

Charter of the National Advanced Spectrum and Communications Test Network

1. Purpose

The purpose of this Charter is to describe the mission, function, and structure of the National Advanced Spectrum and Communications Test Network (NASCTN) in support of the national need for improved spectrum sharing. The purpose of NASCTN is to improve opportunities for successful spectrum sharing through accurate, reliable, and unbiased measurements and analyses. It is the intent that organizations that are signatories to this Charter will work in good faith partnership in accordance with the roles and responsibilities identified to support this purpose.

This Charter also establishes the framework by which the National Institute of Standards and Technology (NIST), National Telecommunications and Information Administration (NTIA), Department of Defense Chief Information Officer (DoD CIO), National Aeronautics and Space Administration (NASA), National Oceanic Atmospheric Administration (NOAA), National Science Foundation (NSF), other federal agencies, and non-federal entities (hereafter referred to collectively as "MEMBERS") perform their roles in providing the NASCTN functionality.

2. Background

Rapid advances in communications technology and increased commercial, federal, and first responder spectrum needs have fundamentally changed the way we as a Nation work and live. These advances, especially the rapid growth of mobile wireless devices capable of transmitting and receiving large quantities of data, have placed significant new demands on access to the electromagnetic spectrum. To continue to benefit from advances in technology in a way that balances demand for commercial broadband uses with the needs of national security and public safety, the United States (U.S.) must develop new capabilities to more efficiently and effectively share and utilize existing electromagnetic spectrum resources. Industry and U.S. Government Agencies, including the Federal Communications Commission (FCC), are increasingly relying on the technical analysis from equipment testing and measurements using sound engineering capabilities.

Signatories on this Charter are establishing a capability to facilitate access to engineering and testing capabilities to address emerging spectrum-related testing needs that is referred to herein as "NASCTN."

3. NASCTN's Mission

NASCTN's mission is to provide, through its MEMBERS, robust test processes and validated measurement data necessary to support the development, evaluation and deployment of spectrum sharing technologies that can increase access to the spectrum by both Federal agencies and non-federal spectrum users.

4. NASCTN Membership

In addition to the existing MEMBERS, other federal agencies, academic, and industry stakeholders may join NASCTN and become a MEMBER by executing this Charter with NIST, NTIA, DoD CIO, NASA, NOAA and NSF.

The guiding principles for NASCTN MEMBERS are to:

- a) Facilitate and coordinate work with federal, academic, and industry spectrum users to rapidly and cooperatively facilitate spectrum sharing and co-existence studies;
- b) Work as a partnership to address the interests and equities of all spectrum stakeholders in a fair, equitable, and non-preferential manner; and
- c) Through sharing of technical resources, with consideration for cost, provide liaison and support to coordinate and leverage existing national capabilities supporting government, academic, and industry testing and evaluation known to improve and expedite spectrum sharing and co-existence.

5. NASCTN's Functions

NASCTN, through its MEMBERS, will provide the following functions:

- a) Creating a trusted capability for federal, academic, and industry to facilitate spectrum sharing studies; optimize access to engineering and testing capabilities; and engage federal, academic, and industry spectrum users in active collaboration without encumbrance of outcome;
- b) Facilitating coordination, access, and engagement of MEMBERS' engineering and testing capabilities;
- c) Advancing the best practices for spectrum sharing metrology, testing, measurement, and data analysis to improve the quality of information provided to the spectrum community (e.g., regulators, federal agencies, industry);
- d) Protecting controlled information (e.g., proprietary, classified, commercially sensitive) against unauthorized uses and disclosures pursuant to applicable statutes, regulations, and agreements while facilitating sharing of MEMBERS' controlled information when appropriate;
- e) Facilitating access to available spectrum test data, analyses, and reports that can be made available to federal, academic, and industry spectrum users to assist in testing, technology assessments, and other research; and
- f) Performing outreach and engagement activities within their respective communities to identify spectrum-related testing and evaluation needs and to disseminate information about the availability and access requirements of engineering and testing capabilities.

6. Organization, Roles and Responsibilities

NASCTN consists of personnel, resources, and capabilities from each NASCTN MEMBER organization. Figure 1 shows the high-level organizational structure for NASCTN and is described in the following sections.

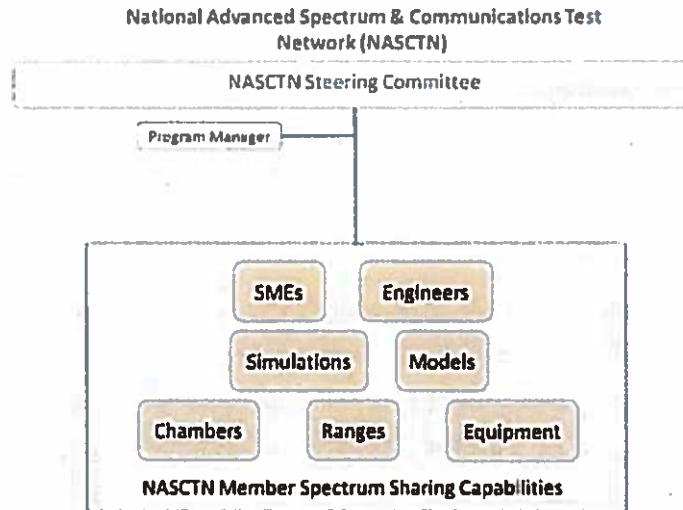


Figure 1. NASCTN Organizational Structure

NASCTN MEMBER Steering Committee

The NASCTN MEMBER Steering Committee (referred hereafter as the Steering Committee) provides guidance, approval, and governance for NASCTN activities. A meeting quorum is considered two members and the program manager. Each MEMBER will designate a representative to the Steering Committee. The government members of the Steering Committee are voting MEMBERS. Industry and Academia MEMBERS will provide technical expertise and guidance, but will not be voting members and will not provide consensus advice to Federal agencies. The Steering Committee is not an advisory committee under the Federal Advisory Committee Act, 5 U.S.C. Appendix 2. The Steering Committee shall:

- a) Set strategic direction,
- b) Discuss current spectrum-sharing issues with respect to NASCTN's mission
- c) Identify and evaluate NASCTN process
- d) Discuss additional MEMBER engineering and testing capabilities that may be needed to support future NASCTN projects.
- e) Approve NASCTN spectrum sharing projects based on the sponsor's proposal and the recommendation of NASCTN screen team

The representative serves as the primary point-of-contact for NASCTN to their home organization and is responsible for disseminating information regarding NASCTN projects and operations to interested stakeholders within the representative's organization.

In coordination with the Steering Committee representatives, the NASCTN Program Manager will convene a meeting of the Steering Committee a minimum of every quarter. The

NASCTN Program Manager will propose meeting agendas, provide reference material, and capture meeting minutes.

NASCTN Program Manager

The NASCTN Program Manager is a Federal employee that is appointed by the NASCTN Hosting Organization after consultation with the voting members of the Steering Committee. The NASCTN Program Manager shall:

- a) Oversee day-to-day operations of NASCTN efforts;
- b) Develop, execute, and improve the processes for NASCTN activities;
- c) Determine when to issue reports to NASCTN's review process
- d) Manage NASCTN projects approved by the Steering Committee including staffing requests;
- e) Provide outreach material to MEMBERS to promote engagement activities that help identify spectrum-related issues and to identify organizations, both Federal and non-Federal, that have relevant engineering and testing capabilities that could be added to NASCTN test network;
- f) Provide standardized NASCTN messaging materials (e.g., briefing, project updates, newsletters) for dissemination within MEMBER organizations by the Steering Committee representatives;
- g) Establish and conduct out-reach to the spectrum sharing community to highlight capabilities and results of NASCTN efforts, improve collaboration and information sharing, and identify potential new spectrum sharing issues;
- h) Consult with the MEMBERS on the efficient and effective operation of NASCTN;
- i) Consult with the MEMBERS on ways to improve NASCTN processes; and
- j) Convene NASCTN MEMBER Steering Committee meetings.

NASCTN MEMBERS

The NASCTN MEMBERS shall:

- a) Attend quarterly NASCTN Steering Committee meetings
- b) Appoint a representative to the NASCTN MEMBER Steering Committee;
- c) Make available, in accordance with their organization's rules policies and regulations, personnel, engineering capabilities, and/or test facilities with typical consideration for cost. MEMBERS will help expedite access to resources by establishing streamlined processes, pre-coordinating sharing agreements, and establishing fee-for-service policies and procedures for other MEMBERS. MEMBERS retain the right to not participate in projects;
- d) Coordinate their efforts to identify, develop, and test spectrum sharing ideas, concepts and technology to support the goal of advancing more efficient and effective spectrum sharing;
- e) Make available information related to spectrum sharing, considering requirements for the protection of intellectual property, national security, and other organizational controls. The MEMBERS will also ensure they comply with the information handling requirements of the

originating MEMBERS. To the maximum extent possible, allow the publication of NASCTN test results;

- f) Safeguard all sensitive, proprietary, and/or classified information obtained through NASCTN membership;
- g) Ensure NASCTN's review processes are conducted properly
- h) Work with other MEMBERS to resolve disagreements. If agreement cannot be reached, MEMBERS may use their own approach but will refrain from referencing NASCTN in documentation; and
- i) Support the out-reach program and coordinate efforts with the NASCTN Program Manager to improve the spectrum sharing capabilities and resources of NASCTN.

7. NASCTN Hosting Organization

NIST hosts the NASCTN capability at the Department of Commerce's (DOC's) Laboratories in Boulder, Colorado. Any support provided by NIST to MEMBERS' staff located at the NIST campus in support of NASCTN, pursuant to its authority under 15 USC §§ 272(b)(10), 272(c)(11), 272(c)(12), 272(c)(14), 272(c)(22), 273, and 275a, will be documented in a separate memorandum of agreement.

8. NASCTN Governance

The NASCTN MEMBER Steering Committee provides all guidance, approval, and governance for NASCTN activities. A quorum for decision making consists of attendance by a majority of voting Steering Committee representatives. All NASCTN decisions will be made by majority vote of voting Steering Committee representatives attending the Steering Committee meeting. [[Ties amongst Steering Committee decisions will be decided through the vote of the NASCTN MEMBER willing to commit the NASCTN Technical Lead and account for the non-reimbursable expenses]]. Non-voting Steering Committee representatives (i.e., Industry and Academia) attend Steering Committee meetings, participate in discussions, and provide recommendations and expertise. Non-voting representatives may be excluded from topics and discussions that are deemed by the NASCTN Program Manager as 'government only'.

In addition to the regularly scheduled meetings, the NASCTN Program Manager may coordinate out-of-cycle meetings to address emergency or critical issues and decisions that cannot wait until the next scheduled meeting. These out-of-cycle meetings will be conducted via the most effective method to achieve a timely decision (e.g., face-to-face, web conference, telephone bridge, or email) and, situationally dependent, emailed votes will be allowed.

If an organization's NASCTN Representative cannot attend a meeting, it may designate an alternate who can attend the meeting and vote on behalf of the organization.

The NASCTN Program Manager will record attendance, deliberations, and decisions in the NASCTN MEMBER Steering Committee meeting minutes for all regular and out-of-cycle meetings.

9. Funding

NASCTN is not an interagency organization and will not receive interagency funding in accordance with government-wide prohibitions established in applicable appropriations acts, most recently at section 708 of the Financial Services and General Government Appropriations Act, 2014 (Pub. Law 113-76, Div. E). Each MEMBER is responsible for its own costs associated with its membership in NASCTN. Funding for MEMBERS participating in a project will be determined on a project-by-project basis and by separate appropriate agreements. All activities contemplated by this Charter are subject to the availability of funds for each respective Member. No Member's funds are obligated by this Charter, which does not constitute a legally binding commitment by any Member, and each Member shall solely provide for its expenditures.

10. New Members

New members may be added to the charter via a single signature from their organization and agreeing to the charter as written.

11. Term, Renewal, Modifications, and Termination

This Charter will be in effect for three year periods. The Charter will be reviewed each year and revised if necessary, with the revised charter accepted upon mutual written agreement of the MEMBERS.

A MEMBER reserves the right to withdraw from NASCTN at any time, but shall provide the NASCTN MEMBER Steering Committee and NASCTN Program Manager written notice no later than thirty (30) days before the effective date of termination.

A Member may be suspended or terminated by a two-thirds vote of the membership for failure to participate or otherwise contribute,

By signing below, each party's representative is affirming his or her authorization to bind that Party to the terms and conditions of this Charter.

For the Department of Defense Chief Information Officer (DoD CIO):

Essye B. Miller

Date: JAN 25 2018

Essye B. Miller
Acting Department of Defense Chief Information Officer

For the National Institute of Standards and Technology (NIST):



Walter Copan, Ph.D.
Director and Under Secretary
of Commerce for Standards and Technology

Date: 4/27/2018

For the National Telecommunications and Information Administration (NTIA):

A handwritten signature in blue ink, appearing to be "W. J. Hall", written over a horizontal line.

Date: 3/4/19

Assistant Secretary of Commerce for
Communications and Information

For the National Aeronautics and Space Administration (NASA):

William H Gerstenmaier

Date: 5 March 2014

William H. Gerstenmaier

Associate Administrator, Human Exploration and Operations

National Aeronautics and Space Administration (NASA)

For the National Science Foundation (NSF):

James S Ulvestad

Date: 3/27/2018

**Dr. James S. Ulvestad, Chief Officer for Research Facilities
National Science Foundation (NSF)**

NSF representatives to NASCTN: Ashley Zauderer and Jonathan Williams

Contact Information for reaching the current ESM unit at NSF:

National Science Foundation
Electromagnetic Spectrum Management Unit
Division of Astronomical Sciences
2415 Eisenhower Avenue
Alexandria, VA 22314

Email: esm@nsf.gov
Phone: (703) 292-8820

For the National Oceanic Atmospheric Administration (NOAA):

Ivan Navarro

Date: 01/17/2018

Mr. Ivan R. Navarro
National Oceanic Atmospheric Administration (NOAA)