Before the
NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION
Washington, DC 20230

In the Matter of	)
	)
Meeting to Discuss Lessons Learned from	)
Commerce Spectrum Management Advisory	)
Committee Working Group Process	)

COMMENTS OF T-MOBILE USA, INC.

T-Mobile USA, Inc.[1/] submits this response to the Notice of Open Meeting issued by the National Telecommunications and Information Administration ("NTIA") dated October 23, 2013.[2/] The *Notice* invites comment regarding "lessons learned" from NTIA's Commerce Spectrum Management Advisory Committee ("CSMAC") working group process in advance of the December 13, 2013 meeting discussing this topic. As an active participant in CSMAC and its working groups, T-Mobile is pleased to have the opportunity to submit the following for consideration at the December 13 meeting.

I. BACKGROUND

As discussed in the *Notice*, CSMAC created five working groups (the "Working Groups") to consider ways to facilitate the transition of the 1695-1710 MHz and 1755-1850 MHz bands from federal to non-federal or shared use.[3/] The Working Groups were open to federal agency representatives and non-federal stakeholders, with each Working Group co-chaired by an industry participant and an agency participant and supported by one or more CSMAC member

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1/ T-Mobile USA, Inc. is a wholly-owned subsidiary of T-Mobile US, Inc., a publicly traded company.

2/ *See Meeting to Discuss Lessons Learned from Commerce Spectrum Management Advisory Committee Working Group Process*, Notice of Open Meeting, 78 Fed. Reg. 64202 (dated Oct. 23, 2013) ("*Notice*").

3/ *See id.*

liaisons. Staff from NTIA and the Federal Communications Commission ("FCC" or "Commission") participated as observers. Each of the Working Groups was directed to address issues related to a particular category of federal operations operating within the targeted spectrum. From May 2012 to August 2013, the Working Groups created plans, engaged in meetings, and drafted reports and recommendations, which were delivered to the full CSMAC for consideration.[4/]

II. LESSONS LEARNED

A. The CSMAC Working Group Process Produced an Unprecedented Level of Collaboration Between Government and Industry.

The FCC has proposed to license spectrum, critical for the continued expansion of wireless broadband networks, which was considered for sharing and/or relocation by CSMAC.[5/] The FCC's proposal would not be possible without the unprecedented process created by CSMAC. The process enabled industry and government collaboration on a wide range of issues affecting the reallocation and sharing of spectrum employed by government users.[6/] In particular, discussions between government and industry stakeholders provided both with a significantly better understanding of system operation, technical features, and operational requirements. In contrast, past efforts often relied on either federal agencies or industry

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4/ *See id.*

5/ *See Amendment of the Commission's Rules with Regard to Commercial Operations in the 1695-1710 MHz, 1755-1780 MHz, and 2155-2180 MHz Bands, et al.*, Notice of Proposed Rulemaking and Order on Reconsideration, GN Docket No. 13-185, *et al.*, FCC 13-102 (rel. July 23, 2013) ("Today we propose rules for spectrum in the 1695-1710 MHz, 1755-1780 MHz, 2020-2025 MHz, and 2155-2180 MHz bands that would make available significantly more commercial spectrum for Advanced Wireless Services ("AWS"). . . The additional spectrum for mobile use will help ensure that the speed, capacity, and ubiquity of the nation's wireless networks keeps pace with the skyrocketing demand for mobile service.").

6/ *Expanding America's Leadership in Wireless Innovation*, 78 Fed. Reg. 37431 (June 20, 2013), *available at* http://www.whitehouse.gov/the-press-office/2013/06/14/presidential-memorandum-expanding-americas-leadership-wireless-innovatio (noting that the discussions between federal and industry stakeholders have "produced an unprecedented level of information-sharing and collaboration to identify opportunities for agencies to relinquish or share spectrum").

representatives conducting an analysis without the benefit of discussions with the other. Because neither federal agencies nor industry has complete information about the technical or operational requirements of the others' systems, these analyses were often inaccurate. Therefore, despite some of the limitations described below, the CSMAC effort was a significant improvement in facilitating discussions, producing a much better understanding of how to approach technical analyses and the proper parameters to include in evaluating potential spectrum sharing or relocation.

The Working Group collaboration and process, notwithstanding its shortcomings, has set a foundation for future joint government/industry engagement that will be critical in addressing the technical and policy challenges relating to many of the spectrum bands that have yet to be evaluated for sharing or relocation. In order to ensure a future framework that improves upon the CSMAC Working Group process, NTIA should consider the issues and proposals identified below.

B. Adopting Changes Relating to the CSMAC Working Groups' Structure, Process, Technical Analyses, and Information-Sharing Procedures Will Improve Future Government/Industry Collaborations.

While the Working Group process was successful in many respects, the participants encountered some challenges, which were not adequately resolved and which led to the Working Groups' inability to complete certain aspects of its work.[7/] Studies submitted by Working Group 4 and 5 in particular remain incomplete and the processes they employed merit further review in

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7/ *See, e.g., Separate Statement Concerning Working Group Reports for the 1755-1850 MHz Band* (Aug. 29, 2013), *available at* http://www.ntia.doc.gov/files/ntia/publications/csmac_separate_statement-aug_29-rev2.pdf (discussing that industry signatories do not endorse the assumptions and methodologies underlying certain Working Group technical analyses and explaining that "additional effort should be initiated that would greatly mitigate the protection zones for Federal operations"); *Separate Statement of Harold Furchtgott-Roth* (Aug. 2013), *available at* http://www.ntia.doc.gov/files/ntia/publications/furchtgott-roth-csmac_statement_080713_3.pdf (asserting that the option of relocating federal users was not adequately considered by the Working Groups).

order to provide more useful guidance. In particular, the interference analyses produced by these groups are overly conservative, and there was inadequate time to refine the results based on recommendations contained in the Working Group reports. In addition, there was no consideration of operation, frequency planning, or alternative bands that would have laid the foundation for comprehensive recommendations.

1. Structure

Technical Working Groups. During the CSMAC process, two technical working groups were created: one under Working Group 1 to develop Long-Term Evolution ("LTE") characteristics and a second under Working Group 5 to discuss details regarding interference analysis. These working groups reviewed specific technical issues that cut across a number, if not all, of the Working Groups, and therefore helped to ensure commonality among all Working Group efforts. Given the technical working groups' success in supporting Working Group activities, technical working groups should be used in future similar efforts where such groups might be helpful.

Federal Advisory Committee Act ("FACA") Structure. CSMAC was created under FACA.[8/] While the FACA structure and requirements are intended to ensure transparency in the decision-making process, they proved to be an impediment to sharing necessary technical and operational information, based on concerns by the Department of Defense ("DoD") and other Federal agencies that potentially sensitive information would be broadly released. This limited the ability to have fully informed discussions. As a result, NTIA should consider whether there are other structures that might be available that would facilitate more complete access to the relevant data.

8/ *See* 5 U.S.C. App. 2.

CSMAC Member Participation in the Working Groups. While CSMAC members were identified as "liaisons" to the Working Groups, they were not full participants. Consequently, CSMAC members were not able to make changes to the output reports of each Working Group. This inability to participate resulted in several separate statements from CSMAC members.[9/] Consequently, CSMAC members should be free to fully participate in future Working Group efforts so that they can provide input throughout the process.

2. Process

Agenda and Scope. The agenda and scope of the Working Groups should not be artificially limited. While the initial general directions covering all Working Groups were broad in scope, pointing to the need to review a wide variety of approaches for both sharing and clearing, the guidance provided to specific Working Groups set a much narrower focus. This guidance unnecessarily limited the scope of discussions. For example, in many cases technical analyses were limited to evaluating the potential for interference between co-channel operations only, an unproductive exercise when it became clear early in the process that co-channel operation would not be feasible. Yet, attempts to broaden the scope of the Working Groups to other areas that could facilitate sharing or relocation (*e.g.*, technical characteristics of equipment, interference thresholds, consideration of alternative bands, etc.) were prevented due to the restrictive definition of the Working Groups' missions. Rather than NTIA defining a baseline work approach upfront without input from the concerned parties, each Working Group should be allowed to develop its working method and scope or to designate an advisory body to work with the Working Group to do so.

9/ *See supra* note 7.

Pursuit of Parallel Tracks. To maximize productive use of time, technical sharing analysis should occur in parallel with discussions regarding assignment and operational changes. In a number of cases, a contractor conducted the interference analysis over the course of weeks or months. Once results were generated, they were subject to review by DoD prior to being made available to industry. During that time, no work was accomplished by the Working Group as it waited for the results of the analysis. Such a serial process is inefficient. Sharing of technical analyses should occur in parallel with discussions regarding assignment and operational changes that are necessary to develop comprehensive recommendations.

3. Technical Analyses

Agreement of Technical Analysis Parameters. Involved parties should agree upon the parameters governing the technical analyses conducted under the Working Group structure before the analysis is initiated. There also should be an opportunity to adjust the approach as initial results are available. For example, in Working Groups 4 and 5, the DoD initiated interference studies based on what it believed to be correct parameters for LTE systems based on output from the Working Group 1 technical working group. When industry pointed out that those parameters were developed for a different purpose and therefore not accurate for DoD's use in the Working Group 4 and 5 interference analyses, there was significant objection from DoD due to the costs associated with rerunning the analyses under different parameters. Ensuring agreement upon and understanding of the approach to a technical analysis prior to initiating the analysis would improve accuracy and increase efficiency. In addition, as discussed below, initial results should be shared within the Working Group so that the technical experts can discuss them and determine whether adjustments to the technical approach and parameters are necessary.

Iterative and Collaborative Technical Analysis Process. Both government and industry participants should have access to technical analyses as they are being developed. In cases where DoD conducted a technical analysis, particularly for Working Groups 4 and 5, the analysis was subject to an extensive DoD review process prior to being made available to industry. At that point, it was difficult or impossible to make adjustments, in order to get to the most accurate results. This process was vastly different from the process used for Working Group 1 where the initial results were thoroughly shared and discussed. Thorough evaluation of Working Group 1's initial results provided technical experts with the opportunity to identify unrealistic results and reach agreement regarding how the analysis should be adjusted to yield more realistic results. Adopting an iterative, transparent process will yield better analyses and more accurate results.

Industry/Government Ongoing Testing Platform. While the CSMAC Working Groups provided a starting point for assessing the technical challenges associated with sharing spectrum among disparate systems, their work underscores the need for an ongoing platform to test spectrum sharing technologies on both industry and government systems. Such a testing environment not only will address the remaining spectrum sharing questions associated with the spectrum that was the focus of the CSMAC process, but also will establish a formalized framework for assessing spectrum sharing technologies for future bands under consideration.

4. Information-Sharing Procedures

Release of For Official Use Only ("FOUO") Information. Many of the CSMAC Working Group studies involved the review of federal government system information, which in many cases was categorized as FOUO. As a result, industry participants were not allowed to access much of this information until such information went through a lengthy DoD review process. In many cases the information was never released to the CSMAC participants. This

review and lack of transparency resulted in months of delays to the analysis process, negatively impacting collaboration and the ability to develop accurate analysis.

Industry Personnel with Proper Security Clearances. Processes should be established to provide access to FOUO and similar information. For example, the CSMAC Working Group process evolved to establish "Trusted Agents" – a select group of industry individuals and their companies that signed non-disclosure agreements ("NDAs") with DoD. Having NDAs in place ultimately allowed for the sharing of FOUO information, but also underscored the need to have that or a similar process established in advance of such an effort. In some cases, it may be necessary to share classified information, not just FOUO, and a process should be put in place to meet this need. For instance, federal agencies could sponsor applicable industry personnel with the appropriate clearances (*e.g.*, Public Trust, Secret, Top Secret, etc.). While T-Mobile recognizes the importance of protecting critical government information and agrees that the distribution of classified or sensitive data should be restricted, expansion of the "Trusted Agent" program would enable better collaboration between government and industry stakeholders.

III. CONCLUSION

Even though the CSMAC Working Group process represents an unprecedented collaboration between government and industry stakeholders, challenges hindering CSMAC and future such collaborations remain. Considering the "lessons learned" identified here and taking action to improve those processes will allow NTIA to build upon the solid foundation established by the CSMAC Working Group process.

Respectfully submitted,

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