



TRENDS AND INNOVATIONS IN 5G AND BEYOND

OVERVIEW

Fifth generation (5G) wireless technologies will be a primary driver of the Nation's prosperity and security in the 21st century. To this end, the deployment of 5G telecommunications infrastructure presents opportunities and challenges for the United States, its allies, and like-minded nations.

During the President's National Security Telecommunications Advisory Committee's (NSTAC) August 2020 Member Conference Call (MCC), NSTAC members, private sector partners, and Federal Government officials will engage in a discussion on 5G technology trends and innovations.

As a result, MCC participants will address the:

- Benefits and challenges associated with open and secure 5G networks;
- Recent 5G-focused efforts across Government and industry, including those led by the Open Radio Access Network (RAN) Policy Coalition;
- Potential supply chain impacts, implementation concerns, and chip/hardware implications; and
- Issues for further NSTAC consideration.

INVITED PARTICIPANTS

The following individuals have been invited to participate in the discussion:

- **Ms. Robin Colwell**, Special Assistant to the President for Economic Policy, Executive Office of the President;
- **Mr. Christopher Boyer**, Vice President of Global Security and Technology Policy, AT&T, and Chair, Open RAN Policy Coalition; and
- **Ms. Diane Rinaldo**, Senior Vice President, Beacon Strategies, and Executive Director, Open RAN Policy Coalition.

These speakers will provide their unique perspectives on the U.S. Government's and industry's recent actions in 5G.

Ms. Colwell will provide a brief overview of the Government's perspective of the implementation the *National Strategy to Secure 5G*. Mr. Boyer and Ms. Rinaldo will then discuss recent trends in next-generation architectures, focusing specifically on activities and innovations related to open systems, open RAN, and key 5G-enabling technologies.

Following these updates, Ms. Colwell will facilitate a discussion with NSTAC members and Government partners.

INTENDED OUTCOMES

The primary goal of this session is to support an open dialogue and provide NSTAC members an opportunity to offer their perspectives. As such, NSTAC members will engage directly on a variety of topics and provide industry-specific insights on how the public and private sectors can collaboratively deploy a trusted global and nationwide 5G infrastructure.

From this discussion, NSTAC members will gain a better understanding of: (1) how the private sector can support the adoption of more flexible and open network technologies; (2) what approaches may facilitate a wide-scale 5G rollout; (3) what policies the Government should consider implementing to support public-private partnership, information sharing, and innovation in this space; and (4) what related issues the NSTAC could examine moving forward.

PROPOSED TOPICS FOR DISCUSSION

The purpose of the following non-prioritized, non-exhaustive list is to help facilitate a discussion on recent 5G developments in the public and private sectors.

It is not intended for attendees to address every topic below. This list is meant to provide participants some items for consideration as they offer their contributions during this session.



PRESIDENT'S NATIONAL SECURITY TELECOMMUNICATIONS ADVISORY COMMITTEE



AUGUST 2020 MEMBER CONFERENCE CALL | 5G DISCUSSION GUIDE

Initiatives to support 5G innovation

- What industry activities are needed to support the *National Strategy to Secure 5G*? What gaps currently exist in ongoing efforts?
- What gaps exist in current 5G policy? What are some key opportunities for public-private partnership?
- What additional industry or public-private initiatives could help the accelerate deployment of a trusted global and nationwide 5G infrastructure? Is there a specific role the NSTAC should play?
- What steps can the Federal Government take to ensure the long-term viability and integrity of the wireless communications technology supply chain?

The open system approach to 5G adoption

- What key innovations are driving the move toward new architectures (e.g., RAN, chip/hardware layer improvements, software-defined networking, virtualization)?
- What are the main operational and cybersecurity benefits associated with the adoption of open RAN across commercial, Government, and enterprise networks?
- How can the Federal Government and service providers work together to ensure open and stable 5G core capabilities?

Secure operations on trusted and untrusted networks

- Given the abundance of new applications and vendors, what steps should the Government take to enhance current cybersecurity risk mitigation practices?
- What are the inherent risks posed by chips and other hardware in 5G network deployments?