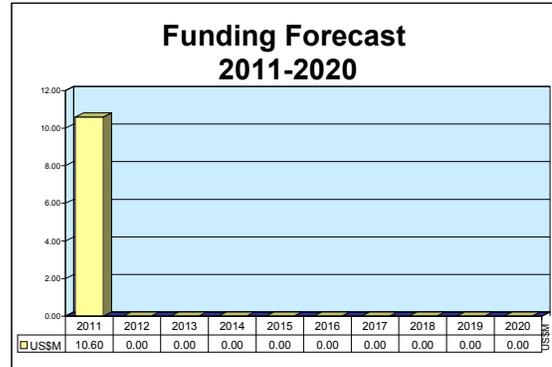


Space Architect

Outlook

- The National Security Space Office was disestablished in December 2010. The Executive Agent for Space was directed to establish a jointly manned space office to support the DoD Executive Agent for Space and the Defense Space Council



Orientation

Description. Space Architect was a program headed by the U.S. Air Force under the National Security Space Office (NSSO). Its purpose was to develop, coordinate, and integrate space system architectures for future U.S. space-based programs such as those involving satellite communications, reconnaissance, and surveillance.

Sponsor

U.S. Air Force
 Air Force Materiel Command
 SMC-Space & Missiles System Center
 160 Skynet St
 Suite 2315
 Los Angeles AFB, CA 90245-4683
 USA
 Tel: + 1 (310) 363-6871
 Web site: www.acq.osd.mil/

Status. Architectural Development Study started in 2004. Efforts realigned and transferred to the newly created NSSO in FY07. NSSO disestablished in December 2010.

Total Produced. Not applicable, as program is in concept development.

Application. Long-term development and integration of command and control networks for use in intelligence operations.

Price Range. Not applicable.

Contractors

Prime

| | |
|---|---|
| Aerospace Corp | http://www.aero.org , 2350 E El Segundo Blvd, El Segundo, CA 90245-4691 United States, Tel: + 1 (310) 336-5000, Fax: + 1 (310) 336-8249, Program Participant (Research & Development) |
| Cobham Analytic Solutions, (Sparta, Inc) | http://www.sparta.com , 25531 Commercentre Dr, Ste 120, Lake Forest, CA 92630 United States, Tel: + 1 (949) 768-8161, Fax: + 1 (949) 583-9113, Program Participant (Research & Development) |

Space Architect

| | |
|---|---|
| MITRE C3I Division | http://www.mitre.org , 202 Burlington Rd, Bedford, MA 01730-1420 United States, Tel: + 1 (781) 271-2488, Fax: + 1 (781) 271-2000, Program Participant (Research & Development) |
| Science Applications International Corp (SAIC) | http://www.saic.com , 10260 Campus Point Dr, San Diego, CA 92121 United States, Tel: + 1 (858) 826-6000, Fax: + 1 (858) 826-6634, Program Participant (Research & Development) |

Comprehensive information on Contractors can be found in Forecast International's "International Contractors" series. For a detailed description, go to www.forecastinternational.com (see Products & Samples/Governments & Industries) or call + 1 (203) 426-0800.

Contractors are invited to submit updated information to Editor, International Contractors, Forecast International, 22 Commerce Road, Newtown, CT 06470, USA; rich.pettibone@forecast1.com

Technical Data

Design Features. The NSSO was established as an independent agency administered jointly by the U.S. Department of Defense and the Intelligence Community (IC) and chartered by a Memorandum of Agreement between the Secretary of Defense and the director of Central Intelligence. The NSSO was responsible for developing and integrating future space architectures and capabilities for the mid- and long-term across the entire range of space missions related to national security. Under the auspices of the NSSO, representatives from the military, intelligence, and civil and commercial space sectors collaborated to develop strategic space system plans.

In January 2001, the Commission to Assess United States National Security Space Management and Organization (the Space Commission) endorsed the National Security Space Architect (NSSA) (later renamed the National Security Space Office) and recommended expanding its roles and responsibilities. As a result, the NSSA was realigned to report to the

Under Secretary of the Air Force and the director of the National Reconnaissance Office (USecAF/DNRO). The current NSSO's expanded responsibilities include conducting an annual assessment of the consistency of defense and intelligence space programs with national security space policy and architectural decisions, supporting development of the National Security Space Plan by the USecAF/DNRO, and assisting the USecAF / DNRO in assessing space and non-space solutions to user requirements. The NSSO was also designed to explore how space, land, sea, and air components can best be integrated. At the present time, there are no other organizations in the DoD, the IC, or the civil sector performing these functions.

The NSSO obtained direct support from various firms and federal agencies involved in space planning and development.

The NSSO was ordered disestablished in December 2010.

Program Review

Background. Efforts to create a space architecture in military satellite communications (MILSATCOM) were initiated in 1995 by the newly created Department of Defense Space Architecture. That department was charged with developing a future MILSATCOM architecture that would coordinate DoD capabilities with commercial technology and broadcasting capabilities. The department proceeded to develop the 1997 Senior Warfighters Forum and the Joint Requirement Oversight Council's "Course of Action" plan, which has since been used as the basis for the development of acquisition plans.

DoD Enacts SATCOM Network Program

The National Security Space Architect was established in March 1998 and functioned under the direction of the DoD and the CIA to ensure that defense and intelligence

space system architectures were coordinated and integrated as much as possible.

In May 2004, the NSSA merged with the National Security Space Integration directorate and the Transformational Communications Office to become the National Security Space Office, with expanded roles and responsibilities. The NSSO is a joint U.S. DoD / intelligence community organization that provides strategic focus and unity of effort across the National Security Space (NSS) enterprise spanning the military, intelligence, civil, and commercial space sectors. NSSO conducts long-range space strategic planning; develops mid- to long-term space architectures; examines trades between space and non-space solutions to user requirements; assesses defense and intelligence space programs for conformity with policies, planning

Space Architect

guidance, and architectural decisions; provides technical enterprise engineering; and conducts analyses of space-related matters to guide the activities of NSS organizations.

The office reports to both the Under Secretary of the Air Force/DoD Executive Agent for Space and the director of the National Reconnaissance Office. Through them, it also advises the leaders of the military services, intelligence community, U.S. Strategic Command, Office of the Secretary of Defense, and Office of the Director of National Intelligence on space matters. NSSO efforts enable the NSS community to leverage space assets more effectively in support of U.S. national objectives in concert with land, sea, air, and cyberspace capabilities. Approximately half the funding for NSSO resides in the Space Architect program element; the intelligence community provides additional funds.

Space Architect Program to Better Integrate Information

Initial plans for FY04 focused on continuing support of NSSO efforts to integrate intelligence, surveillance, and reconnaissance capabilities and to develop the Space Situational Awareness Architecture. In addition, work was started on an architectural development study. The agenda for FY05 called for continuing the work from the previous year and initiating architectural developments for one or more of the following: Integrated Force Applications, Objective Blue Force Tracking, and Space Control & Information Operations. These efforts continued over the next several years.

In FY07, a move was started to transfer the still separate Space Architect project (from the old NSSA days) to the

young NSSO. The related R&D project continues to be informally called Space Architect. Additionally, in FY07, new work began on integrated force application, as well as space control and information integration.

Major Support Contract Goes into Action

Following a full and open competition, NSSO awarded a contract worth \$10.1 million to SAIC, in December 2006, to provide the technical assistance and management support needed to execute its space architecture, strategy, development, and planning activities. Meanwhile, contract vehicles already maintained by other DoD organizations were utilized for the provision of supplemental assistance and support as required.

Program efforts from FY08 through FY10 focused on incorporating system architecture results into an integrated database.

A December 16, 2010, memorandum (Realignment of National Security Space Office) stated that the U.S. DoD Executive Agent for Space (the Secretary of the Air Force) had been directed to disestablish the National Security Space Office and establish a joint office to support the Executive Agent for Space and the newly formed Defense Space Council. He commissioned a study to review the tasks assigned to the Executive Agent for Space and make recommendations on how the new office should be organized and resourced. In the interim, the existing staff will report to the Deputy Under Secretary of the Air Force (Space Programs).



The former National Security Space Architect (NSSA) has been transferred to...

Source: U.S. DoD

Space Architect



...the newly formed National Security Space Office (NSSO).

Source: U.S. DoD

Funding

| | U.S. FUNDING | | | | | | | |
|-----------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| | FY10 <u>QTY</u> | FY10 <u>AMT</u> | FY11 <u>QTY</u> | FY11 <u>AMT</u> | FY12 <u>QTY</u> | FY12 <u>AMT</u> | FY13 <u>QTY</u> | FY13 <u>AMT</u> |
| RDT&E (U.S. Air Force) | | | | | | | | |
| PE#0305924F | | | | | | | | |
| National Security Space Office | | | | | | | | |
| Project A016 | | | | | | | | |
| National Security Space Office | - | - | - | 10.6(a) | - | - | - | - |

All \$ are in millions.

Source: U.S. Department of the Air Force FY12 RDT&E (R-2) Budget Item Justification

PE#0305924F National Security Space Office was a FY07 new start. Efforts within this program were transferred from PE#0305917F Space Architect to reflect the merger of National Security Space Architect with other organizations.

(a) The National Security Space Office was disestablished in December 2010. The Executive Agent for Space was directed to establish a jointly manned space office to support the DoD Executive Agent for Space and the Defense Space Council.

Contracts/Orders & Options

| <u>Contractor</u> | <u>Award (\$ millions)</u> | <u>Date/Description</u> |
|-------------------|----------------------------|---|
| MITRE | 1.9 | Oct 2006 – Support contract for architecture and other product development. |
| Aerospace | 1.3 | Nov 2006 – Support contract for architecture and other product development. |
| SAIC | 10.1 | Dec 2006 – Support contract for architecture and other product development. |

Space Architect**Timetable**

| Month | Year | Major Development |
|--------------|-------------|--|
| 1st Qtr | 2004 | Architectural development study initiated |
| 1st Qtr | 2004 | NSSA program assessment for FY05 completed |
| 1st Qtr | 2004 | Space technology roadmap integrated into the NSSA |
| 2nd Qtr | 2004 | Efforts to integrate ISR capabilities and develop a Space Situational Awareness Architecture completed |
| 3rd Qtr | 2004 | NSSA program assessment for FY06 initiated |
| 2nd Qtr | 2006 | Integrated force application begun, as well as Space Control & Information integration |
| | 2007 | Space Architect project transferred to National Security Space Office |
| Dec | 2010 | NSSO disestablished |

Worldwide Distribution/Inventories

This is a U.S. DoD/U.S. Air Force program.

Forecast Rationale

The U.S. National Security Space Office's (NSSO's) Space Architect effort was designed to provide focus and unity across the U.S. National Security Space enterprise spanning the military, intelligence, civil, and commercial space sectors. Previously known as the National Security Space Architect program, this effort was merged with other programs to form the NSSO, which conducted long-range space strategic planning; developed mid- to long-term space architectures; examined trades between space and non-space solutions to user requirements; assessed defense and intelligence space programs for conformity with policies, planning, guidance, and architectural decisions; provided technical enterprise engineering; and conducted analyses of space-related matters to guide the activities of NSS organizations.

A December 16, 2010, memorandum (Realignment of National Security Space Office) stated that the U.S. DoD Executive Agent for Space (the Secretary of the Air Force) had been directed to disestablish the National Security Space Office and establish a joint office to support the Executive Agent for Space and the newly formed Defense Space Council. He commissioned a study to review the tasks assigned to the Executive Agent for Space and make recommendations on how the new office should be organized and resourced. In the interim, the existing staff will report to the Deputy Under Secretary of the Air Force (Space Programs).

Ten-Year Outlook

| ESTIMATED CALENDAR YEAR RDT&E FUNDING (in millions \$) | | | | | | | | | | | | |
|---|------------------------|-------------|-------------|-------------|-------------|------------------------|-------------|-------------|--------------------|-------------|-------------|--------------|
| Designation or Program | High Confidence | | | | | Good Confidence | | | Speculative | | | Total |
| | Thru 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | |
| MFR Varies | | | | | | | | | | | | |
| NSSO Space Architect <> Department of Defense | | | | | | | | | | | | |
| | 78.45 | 10.60 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 10.60 |
| Total | 78.45 | 10.60 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 10.60 |