NASA Policy Directive

NPD 8074.1
Effective Date: August 11, 2009
Expiration Date: August 09, 2032

COMPLIANCE IS MANDATORY FOR NASA EMPLOYEES

Printable Format (PDF)

Subject: Management and Utilization of NASA's Space Communication and Navigation Infrastructure - Revalidated 7/01/21

Responsible Office: Space Operations MD

CHANGE HISTORY

Chg#	Date	Description/Comments
1	02/27/2015	Update to comply with 1400 Compliance,with administrative changes, update applicable documents, and added Attachment A for references.
2	07/01/2021	Update to comply with 1400 Compliance,with administrative changes.

1. POLICY

It is NASA's policy to achieve and maintain consolidated, mission-success oriented, and cost-effective space communications and navigation (C&N) mission support; to unify the set of processes for the development, utilization, and acquisition of agency space C&N infrastructure; and to enhance this support by facilitating new capabilities for the future. NASA's space C&N comprises the ground and space-based communications and navigation networks and infrastructure providing mission support for all planetary orbits, surfaces, and environs.

2. APPLICABILITY

a. This directive is applicable to NASA Headquarters and NASA Centers, including Component Facilities and Technical and Service Support Centers. This directive applies to the Jet Propulsion Laboratory, a Federally Funded Research and Development Center, and other contractors only to the extent specified or referenced in the appropriate contracts.

b. In this directive, all mandatory actions (i.e., requirements) are denoted by statements containing the term "shall," followed by a software engineering (SWE) requirement number. The terms "may" or "can" denote discretionary privilege or permission, "should" denotes a good practice, and is recommended but not required, "will" denotes expected outcome, and "are/is" denotes descriptive material.

c. In this directive, all document citations are assumed to be the latest version unless otherwise noted.

3. AUTHORITY

15 U.S.C. 272(b), Section 13, Functions of Secretary and Institute.

4. APPLICABLE DOCUMENTS AND FORMS

a. NPD 1000.0, NASA Governance and Strategic Management Handbook.

b. NPD 1000.3, The NASA Organization.

c. NPD 7120.10, Technical Standards for NASA Programs and Projects

d. NPR 7120.5, NASA Space Flight Program and Project Management Requirements

e. NPR 7123.1, NASA Systems Engineering Processes and Requirements

5. RESPONSIBILITY

a. To accommodate this policy, NASA leadership established the Space Communications and Navigation (SCaN) Office, organizationally located within the Human Exploration and Operations Mission Directorate (HEOMD), to support agency management of space C&N services, as prescribed by NPD 1000.0, NASA Governance and Strategic Management Handbook and NPD 1000.3, The NASA Organization. In order to accomplish this responsibility:

b. NASA's Human Exploration and Operations Mission Directorate shall manage the space C&N infrastructure through the Space Communications and Navigation (SCaN) Program Office, as prescribed by NPD 1000.0, and NPD 1000.3.

c. The SCaN Program Office shall:

(1) Act as NASA's central agent for the acquisition and logistics management, authorization of commercial service solutions and operationalization, design, development, implementation, and management of the space C&N services necessary to satisfy agency user mission requirements for all planetary orbits, surfaces, and environs.

(2) Fulfill NASA's C&N service portfolio for the agency, through U.S government-owned assets, established collaborative partnerships, and acquisition of services from commercial industry.

(3) Establish public/private partnerships to leverage commercial communications infrastructure for the development, demonstration, and operations for end-to-end capability of communications and navigation services

(4) Manage the C&N capability, both NASA and commercial assets and services, through collaboration with agency senior leadership, Mission Directorates (MD's), national and international Partners; and in compliance with the Independent Technical Authority (ITA).

(5) Provide the Agency Program Management Council (APMC) with an annual evaluation of integrated, mission-based capability gaps and risk assessments of the SCaN program and services, and an update of new C&N technologies..

(6) Apply all technical standards used to implement or acquire C&N services with the objective of maintaining and sustaining interoperability with other agencies and international partners.

(7) Collaborate with the MD's to identify future C&N requirements, resolve technical capability gaps, and coordinate with MD's for planning and supporting, with NASA and/or commercial assets, the space C&N requirements for all current and new missions, projects, Announcements of Opportunity (AO), and other NASA partnerships.

d. NASA Mission Directorates (MD) shall:

(1) Utilize SCaN to meet all communication and navigation requirements, including all human and science missions. However, where most practicable and cost-efficient the MD's, with SCaN office concurrence, may use pre-existing infrastructure external to NASA for this purpose; provided that no new facilities are constructed using NASA funds.

(2) Notify SCaN of cases, whereby the MD's choose to utilize non-NASA assets and/or currently offered SCaN services to meet a mission's communication and navigation requirements, in order to coordinate alternate communication and navigation services to ensure backup support and mission readiness

(3) Collaborate with the SCaN office to identify future C&N requirements, resolve technical capability gaps, and coordinate with the SCaN office for planning the space C&N requirements for all new missions, projects, AO's and NASA partnerships.

(4) Identify, in coordination with the SCaN office, space C&N technologies and commercial opportunities relevant to their operating platforms and that are compatible and interoperable with SCaN infrastructure.

e. NASA's Office of the Chief Engineer shall:

(1) Review and verify/validate compliance with this NPD.

(2) Serve as the independent technical authority for the SCaN program, and provide an independent perspective of SCaN services, architecture, and future capabilities in accordance with NPR 7123.1, NASA Systems Engineering

Processes and Requirements.

6. DELEGATION OF AUTHORITY

None.

7. MEASUREMENTS/VERIFICATION

a. Compliance with the NPD will be evaluated through:

(1) SCAN Quarterly Program Management Reviews (QPMR)

(2) SCAN Board of Directors (BoD) meetings

(3) Directorate Program Management Council (DPMC)

(4) Agency Program Management Council (APMC)

(5) Independent assessments and reviews, as prescribed by NPR 7120.5, NASA Space Flight Program and Project Management Requirements or Directorate and Agency guidance

8. CANCELLATION

NPD 8074.1, Management and Utilization of NASA's Space Communication and Navigation Infrastructure, dated August 11, 2010.

Revalidated with change 2 on 7/01/2021, original signed by:

/s/ Charles F. Bolden, Jr.,

Administrator

ATTACHMENT A: REFERENCES

A.1 OMB Circular A-119, Federal Participation in the Development and Use of Voluntary Consensus Standards.

A.2 NPD 1001.0, NASA Strategic Plan

A.3 NPD 2570.5E, NASA Electromagnetic Spectrum Management

A.4 NPR 2570.1B, NASA Radio Frequency (RF) Spectrum Management Manual

A.5 NPR 7120.10, Technical Standards for NASA Programs and Projects

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