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By Electronic Delivery

April 27, 2012

Attn: Ed Drocella
Office of Spectrum Management
National Telecommunications & Information Administration
1401 Constitution Avenue, NW
Washington, DC 20230

Re: ***The National Telecommunications & Information Administration's Spectrum Sharing Innovation Test-Bed Pilot Program***

Dear Mr. Drocella:

The Telecommunications Industry Association ("TIA") writes to express its support of the National Telecommunications & Information Administration's ("NTIA") Spectrum Sharing Innovation Test-Bed Pilot Program effort to assess whether devices employing Dynamic Spectrum Access (DSA) techniques can share with land mobile radio ("LMR") systems in the 410-420 MHz federal band and 470-512 MHz non-federal band ("T-Band").[1] We submit these comments on the RFI to (1) generally support NTIA's continued examination of DSA techniques that also ensures protection from harmful interference for licensed users of frequencies by determining that DSA mechanisms with respect to public safety spectrum should only be allowed by authorized public operators, and (2) make NTIA aware that a TIA standards development committee intends to examine the technical parameters put forth in the RFI and request that future input from TIA be considered by NTIA past the expiration of the due date of the RFI given the scope of material that must be reviewed by TIA subject matter experts.

[1] *Spectrum Sharing Innovation Test-Bed Pilot Program*, National Telecommunications and Information Administration, 77 Fed. Reg. 18793 (March 28, 2012) ("RFI") and NTIA, *Draft Spectrum Sharing Innovation Test-Bed Pilot Program: Phase II/III Test Plan* (Mar. 2012) ("Test Plan").

I. INTRODUCTION

TIA is and has been a standards development organization ("SDO") since its inception in 1988, and is one of the largest SDOs accredited by ANSI. TIA's standards committees create consensus-based voluntary standards for numerous facets of the ICT industry, for use by both private sector interests and government, which fall within the purview of the Petition.[2] Among other areas, TIA's standards committees develop protocols and interface standards relating to current U.S. Government technology priorities in such areas as fiber optics, public and private interworking, telecommunications cable infrastructure, wireless and mobile communications, multimedia and voice over internet protocol ("VoIP") access. TIA's standards reach into areas such as Smart Grid,[3] health care ICT,[4] and – of particular relevance to the RFI – emergency communications infrastructure.[5] TIA's hundreds of member companies provide, develop, manufacture, and supply information and communications technology (ICT) products and services, including components of both bands included in the pilot program.

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[2] TIA publishes an annual report that includes the latest actions taken by each respective TIA engineering committee toward the development of standards for the advancement of global communications. *See* TIA, Standards & Technology Annual Report (September 2010), *available at* http://tiaonline.org/standards/about/documents/StarReport_09-10.pdf.

[3] TIA's TR-50 (Smart Device Communications) is responsible for the development and maintenance of access agnostic interface standards for the monitoring and bi-directional communication of events and information between smart devices and other devices, applications or networks. *See* http://tr50.tiaonline.org.

[4] TIA's TR-49 (Healthcare ICT) is responsible for development and maintenance of standards for the healthcare ICT applications which involve medical devices, network infrastructure, applications, and operations support. *See* http://tr49.tiaonline.org.

[5] Engineering Committee TR-8 formulates and maintains standards for private radio communications systems and equipment for both voice and data applications. TR-8 addresses all technical matters for systems and services, including definitions, interoperability, compatibility, and compliance requirements. The types of systems addressed by these standards include business and industrial dispatch applications, as well as public safety (such as police, ambulance and firefighting) applications. *See* http://tr8.tiaonline.org.

II. TIA SUPPORTS EXAMINATIONS OF DYNAMIC SPECTRUM ACCESS RESEARCH AND DEVELOPMENT THAT MAINTAINS PROTECTION FROM HARMFUL INTERFERENCE FOR LICENSED USES

By utilizing sound technical analyses, NTIA, working with the Federal Communications Commission ("FCC") and industry, will be in the best position to identify whether a given band and its service is suitable for spectrum sharing models. TIA is supportive of research and development efforts to mature spectrum sharing technologies that may in the future enable further maximization of use of spectrum. Generally, creating a successful sharing environment is determined by coordination among agencies and with industry, along with the consideration of many factors, including the economic model, whether spectrum can be used nationwide, whether limitations are in significant markets, whether the considered spectrum is valuable enough to warrant innovation, is adjacent to or complements existing bands/services, is contiguous in large blocks, and is suitable for mobility.[6] We believe that NTIA shares our understanding and we applaud the consultation with the Interdepartment Radio Advisory Committee (IRAC) in developing the Test Plan,[7] as well as the public via this RFI.

The Middle Class Tax Relief and Job Creation Act of 2012 requires that, within nine years, the FCC reallocate and auction spectrum in the 470 – 512 MHz band used by public-safety and industrial and business entities, which will then have two years to relocate from the band.[8] Furthermore, very recently, the FCC's Wireless Telecommunications Bureau and Public Safety and Homeland Security Bureau have announced a suspension of the acceptance and processing of applications for new or

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6 *See* Comments of TIA, ET Docket No. 10-237 (filed Feb. 28, 2011).

7 *See* NTIA, *The Spectrum Sharing Innovation Test-Bed Pilot Program Fiscal Year 2011 Progress Report* (Dec. 2011) at 5.

8 Pub. L. No. 112-96, 126 Stat. 156 (2012) ("Act"). Section 6103(a) of the Act directs that no later than nine years after the date of enactment (February 22, 2021), the FCC must reallocate spectrum in the 470-512 MHz band used by public safety entities and begin a system of competitive bidding. Section 6103(c) of the Act further states that the relocation of public safety entities must be completed 2 years after the auction is complete.

expanded use of T-Band frequencies while the FCC determines how to implement the Act.[9]

TIA has long supported the adoption of policies and rules that maintain the principle of protecting services in primary licensees' allocations. The recent developments noted above related to the T-Band have raised a number of issues for affected public safety operators and their vendors who must begin to plan for the reallocation of the T-Band, aside from the NTIA's effort under this pilot program which includes the potential for harmful interference. Given that Phase II of the pilot program will assess the spectrum sensing capabilities of DSA devices in a live LMR environment with sufficient DSA transmitter attenuation to prevent interference to LMR systems,[10] we propose that DSA mechanisms with respect to the T-Band be limited in participation to those public safety licensees already authorized in the T-Band. We believe that taking this step will provide much-needed certainty to T-Band licensees related to interference, and will aid in a smoother implementation of the Act.

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[9] *Wireless and Telecommunications Bureau and Public Safety and Homeland Security Bureau Suspend the Acceptance and Processing of Certain Part 22 and 90 Applications for 470-512 MHz (T-Band) Spectrum*, DA 12-643 (rel. Apr. 26, 2012).

[10] *See* Test Plan at 10-22.

III. TIA REQUESTS THAT NTIA CONSIDER INPUT ON THE TECHNICAL PARAMETERS OF PHASE II/III OF THE SPECTRUM SHARING INNOVATION TEST-BED PILOT PROGRAM

As noted above, TIA appreciates NTIA's seeking comment on the Phase II/III of the Spectrum Sharing Innovation Test-Bed pilot program. As NTIA notes in the draft Test Plan, several TIA standards are relied upon for conformity assessments related to physical layer interactions between LMR transmitters and LMR receivers.[11] Given TIA's natural interest in the Test Plan, TR-8 may conduct a thorough review of it. However, the deadline for comments, April 27, has not provided TR-8 with enough time to provide input to NTIA. For this reason, TIA requests that, at the time TR-8 may complete this review and offer technical input to the Test Plan, that NTIA make reasonable efforts to fully consider that input.

[11] Conformity assessment criteria for physical layer interactions between LMR transmitters and LMR receivers are documented in standards TIA-603-C, TIA-102.CAAA-B, and TIA-102.CAAB-B. *See* Test Plan at 6.

IV. CONCLUSION

We again congratulate NTIA in their continued examination of DSA and ways to further maximize efficient use of radio frequencies, which are vital to the United States' future. We urge NTIA to contact us with any questions or concerns you may have with our positions as it considers this proposal.

Respectfully submitted,

TELECOMMUNICATIONS INDUSTRY ASSOCIATION

By: */s/ Danielle Coffey*

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