

STATEMENT OF WORK
FOR THE
RAPID RESPONSE SPACE WORKS
(RRSW)

Attachment (# TBD)
Basic Contract Statement of Work

15 July 2009

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STATEMENT OF WORK

Rapid Response Space Works

1.0 Scope

1.1 Objective

The objective of this contract is to establish and operate the Rapid Response Space Works (RRSW) for the Operationally Responsive Space (ORS) Office. When fully operational, the RRSW will provide the capability for the ORS Office to use small satellite technology to meet rapid response times (see section 1.2 Background for definition of response times) for Joint Force Commander USSTRATCOM-defined time-critical operational needs. There are four major elements associated with establishing the functions within the RRSW. First is the initial establishment of the capability (processes and equipment, procedures, initial inventory, spacecraft standards maintenance); second is establishing routine operations (facility maintenance, training, process improvement); third is supporting user training/planning functions (wargames, exercises); and fourth is responding to time-critical or enabler needs. In those instances where there is not an existing hardware and software solution (“mission kit”) to solve a time-critical need, or the government requires the contractor to integrate a hardware and/or software solution to satisfy an enabler need, the government will provide the contractor a Technical Requirements Document which defines performance requirements for the needed component (e.g., mission planning system, logistics tracking system, space vehicles). The contractor, then, shall be responsible for procuring predefined component(s) or receiving the component(s) as Government Furnished Equipment (GFE) and integrating it into the RRSW architecture.

The contractor shall provide the required engineering, technical, program management and administrative services to establish and execute through task orders the following functions in the RRSW:

- Systems Engineering → Provide necessary H/W, S/W and personnel to execute the mission
- Logistics → Maintain ready access (appropriate to threat) to mission building blocks
- Training → Maintain and evaluate readiness across capability
- Maintenance → Rapid Assembly, Integration & Test (AI&T) of satellite bus/payload/ground system

The contractor shall provide the required engineering, technical, program management and administrative services to support the following government functions in the RRSW:

- Intelligence → Assess threat and dictate state of readiness

- Plans → Rapidly convert a JFC defined need into an executable small satellite mission
- Operations → Mission execution
- DT&E/OT&E → System Evaluation

1.2 Background

Pursuant to Section 913(b) of the John Warner National Defense Authorization Act for Fiscal Year 2007 (Public Law 109-364) and as directed by the Deputy Secretary of Defense (DEPSECDEF) on May 17, 2007, the ORS Office was established under the authority, direction, and control of the DoD Executive Agent for Space (DoD EA for Space).

The DoD defined ORS as “Assured space power focused on timely satisfaction of Joint Force Commanders’ needs.”

The ORS Office’s mission is to plan and prepare for the rapid development of highly responsive space capabilities which enable delivery of timely warfighting effects and, when directed, develop and support deployment and operations of these capabilities in order to enhance and assure the support to Joint Force Commanders’ and other users’ needs for on-demand space support, augmentation, and reconstitution.

The ORS Office is tasked establish the ability to provide rapid end-to-end capability efforts to meet time-critical operational needs of the Joint Force Commanders (JFCs). The ORS Office plans to standup this capability over time with a phased “crawl”, “walk”, and “run” approach. Responsiveness is defined by the length of time required to deliver ORS capabilities. Achieving the timelines may not be possible at the outset, but will remain an important goal as the ORS program matures:

- EMPLOY: On-demand use of existing deployed assets in applications that may extend or expand their original purpose. The objective of employment is to deliver these capabilities within minutes to hours. Other elements of the National Security Space (NSS) community have the primary responsibility for identifying and executing these initiatives.
- DEPLOY: Deploying new or additional capabilities that are “field-ready”, that is, already produced. The objective of deployment is to deliver capabilities within days to weeks.
- DEVELOP: The rapid development, delivery, and employment of a new capability. The objective of development is to deliver capabilities within months and less than one year. Development comprises the primary office activity focused on maturing the ORS enabling elements.

Anticipated initial mission types include:

LEO (Low Earth Orbit):

- Tactical Surveillance
 - Electro-Optical Visible/Near Infrared Imager (EO/VNIR)
 - EO/Shortwave-Infrared Imager (EO/SWIR)
 - Hyperspectral Imager (HSI)
 - Deep Space Object Search and Track (DS SSA)
 - Synthetic aperture radar

- Space Situational Awareness
- Space Protection

HEO (Highly Elliptical Orbit):

- Tactical communications
 - SATCOM
 - Blue Force Tracking (BFT)
- Tactical Surveillance
 - Kinetic Event Detection Battlespace Awareness

GEO (Geosynchronous Earth Orbit):

- Space Situational Awareness
- Space Protection

2.0 Compliance and Reference Documents

Compliance documents are listed in Exhibit 1 of this document and are also attached to the contract. Reference documents are listed in Exhibit 2 of this document. A subset of these documents will also be included in each Task Order when they apply. Contractors shall comply with the latest version of these documents.

3.0 Requirements

3.0.1 Each task shall be initiated only upon written direction in the form of a contracting Officer signed and approved Task Order in accordance with the contract. Task Orders shall be issued by the Contracting Officer prior to performance of any work or cost incurred for respective work.

3.0.2 Services shall be conducted at operating locations at Kirtland AFB, NM, at field sites, or at the contractor's facility.

3.1 Systems Engineering & Integration (SE&I)

The contractor shall provide the necessary resources to staff, manage, document and rapidly execute the following SE&I functions in support of the RRSW:

3.1.1 Establish the equipment and tool requirements and coordinate with the government for their procurement for the rapid assembly, integration and test of ORS satellites.

3.1.2 In coordination with external industry and government, establish the functions, processes, production and test flow for rapid AI&T that support rapid response timelines.

- 3.1.3 Develop and manage a Mission Assurance Plan that will provide the statistics necessary to manage risk and build confidence in a rapid response operation.
- 3.1.4 Oversee integration and test of the satellite vehicles.
- 3.1.5 Provide support to the ORS Office to conduct mission planning and analysis and assist in the training of satellite data collection managers.
- 3.1.6 Provide on-call support to the Launch site.
- 3.1.7 Provide on-call support to ground systems operations for Launch and Early Orbit Operations.
- 3.1.8 Coordinate and participate in identifying and managing interfaces and standards necessary to provide rapid response capabilities.
- 3.1.9 Provide configuration control and maintenance of the processes, interface control documents, assembly drawings, software, top level satellite vehicle bus and payload details, models, simulation, and databases associated with the RRSW.
- 3.1.10 Provide engineering support for configuration change requests.
- 3.1.11 Monitor and validate test results.
- 3.1.12 Improve the processes necessary to decrease the timeline to launch, decrease cost, increase reliability, or lower risk.
- 3.1.13 Support external analysis to manage innovation using rapid response assets.
- 3.1.14 Support ORS Office concepts development and planning to increase mission area capability.
- 3.1.15 Script scenarios for and support exercise and wargame planning, execution and analysis.
- 3.1.16 Coordinate with launch vehicle providers to ensure smooth integration of a flight ready spacecraft to the launch vehicle.
- 3.1.17 Provide analysis, mission modeling and engineering modeling & simulation to support launch vehicle selection, spacecraft to launch vehicle integration, and coupled loads analysis.
- 3.1.18 Support the government's coordination with launch ranges to provide required mission, safety and environmental information.

3.1.19 Support the government's efforts to establish Intelligence, Plans, Operations and System Evaluation (Developmental/Operational Test & Evaluation) elements that are included in, or interface with, the RRSW.

3.2 Integrated Logistics Support (ILS)

The contractor shall provide the necessary resources to staff, manage, and rapidly execute the following ILS functions in support of the RRSW:

3.2.1 Manage and procure long lead parts (major assemblies, modules, and components) necessary to meet rapid response timeliness as directed by the government to meet planned test and force structure requirements.

3.2.2 Receive, checkout, and stock components/parts.

3.2.3 Coordinate shipment of the assembled satellite vehicles.

3.2.4 Host and manage the Technical Data associated with the RRSW.

3.2.5 Support data, parts, and system configuration control.

3.2.6 Conduct legacy component conversion to ORS architecture.

3.2.7 Conduct commonality, supportability analysis and trades to improve timeliness, reduce cost, improve reliability, and reduce risk.

3.2.8 Develop, manage and execute training of the RRSW functions.

3.2.9 Manage the repair of parts.

3.2.10 Provide and conduct Reliability Growth analysis.

3.2.11 Provide Failure Reporting and Analysis.

3.2.12 Script scenarios for and support exercise and wargame planning, execution and analysis.

3.3 Assembly, Integration, and Test (AI&T)

The contractor shall be required to provide the necessary resources to staff and rapidly execute the following AI&T functions in support of the RRSW:

3.3.1 Install and checkout equipment (e.g. unique handling equipment, additional shock and vibration tables, unique storage capability) necessary to operate the RRSW.

3.3.2 Assemble, integrate, and test buses, payloads, and satellite vehicles.

- 3.3.3 Prepare for shipment of the satellite vehicles.
- 3.3.4 Provide on-site support to launch site.
- 3.3.5 Provide on-call support to ground systems operations for Launch and Early Orbit Operations.
- 3.3.6 Maintain calibration of tools and equipment in the RRSW.
- 3.3.7 Improve the processes necessary to decrease the timeline to launch, decrease cost, increase reliability, or lower risk.
- 3.3.8 Provide feedback on rapid test and assembly.
- 3.3.9 Script scenarios for and support exercise and wargame planning, execution and analysis.

3.4 Space Vehicle and Ground System Procurement

The majority of new mission hardware and software will be procured by the government on contracts other than the RRSW. In this instance, the contractor shall be responsible for integration into the existing RRSW architecture and advise the government on related issues. The contractor may also be tasked to procure any predefined component of a "Deploy" response architecture, to include long lead components, satellite buses, payloads, ground commanding/telemetry systems, space/ground components, subsystems and/or data-handling systems to meet time-critical needs or execute enabler missions when directed in writing by the Procurement Contracting Officer.

3.5 Program Management and Administration

The contractor shall be required to provide the necessary resources to execute the following program management and administration functions:

- 3.5.1 Program management, business and administrative planning, information and process management, configuration management, training, personnel certification, resource and facility management to include property accountability, tool management, hazardous waste management, quality control management and work site cleanliness. This includes maintaining program interfaces, performing short-term studies, and complying with all technical, legal and regulatory requirements.
- 3.5.2 Implement administrative, financial management and task planning functions to ensure the on-time, on budget accomplishment of all authorized tasks.
- 3.5.3 Schedule all project activities, develop task milestones and task status, present the contractor's progress towards the accomplishment of contract objective and attend program and project reviews when necessary.

- 3.5.4 Track and report technical and financial status of the individual task orders.
- 3.5.5 Participate in program reviews of tasks individually or collectively.
- 3.5.6 Travel to various off-site locations, as required and after receiving applicable approval, to accomplish contract designated objectives.
- 3.5.7 Interact with other contractor and Government personnel in an Integrated Product Team (IPT) type environment to achieve successful operation and completion of tasks. This includes, but is not limited to, interaction with test engineers, software engineers, analysts, and program managers to ensure proper functioning of the RRSW.
- 3.5.8 Establish and implement a security program in accordance with applicable DD254 Contract Security Classification Specifications.
- 3.5.9 Oversee an RRSW training program to maintain proficiency and assurance for the RRSW to conduct ORS missions.

3.6 Facilities

The contractor shall accomplish the following facilities functions:

- 3.6.1 Define facility requirements, plan and schedule facilities use, facility operation, safety, maintenance planning and maintenance of facilities (both routine and unscheduled).
- 3.6.2 Maintain government provided facilities in a state of functional readiness unless directed to transition a particular facility to an inactive or stand down mode.
- 3.6.3 By the most economical means available, consistent with security and contract performance requirements, purchase, lease, rent or otherwise provide a facility for the RRSW after receiving applicable written approval from the Contracting Officer.

3.7 Information Assurance

Information Assurance (IA) is defined in terms of three primary areas: 1) Contractor establishment of and maintaining the RRSW facility, 2) Contractor procurement of a space vehicle and/or ground system to meet an time-critical need or enabler mission, and 3) Contractor receipt of hardware and/or software products from vendors who deliver products for flight or operational use within RRSW.

The contractor shall accomplish the following IA functions for each of the 3 primary IA areas as indicated following each task:

- 3.7.1 Letters of Assurance (LOA). (All 3 areas)

- 3.7.2 System identification profile (SIP). (Areas 2 & 3)
- 3.7.3 DoD Information Assurance Certification and Accreditation Process (DIACAP) Implementation Plan (DIP). (Areas 2 & 3)
- 3.7.4 IA controls Artifacts. (Areas 2 & 3)
- 3.7.5 Accreditation Boundary Drawings(s). (Areas 2 & 3)
- 3.7.6 System Description. (Areas 2 & 3)
- 3.7.7 Hardware List. (Areas 2 & 3)
- 3.7.8 Software List. (Areas 2 & 3)
- 3.7.9 Security Test & Evaluation. (ST&E) Plan. (Areas 2 & 3)
- 3.7.10 Actual Validation Results. (Areas 2 & 3)
- 3.7.11 Scorecard. (Areas 2 & 3)
- 3.7.12 Plan of Action & Milestones (POA&M) (Areas 2 & 3)
- 3.7.13 ATO/IATO Letter (Areas 2 & 3)
- 3.7.14 Special Cases (All 3 areas)

Exhibit 1: Compliance Documents

- **DoDI 8510.01, DoD Information Assurance Certification and Accreditation Process (DIACAP)**

Exhibit 2: Reference Documents

- **ORS Government Reference Architecture**