

February 10, 2021

Ms. Rebecca Dorch
National Telecommunications and Information Administration (NTIA)
U.S. Department of Commerce
325 Broadway
Boulder, CO 80305

Dear Ms. Dorch,

The Information Technology Industry Council (ITI) appreciates the opportunity to provide input into the proposed 5G Challenge to facilitate the development of an open 5G stack ecosystem in support of U.S. Department of Defense (DoD) missions. ITI represents over 70 of the world's leading innovation companies from all corners of the technology sector, including hardware, software, digital services, semiconductor, network equipment, electronic test and measurement, and other internet and technology-enabled companies that rely on information and communications technology to evolve their businesses. ITI strongly supports a trusted, secure, and innovative U.S. and allied 5G ecosystem and we commend NTIA and DoD for their efforts to unify the open 5G stack community through creating the 5G Challenge.

In order to structure the 5G Challenge in a way that will optimize innovation and interoperability, we offer the following recommendations:

1) Clearly Define “Open 5G Stack Ecosystem”

In all further communications relating to the 5G Challenge, we recommend that NTIA further define what is meant by an “open 5G stack ecosystem.” Particularly, NTIA should clarify that “open” in this context means “supports defined, standardized interfaces among the parts of the 5G stack.” In some instances, the use of the term “open” in the Notice of Inquiry (NOI) seems to conflate open architectures with open source software. While we appreciate the importance of facilitating interoperability across different implementations, we recommend that NTIA clarify that “open architectures” refers to the interfaces themselves, and that the elements of these networks can be built out using anything from open source to proprietary technology in the form of hardware, software, and services.

2) Clarify the 5G Challenge’s Metrics and Goals

The NOI asks stakeholders to provide input on the specific metrics that should be used to evaluate the 5G Challenge’s participants. We suggest that evaluation metrics should be a composite of performance measures derived from DoD 5G-related mission requirements, conformance to 5G standards, and performance measures based on an agreed upon interoperability test suite and 5G testbed. By designing such a composite measure, NTIA can establish how it is prioritizing performance vs. openness while maintaining 5G standards. NTIA can also use this trade-off to

assess the importance of time-to-market. Given the importance of incorporating security capabilities into 5G deployments to prevent malicious exploitation of the network while still enabling seamless connectivity, a foundational security metric should ensure full visibility of data and signaling layer traffic, coupled with automated security enforcement.

Additionally, the 5G Challenge should look to identify advancements in areas that have been suggested as possible impediments to the adoption of open architectures for 5G, such as the complexity of integration, the security implications of new interfaces, and energy consumption. In evaluating competing solutions within the challenge, NTIA and DoD should strongly consider these criteria. Relatedly, NTIA should suggest as an output for the challenge areas where the agency believes additional industry-led standards adoption would speed adoption of these architectures. Furthermore, NTIA should clarify that the primary goal of the 5G Challenge is to promote an innovative equipment ecosystem of trusted U.S. and allied suppliers.

3) Streamline the 5G Challenge's Governance Structure

ITI's members strongly support similar efforts to the 5G Challenge like DoD 5G testbeds. However, oftentimes the bureaucratic overhead required for an entity to participate in these challenges is substantial and costly; this likely limits the range of companies that can be involved in these activities. A bureaucratic governance structure runs contrary to the goal of these types of effort, which is to ensure that the most innovative possibilities can be accessed, no matter the size of the company involved. We urge NTIA to reduce the bureaucratic overhead for the 5G Challenge to the greatest possible extent, considering that similar exercises are typically run within industry as catalysts and can be quickly assembled and demonstrated with little overhead.

4) Consider a Broad Range of 5G Enabling Features

The NOI also asks stakeholders what 5G enabling features should be highlighted in the 5G Challenge. There are a variety of different technologies that are helping to drive the development and deployment of 5G technologies. We appreciate that NTIA is thinking about what makes sense to focus on. In the context of this Challenge, it may be helpful for NTIA to focus at least in part on network functions virtualization (NFV), cloud-native applications, software defined networking (SDN), and network slicing. In enabling enterprise-wide private 5G licensing, in particular, network slicing will be imperative and so an emphasis on this enabling technology might be helpful. SDN and NFV will also be useful in enabling an open 5G stack, as these technologies allow for greater flexibility in the network.

5) Look to the National Artificial Intelligence (AI) Advisory Committee as Guide to Stakeholder Engagement

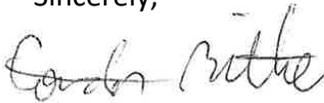
Section 5104 of the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2021 establishes a National Artificial Intelligence Advisory Committee to fully implement its National AI Strategy. Comprised of experts from government, industry, and academia, this Committee is tasked with advising the President and other executive branch agencies on the state of U.S. competitiveness and leadership in AI. The Committee is also fully exempt from requirements related to the Federal Advisory Committee Act (FACA). ITI believes a similar 5G-focused Advisory Committee could assist in educating stakeholders on what 5G is, helping government personnel understand the benefits of



5G adoption on a macro and micro level, and gathering feedback from interested parties across multiple sectors. As the U.S. government continues to push forward 5G adoption and innovation, ITI urges NTIA and other agencies to look at the National AI Advisory Committee as a stakeholder engagement model.

Thank you for your attention to this issue. We hope that the technology industry can work closely with NTIA to develop the 5G solutions that will power U.S. innovation and national security. Should you have any questions, please contact Kelsey Kober, Manager of Policy, Public Sector at kkober@itic.org or 202-524-5545.

Sincerely,



Gordon Bitko
Senior Vice President of Policy, Public Sector
Information Technology Industry Council (ITI)

