



NASA Communications Services Program (CSP) Overview

Elias Naffah
Thomas Kacpura
Raye Sledge

NASA Glenn Research Center
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CSP Budget



Op Plan Enacted Request

Budget Authority by Fiscal Year (in \$ millions)

Total Budget

FY2020

FY2021

FY2022

FY2023

FY2024

FY2025

FY2026

3.0

23.4

42.0

51.2

58.9

58.9

58.9

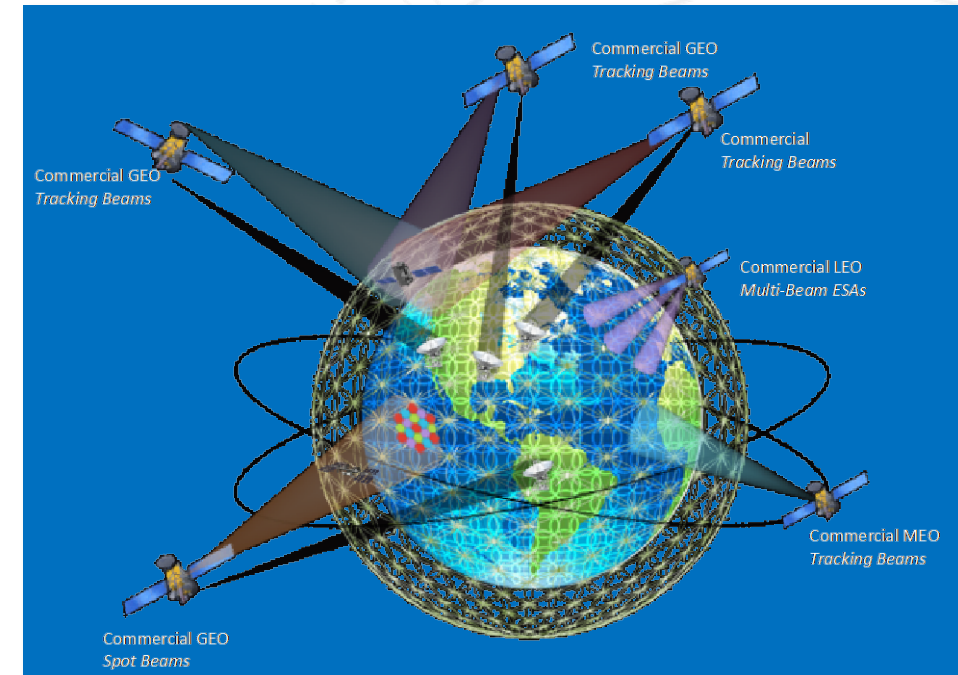
- **The Communications Services Program (CSP) is being formulated to:**

- Demonstrate the feasibility of commercially-provided satellite communications (SATCOM) capabilities
- Acquire future commercial SATCOM services
- Phase out reliance on NASA-owned and operated systems

- **CSP will work with the commercial market to explore mutually beneficial opportunities.**

- **Goals:**

- Bolster American Industry
- Reduce cost to NASA
- Maximize interoperability between government and commercial service providers while promoting a diverse and growing commercial market



Above: Future Space Communications Infrastructure

Capability Demonstrations

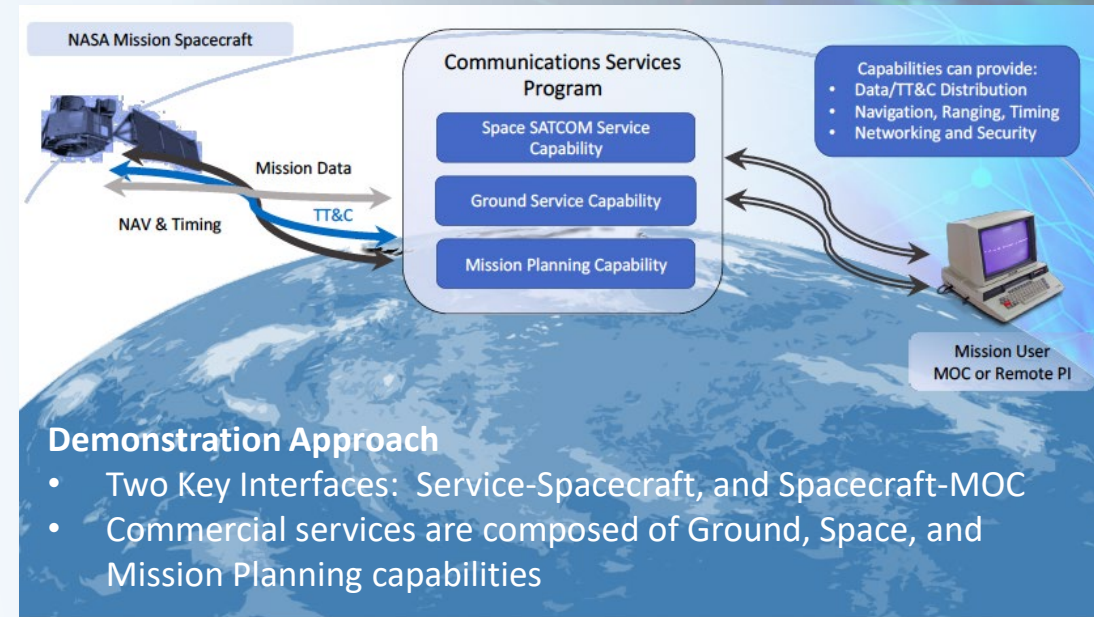
OVERVIEW - CSP will:

- Work with the commercial market to identify requirements and explore opportunities that are mutually beneficial
- Develop an acquisition model for incorporating commercial communications services into operations
- Define the acquisition strategy for transitioning near Earth NASA users to suitable commercially provided services

POLICY - CSP will:

- Implement U.S. Space policy with investments to stimulate the commercial space industry via Public Private Partnerships through appropriate funding instruments
- Facilitate U.S. private industry demonstration of commercial satellite capabilities with the goal of achieving robust, reliable, and cost-effective communications to spacecraft in near-Earth orbit
- Create a market environment where commercial space satellite comm services are available to Government and private sector customers

CSP plans to utilize Public-Private Partnerships with the commercial sector to develop the commercial SATCOM capability for near-Earth spacecraft



Commercial Service Demonstration Goals

- Demonstrate end-to-end commercial capabilities to address mission needs
- End-to-end capabilities demonstrate a service or series of services to a mission
- Successful demonstrations are candidates for services that could be offered to missions
- The capability demonstrations selected should be extensible for a class of missions

**Information is pre-decisional and subject to change*

Objectives and Service Portfolio



Objectives

- Explore which services, technologies, and partnership strategies best fulfill NASA's requirements. CSP seeks to partner with multiple commercial entities
- Acquire Commercial services and is agnostic on technology, orbits, and data pathway
- Provide end-to-end commercial SATCOM services with little to no government furnished equipment or services
- Minimize the need for NASA-unique capabilities. CSP seeks to be one of many users

Partnerships will bolster American industry, reduce the cost to NASA, and maximize interoperability

Service Portfolio

- A portfolio of end-to-end SATCOM services between the spacecraft and the service, and the service and the mission operation center
 - Delivery of commands and return of telemetry
 - Navigation and timing services
 - The return of the science data created on NASA missions, and support the operation of the science payloads
 - The appropriate level of security
 - Other communication needs (proximity, voice, etc. as required)
- Support for real time and near real time data needs
- Scheduling
- Commercial spectrum management, certification and compliance

**Information is pre-decisional and subject to change*

Approach

**Information is pre-decisional and subject to change*

**Timelines are notional and subject to change*



NASA envisions a 3-phase strategy for transitioning NASA's satcom traffic from government-owned and operated assets to commercial services:

PHASE 1: NASA's Mission Needs

Identify, characterize, and quantify NASA's future satcom needs, and interact with industry

- Identify future missions needing commercial communication services and break into suitable mission classes
- Develop the requirements for end-to-end service demonstrations that will prove the viability of the service(s)
- Identify possible missions to support these demonstrations

PHASE 2: Commercial Capability Development and Demonstrations

Establish multiple partnerships between NASA and commercial satcom companies to develop and demonstrate end-to-end operational capabilities that can meet NASA's needs

- Conduct demonstrations that will support potential missions
- Validate the performance of the demonstrations for suitability as services
- Identify the future services required and continue to conduct

PHASE 3: Commercial SATCOM Services Acquisition

Acquire commercial satcom services from multiple providers

- Procure the services necessary for communications to support NASA missions through long term contracts and traditional procurements
- Support an integrated approach for mission communication systems and enterprise management (scheduling and data delivery)

Capability and Demonstration Plan Forward

CSP Demonstrations will implement U.S. Space commercial policy with investments to advance the commercial space industry

- Maintain multiple touch points with industry to gather information and match industry capabilities with mission needs
- CSP awards will follow the COTS agreement model, that successfully used funded SAAs for demonstrations.
- Agreements will feature cost-sharing between NASA and private industry, pay-for-performance development milestones
- Industry will retain maximum intellectual property
- The Government and Partners will share technology, cost, or risk to complete the project
- Benefits include offering flexible, cost-effective, state-of-the-art satcom services to satisfy NASA mission needs and promote a diverse and growing commercial satcom industry
- Create a market where commercial space communication services are available to the Government and other industry customers

NASA will begin with multiple awards for partnerships to develop and demonstrate capabilities and will last approximately 2-3 years.

- May be extended to enable future on ramps.
- Demonstrations provide the necessary information and experience to release long term procurements for communications services to support future NASA missions.

Key Dates (Proposed Schedule)

Satellite 2020 Industry Engagement	March 2020
Draft Announcement Released	August 2020
Industry Day	August 2020

Announcement Released
Awards
Initial Demonstrations

September 2020
January 2021
FY21 – FY23

Contact Information



NASA Glenn Research Center (GRC) is providing the primary support to NASA HQ

[View the CSP Website](#)

Elias Naffah

NASA GRC, CSP Program Manager

elias.t.naffah@nasa.gov

Thomas Kacpura

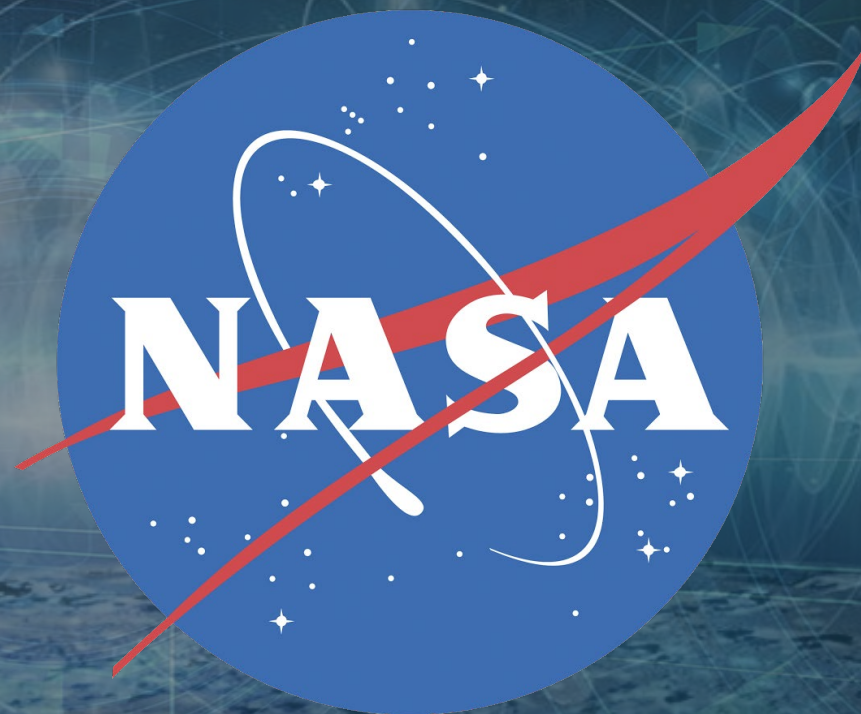
NASA GRC, CSP Deputy Program Manager

thomas.kacpura@nasa.gov

Raye Sledge

NASA GRC, CSP Business Manager

ra-deon.sledge@nasa.gov



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