band within two years of the auction. Please see www.npstc.org/TBand.jsp for additional information.

Larry Parks received the IMSA Educational Foundation Award. He wrote the following to the IMSA Educational Foundation Board of Directors:

I am honored to have received the “2012 Education Award” from the IMSA Educational Foundation. This was indeed a pleasant surprise (since I was unable to attend this year’s conference I wasn’t aware I had won the award till yesterday at our IMSA BC Section Executive meeting – where Craig Mackenzie presented it to me). I will proudly have the exceptional clock/plaque award placed front and center in my office, for all to see!

Looking at the past “Educational Award” winners, I am in awe of being placed among them. As you are all aware, it is the mentoring and guidance provided by others that so influences our personal successes – I feel this is reflected in my receiving this award, both from those that preceded me with this award, as well as so many other local and International IMSA members and friends. And indeed I can only continue to strive to be one of those mentors for others that follow me with the IMSA.

Again, I want to thank you all for this extraordinary recognition you have bestowed upon me.

Larry Parks, 2012 IMSA Educational Foundation Award winner

The City of Tampa (Florida) is soliciting ATMS Central Software for testing and evaluation in anticipation of procuring a preferred package that will operate their 523 existing signals, with expansion capability to 650 intersections, as well as various Intelligent Transportation System (ITS) devices. Potential responders will be requested to install and configure their software to support an existing Alpha Test site that emulates the City’s Ethernet/IP communication and control network in order to demonstrate conformance to the functional requirements of the new system. A pre-defined set of criteria will be used to quantitatively evaluate each responder’s ATMS Central Software under identical conditions.

**Basic Requirements of the Central Software**
- Shall provide access to the source code.
- Shall utilize distributed control that allows user-defined monitoring of intersection operation, including once per second status polling.
- Shall support traffic responsive algorithms.
- Shall support DMS and CCTV camera control (integrated pan/tilt/zoom) and monitoring.
- Shall support incident management functionality.
- Shall support pre-emption functionality.
- Shall support traffic adaptive integration.
- Shall be a client-server architecture with open network and database standards.
- Shall provide graphical user interface for operators.
- Shall support multiple types of communication media.
- Shall provide database transfer and comparison capability between central control and field devices.
- Shall support importing and exporting of data to and from traffic modeling packages (e.g., Synchro).
- Shall support alarm events that can be prioritized as to thresholds and type.
- Shall include the ability to provide both pre-defined and customized reports.
- Shall support data archiving capability.
- Shall support remote access via VPN over the Internet without interfering with central control and operations.
- Shall provide access to the source code.