

## **SECTION C STATEMENT OF WORK**

### **C.1 INTRODUCTION**

The Federal Technology Service (FTS) provides Government users with up-to-date, cost-effective, and easy to use satellite services. Working in partnership with user agencies the following requirements were developed:

**C.1.1 Service Continuity** - This solicitation defines and includes all services that are currently available under the FTS Satellite Services Program. This requirement will facilitate a smooth transition from the existing satellite contract(s) to the GSA SATCOM-II contract(s).

**C.1.2 Competitive Pricing** - All pricing proposed shall be equal to or better than that offered commercially. Further discounts may be negotiated at the Task Order level.

**C.1.3 Continuous Competition** - These satellite contracts provide agencies a broad array of service options and continuous competition among the vendors throughout the life of the acquisition.

**C.1.4 Full Range of Commercial Offerings** - These contract(s) provide a wide range of commercial satellite offerings to include: mobile satellite services, fixed satellite services, broadcast satellite services, satellite applications solutions, engineering, operations and management services, and professional support services.

**C.1.5 Flexible Commercial Ordering and Billing Options** - These multiple award contracts offer multiple ordering and billing options to customers. Similar to the previous Satellite contract(s), customers may take advantage of direct-order, direct-billed or GSA-assisted ordering and billing options.

**C.1.6 Service Quality** - The SATCOM-II contractor(s) shall include metrics to ensure high quality service is delivered throughout the terms of the contract(s).

### **C.2 SCOPE**

The scope of this acquisition includes all national and international services necessary for the Government to satisfy its worldwide commercial satellite communications solutions for the life of the contract(s). In addition, the scope of this contract includes, at the discretion of the Government, technological enhancements, service improvements, customer-specific applications and extensions, ancillary equipment and professional support services (small business set-aside) necessary to provide end-to-end satellite solutions. The scope also includes new and/or emerging commercial satellite service offerings as commercially available.

### C.3 MANDATORY SERVICE REQUIREMENTS

SATCOM-II services are grouped into four service types as defined below. The Offeror shall, at a minimum, offer one service from Service Type I, one service from Service Type II, and shall offer all services within Service Type III to be considered eligible for award. In addition to Service Types I, II, and III, small businesses may offer Service Type IV which is a small business set aside.

- a. **Service Type I: Satellite Transport Services.** Satellite Transport Services include Mobile Satellite Service and Fixed Satellite Service.
- b. **Service Type II: Satellite Applications Services.** Satellite Applications Services include Distance Learning, Emergency Response/Continuity of Operations Planning (COOP), Telemedicine, Streaming Video, and Broadcast Satellite Service (BSS).
- c. **Service Type III: Satellite Design, Engineering, and Maintenance Services.** Design, Engineering, and Maintenance Support Services provide satellite system engineering design, configuration, installation, implementation, training, and on-going maintenance and operational support for the services delivered under Service Types I and II.
- d. **Service Type IV: Satellite Professional Support Service – Small Business Set-Aside.** This service offering supports agencies needs and are independent of the delivery of Type I, II and III services. Professional Support Services include abstract or concept studies and analysis, strategic and preliminary planning, requirements definition and analysis, the evaluation of alternative technical approaches, modeling and simulation, enterprise architecture design, cost-performance trade-off analysis, feasibility analysis, regulatory compliance support, system engineering, acceptance testing, independent verification and validation, and Information Assurance certification and accreditation.

#### C.3.1 Service Type I: Satellite Transport Services

Service Type I, Satellite Transport Services, is a mandatory service type. Within Service Type I, the Offeror shall offer Mobile Satellite Service, Fixed Satellite Service, or both.

##### C.3.1.1 Mobile Satellite Service (MSS)

Mobile Satellite Service is any commercial satellite service that is intended for use with terminals that are capable of communicating while on the move. In addition to the commercial transport service, MSS includes handheld and portable equipment required to deliver the service to the user.

The Offeror shall propose one or more systems for providing Mobile Satellite Service including, but not limited to the following:

- Iridium
- Globalstar
- Inmarsat

#### **C.3.1.1.1 Minimum Requirements for Mobile Satellite Service (MSS)**

Offerors proposing one or more of these MSS commercial services shall include and describe the following for each service:

1. Full-duplex voice and data communications.
2. End-to-end connectivity for all calls originating or terminating between MSS users, MSS and wireline users, or between MSS and wireless users.
3. The Offeror shall identify proposed MSS data rates using Table C-1.

Table C-1  
MSS Data Rates

	Data Rate(s)
Iridium	
Globalstar	
Inmarsat	
other	

4. The Offeror shall propose performance metrics sufficient to ensure proper delivery of services. These metrics shall be identified by the offeror using a tabular format similar to the example shown in Table C-2.

Table C-2  
Performance Metrics (examples only)

Key Performance Indicator	Service Level	Performance Threshold	How measured
Availability	Regular	.995	Time that system is operationally available to user
Availability	Premier	.9975	Time that system is operationally available to user
Latency (one way)	Regular	< 0.4 seconds	Satellite propagation and circuit delays
Call Waiting Time	Premier	< 5 seconds	Statistical sampling of calls

5. The Offeror shall define the contours of the MSS coverage (the satellite footprint). The Offeror shall provide maps showing frequency band coverage and any regional performance metrics.
6. The Offeror shall provide all necessary hardware, software, and accessories to support the MSS.

### **C.3.1.2 Fixed Satellite Services (FSS)**

Fixed Satellite Services is satellite based transmission to support agency networks and mission critical applications such as wide band video. FSS also includes transportable terminals for use in any emergency response or quick deployable applications.

Fixed Satellite Service includes very small aperture terminals (VSAT) and other various sized terminals.

#### **C.3.1.2.1 Minimum Requirements for Commercial Fixed Satellite Service (FSS)**

If FSS is proposed, the following requirements are mandatory:

1. The Offeror shall provide full-duplex, half-duplex, and simplex transmission service of voice, data, and video traffic for point-to-point and point-to-multipoint configurations. The service may use any available satellites operating in C-band, Ku-band, Ka-band, and other commercial bands. The offeror shall identify proposed service categories, uplink and downlink bandwidths using Table C-3.

Table C-3  
Service Category and Bandwidth

Service Category	Uplink Bandwidth	Downlink bandwidth

2. The Offeror shall propose satellite services on renewable terms with durations of one (1) hour, one (1) day, one (1) week, monthly, one (1) year and greater than one (1) year as required by the task/delivery order.
3. The Offeror shall propose procedures for an advanced reservation system allowing Government users to obtain guaranteed reservations. The Offeror shall propose the number of days prior to the service date it is willing to allow Government users to make a reservation and propose the days in advance a reservation can be cancelled without charge, consistent with commercial practice.
4. The Offeror shall propose procedures to allow bandwidth scheduling and reservation on a group basis. The reservation system shall allow for any user within the group to centrally control the scheduling of its own bandwidth as a group and any number of subgroups within 24 hours of need. The reservation system shall allow a user to combine any number of specified downlinks for any number of users within the group to receive content from one or more uplinks in the group. The reservation system shall allow for on-the-spot addition of sites to any reception group.
5. The Offeror shall propose procedures to ensure that the Government has sufficient notice to affect service renewals to avoid service interruptions or challenge by other commercial satellite users.
6. The Offeror shall provide bandwidth on a dedicated and occasional use basis. In addition, the Offeror shall propose preemptible and non-preemptible bandwidth.
7. The Offeror shall propose recovery procedures used in the event that the satellite being used by the Offeror suffers any failure that disrupts service to Government users. This includes partial failure and total catastrophic failure of the satellite.
8. The Offeror shall propose sufficient performance metrics to ensure proper delivery of service. Such metrics may include service availability, latency, time to restore, grade of service, bit error rate, jitter, event notification, and/or any other combination of commercially offered performance metrics. These metrics shall be identified by the offeror using a tabular format similar to the example provided in Table C-4.

Table C-4  
Performance Metrics (examples only)

Key Performance Indicator	Service Level	Performance Threshold	How measured
Availability	Regular	.995	Time that system is operationally available to user
Availability	Premier	.9975	Time that system is operationally available to user
Latency (one way)	Regular	< 0.4 seconds	Satellite propagation and circuit delays

9. The Offeror shall propose and define the contours of its FSS coverage (the satellite footprint). The Offeror shall provide maps showing frequency band coverage and any regional performance metric differences. The minimum coverage shall be the forty-eight contiguous states, and the District of Columbia.
10. The Offeror shall propose its commercial methods to ensure data and protocol transparency.
11. The Offeror shall provide all necessary hardware, software, and accessories to support the FSS solution.

### C.3.2 Service Type II: Satellite Application Services

The Offeror shall provide one or more of the following Satellite Application Services.

- Distance Learning
- Emergency Response/Continuity of Operations Planning
- Telemedicine
- Streaming Video
- Broadcast Satellite Service (BSS)

The Government may consider additional Satellite Application Services proposed under this solicitation. Satellite Application Service descriptions and minimum requirements are listed below.

### **C.3.2.1 Distance Learning**

The distance learning requirement extends from one-way broadcast to two-way interactive features. The broadcast mode enables transmission of real-time audio/video presentations to remote participants. The interactive mode can range from video broadcast with simple two-way audio to high quality multimedia presentations with two-way video/audio including video write-over capability.

The minimum requirement shall be commercially available broadcast video and audio services.

### **C.3.2.2 Emergency Response/Continuity of Operations (COOP)**

COOP is an activity to ensure that essential business operations continue in response to any operational interruptions. In order to support COOP, selected locations shall have fixed or transportable ground terminals and power restoration capabilities to maintain operations. This includes both fixed and mobile generators and trained personnel to deploy and operate them.

These activities may require various communications solutions, including terrestrial and/or a combination of MSS or FSS based solutions. The minimum requirement for the satellite-based solutions shall entail low bandwidth MSS and/or higher bandwidth FSS including transportable terminals.

### **C.3.2.3 Telemedicine**

Telemedicine requires effective transfer of voice, video, or videoconference services and high-resolution still and video images.

The minimum requirement shall be the transmission of medical data in fixed and/or mobile environment.

### **C.3.2.4 Streaming Video**

Streaming video is a sequence of “moving images” that are sent in compressed form over the Internet and displayed by the viewer. Streaming media is streaming video with sound. It can be sent from prerecorded video files, but may also be distributed as part of a live broadcast “feed”.

The minimum requirement shall be the capability to support one commercially available streaming video technology.

### **C.3.2.5 Broadcast Satellite Service (BSS)**

Broadcast Satellite Service is typically defined as a one-way broadcast of video from a satellite to a receiving satellite antenna. BSS examples include, but are not limited to, Business TV solutions, DIRECTV and DISH Network.

The minimum requirement for BSS services shall include the ability to broadcast high-quality video broadcasts over satellite to widely dispersed locations.

### **C.3.3 Service Type III: Design, Engineering, and Maintenance Support Services**

Design, Engineering, and Maintenance Support Services provide satellite system engineering design, configuration, installation, implementation, training, and on-going maintenance and operational support in conjunction with the services delivered under Service Types I and II. Design and engineering services shall include, but are not limited to the following: site surveys, developing specifications, drawings, reports, schedules and other related work products. The Offeror shall propose its best commercial practices for providing satellite design and engineering services.

The minimum requirement for Design, Engineering, and Maintenance Support Services is the ability to provide each of the services identified below:

- a) Design and Engineering Services
- b) Ongoing Maintenance and Operational Support Services
- c) Customer Care and Helpdesk Support
- d) Training

#### **C.3.3.1 Design and Engineering Services**

Design and engineering services shall include, but are not limited to the following: site surveys, developing specifications, drawings, reports, schedules and other related work products, configuration, implementation and installation. The Offeror shall propose its best commercial practices for providing satellite design and engineering services.

#### **C.3.3.2 Ongoing Maintenance and Operational Support Services**

Ongoing maintenance and operational support services shall be provided under this contract. The Offeror shall propose standard commercial maintenance and support procedures for these services. At a minimum, the Offeror shall propose and define the commercial warranty for all hardware, software, accessories, installation and other services provided under this contract. The Offeror shall propose its commercial service level agreements (SLAs) metrics, and incentives such as credits in a tabular format using Table C-5.

Table C-5  
Commercial Service Level Agreements (SLAs)

SLA Description	Metric	Incentive

### C.3.3.3 Customer Care and Helpdesk Support

Customer Care and Helpdesk support shall be provided in accordance with the Offerors commercial practice. The Offeror shall propose the levels of service for both Customer Care and Helpdesk support. Availability of Customer Care and Helpdesk support shall be identified using Table C-6.

Table C-6  
Customer Care and Helpdesk Support

Service Offering	Hours Offered
Customer Care	
Helpdesk Support	

### C.3.3.4 Training

The Offeror shall propose its commercial procedures for providing training to Government associates related to installation, set-up, configuration and operation of all hardware, software and services proposed under this contract.

### C.3.4 Service Type IV: Satellite Professional Support Services (Small Business Set-Aside)

Satellite Professional Support Services are set-aside for Small Businesses. These services shall be provided independent of the delivery of Type I, II and III services.

Professional Support Services include abstract or concept studies and analysis, strategic and preliminary planning, requirements definition and analysis, the evaluation of alternative technical approaches, modeling and simulation, enterprise architecture design, cost/cost-performance trade-off analysis, feasibility analysis, regulatory compliance support, system engineering, independent verification and validation, and Information Assurance certification and accreditation.

The minimum set of requirements for Satellite Professional Support Services is the capability to provide each of the fourteen skill categories identified in the following section.

**C.3.4.1 Labor Category Requirements**

The following table lists labor categories with experience, education, and skills requirements for use on Service Type IV: Satellite Professional Support Services tasks. Reference RFP Clauses B.3.4, B.4.4, B.5.4 and B.6.4 for pricing templates.

<b>Labor Category</b>	<b>Years of Experience and Education</b>	<b>Requirements</b>
Program Manager	6+ years and a Masters Degree in a business, technical, or scientific discipline  Or  10 + years and a Bachelor's Degree in a business, technical, or scientific discipline	Demonstrated program management experience for satellite related projects using managerial, technical and/or business knowledge. Experience in directing and managing internal/external communications and all functional program activities to meet contract cost, schedule and performance objectives.
Project Engineer	2 + years and a Master's Degree in Electrical Engineering or equivalent engineering, scientific (e.g. Physics), or technical discipline  Or  5 + years and a Bachelor's Degree in Electrical Engineering or equivalent, engineering, scientific (e.g. Physics), or technical discipline  Or  10+ years and a High School Diploma	Demonstrated experience in the design, development, installation, testing and maintenance of satellite systems and subsystems. Experience in planning, direction, and coordination functions of a project to ensure contract performance requirements and objectives are accomplished. Has managed activities of personnel and responsible for setting and attaining budget, schedule, and performance standards.

<b>Labor Category</b>	<b>Years of Experience and Education</b>	<b>Requirements</b>
Subject Matter Expert	2 + years and a PhD Or 5+ years and a Masters Degree in engineering, scientific (e.g. Physics), or technical discipline Or 8+ years and a Bachelors Degree in engineering, scientific (e.g. Physics), or technical discipline	Is a recognized satellite industry expert. Experienced in developing concept of operations, strategic planning, design, development, and testing of satellite systems and subsystems through operations, in-orbit activities modeling and simulation and testing. Experience in analysis of network technology for current and future telecommunications needs. Has developed architectures and strategic direction for network requirements on an enterprise level. Areas of specialization may include network level satellite architecture, modeling and simulation, or information assurance.
Senior Technical Staff	PhD Or 4+ years and a Masters Degree in engineering, scientific (e.g. Physics), or technical discipline Or 6 + years and a Bachelor's Degree in engineering, scientific (e.g. Physics), or technical discipline	Experience in the application of in-depth expert level knowledge to the concept of operations, strategic planning, design, development and testing of satellite systems and subsystems. Has developed strategic and implementation plans, system architecture and design including software, hardware, communications and interface requirements. Has led definition, trade-off and design activities. Has prepared reviews, and evaluations of documentation, specifications, test plans and procedures. Has conducted analysis to define, analyze and allocate requirements. Able to research trends and changes in networking technology and determines areas for future study. Senior Technical Staff have experience in more than one discipline including quality of service, modeling and simulation, security certification and accreditation, and software development.

Labor Category	Years of Experience and Education	Requirements
Technical Staff	<p>Masters Degree in engineering, scientific (e.g. Physics), or technical discipline</p> <p>Or</p> <p>2+ years and a Bachelor's Degree in engineering, scientific (e.g. Physics), or technical discipline</p>	<p>Experience applying in-depth subject knowledge to the design, development, installation, testing, and maintenance of satellite systems and subsystems. Has experience in developing strategic and implementation plans or system architecture and design including software, hardware, communications and interface requirements. Experience in supporting definition, trade-off and design which would include reviews, and evaluation of documentation, specifications, test plans and procedures. Experience in analysis to define, analyze and allocate requirements, or experience researching trends and changes in networking technology and determining areas for future study. Technical Staff have experience in one discipline from quality of service, modeling and simulation, security certification and accreditation, and software development.</p>
Principal Engineer	<p>6+ years and a Masters Degree in Electrical Engineering or equivalent engineering, scientific (e.g. Physics), or technical discipline</p> <p>Or</p> <p>10 + years and a Bachelor's Degree in Electrical Engineering or equivalent engineering, scientific (e.g. Physics), or technical discipline</p> <p>Or</p> <p>15+ years and a High School Diploma</p>	<p>Experienced in the development, installation, and maintenance of satellite systems and subsystems. Demonstrated leadership and direction for engineering of systems, system elements, interfacing systems, components, devices and/or processes. Experience leading test programs and analysis of requirements to ensure intended functionality, operation and performance requirements are achieved.</p>

<b>Labor Category</b>	<b>Years of Experience and Education</b>	<b>Requirements</b>
Senior Engineer	3 + years and a Bachelor's Degree in Electrical Engineering, Computer Science or equivalent engineering, scientific (e.g. Physics), or technical discipline  Or  8 + years and a High School Diploma	Experience in development, installation, operation, maintenance and testing of satellite systems and subsystems. Possesses broad knowledge of industry practices, standards and technology areas. Experience supporting test programs and analyzes testing or experience in analysis of requirements and components or performance of audits to ensure intended functionality and performance is achieved. Experience in installation and maintenance of systems/equipment, and associated training to customer personnel and able to diagnose, isolate, and correct problems to component level to restore system's functions.
Engineer	Bachelor's Degree in Electrical Engineering, Computer Science or equivalent engineering, scientific (e.g. Physics), or technical discipline  Or  5 + years and a High School Diploma	Experience in development, installation, and maintenance of satellite systems and subsystems operations and testing. Has general working knowledge of industry practices, standards and technology areas. Assists in definition, analysis and allocation of requirements. Supports test programs and analyzes testing. Conducts analysis of requirements and components and supports audits conducted to ensure intended functionality and performance is achieved. Can conduct installation and maintenance of systems/equipment, and provide associated training to customer personnel. Diagnoses, isolates, and corrects problems to component level to restore system's functions.

Labor Category	Years of Experience and Education	Requirements
Network Engineer	2+ years and a Bachelor's Degree in Electrical Engineering or equivalent engineering, scientific (e.g. Physics), or technical discipline  Or  6 + years and a High School Diploma	Experience in planning, analysis, design, testing, and troubleshooting of satellite networks and related systems. Experience in solving system problems and workflow organization and planning. Able to install, operate and test software and hardware. Proficient with the use of various types of satellite communications test equipment.
Information Security Specialist	2+ years and a Bachelor's Degree in Electrical Engineering or Computer Science or equivalent engineering, scientific (e.g. Physics), or technical discipline  Or  6 + years and a High School Diploma	Experienced in the planning, analysis, testing, security certification and accreditation of satellite networks and related systems. Conducts analysis of requirements and components and supports audits conducted to ensure intended functionality and performance is achieved.
Management Support Staff	Bachelor's Degree  Or  2 + years and a High School Diploma	Ability to assist in the planning and coordination of scheduling activities. Supports business and administrative activities, such as budgeting, manpower and resource planning, and financial reporting.  And/ Or Assists in the production of management plans, technical documents, and produces presentation graphics.  And/Or Performs configuration management functions and other engineering support duties. Assists in organization, maintenance and use of project library. And/Or May provide office administration support.

Labor Category	Years of Experience and Education	Requirements
<p>Engineering Technician IV</p> <p>(DOL SCA Labor Category #29084)</p>	<p>Technical School Certificate</p> <p>Or</p> <p>3 + years and a High School Diploma</p>	<p>Performs routine and non routine tasks for complex satellite systems. Work is reviewed for technical adequacy and accuracy by project manager or engineers. May plan tests and may be assisted by lower level technicians. Develops or reviews designs by extracting and analyzing a variety of engineering data. Applies conventional engineering practices to develop, prepare, or recommend designs, specifications, electrical drawings and parts lists.</p> <p>Conducts tests or experiments requiring selection and adaptation or modification of a wide variety of satellite test equipment and test procedures; sets up and operates equipment; records data, measures and records problems of significant complexity that sometimes require resolution at a higher level; and analyzes data and prepares test reports.</p> <p>Applies methods outlined by others to limited segments of research and development projects; constructs experimental or prototype models to meet engineering requirements; conducts tests or experiments and redesigns as necessary; and records and evaluates data and reports findings.</p>
<p>Engineering Technician II</p> <p>(DOL SCA Labor Category #29082)</p>	<p>High School Diploma</p>	<p>Performs standardized tasks following a prescribed sequence of events. Following specific instructions, can install, maintain, test, and support complex satellite communications equipment for satellite based systems. Can conduct a variety of tests using established methods. Records test data, identifies deviations resulting from equipment malfunction or observational errors and prepares test reports. Ability to install and use various types of cabling, wiring, and satellite communications test equipment.</p>

Labor Category	Years of Experience and Education	Requirements
Word Processor III  (DOL SCA Labor Category #01613)	High School Diploma	Requires both a comprehensive knowledge of word processing software applications and office practices and a high degree of skill in applying software functions to prepare complex and detailed documents. For example, processes complex and lengthy technical reports which include tables, graphs, charts, or multiple columns. Uses either different word processing packages or many different style macros or special command functions. Independently completes assignments and resolves problems.

#### C.3.4.2 Resumes

Resumes shall be provided for personnel used on a task order basis to the GSA or the user ordering activity Contracting Officer upon request. In the event the individual proposed does not meet the years of experience or education requirement the loaded hourly rate shall be reduced by 15 percent (15%).

#### C.3.4.3 Service Contract Act of 1965, as Amended

The current Department of Labor (DOL) Wage Determination for the District of Columbia is provided in Section J – Attachment J-1.

Wage Determination No. 1994-2103

Revision No. 34

Date of Last Revision 05/23/2005

The ordering activity issuing the task/delivery order against this contract will be responsible for the proper administration and enforcement of the Federal labor standards of the Service Contract Act. The proper wage determination will be issued by the ordering activity at the time a request for quotation is made.

#### C.4 MANAGEMENT

The Offeror shall have the capability to:

1. Manage multiple simultaneous task/delivery orders of varying complexity at worldwide locations.
2. Provide customers with commercial ordering procedures.
3. Provide customers with timely and accurate invoicing.

4. Handle trouble calls and complaints, with identified points of contact, procedures for problem resolution, information flow, and escalation.
5. Manage the operations of each proposed subcontractor.
6. Apply their commercial quality control methodology to assure meeting individual task/delivery order requirements.