

**STATEMENT OF OBJECTIVES (SOO)
For
SATELLITE TELECOMMUNICATION FLEXIBLE FRAMEWORK (STFF)**

22 October 2022

1.0 INTRODUCTION:

The 46th Test Squadron (46 TS) at Eglin Air Force Base has an existing, demonstrable capability for evaluating tactical datalinks (Terrestrially based, Airborne) and through use of their tactical communications systems, Operational Facilities (OPFACs) aircraft and Command and Control (C2) systems. This SOO is designed to address the need for industry space based tactical datalinks SME support to assist in identifying specialized resources (personnel and equipment) needed for the Datalinks Test Flights analysis and testing requirements.

1.1 Purpose

The overall objective of the SOO is to gain insight to State-of-the-Art commercial techniques for conducting space-based datalink testing and analysis. There is a growing capability requirement in the U. S. Air Force for satellite telecommunication data transfer and interoperability testing. This capability allows sharing of data through use of ‘communication gateways’ that interoperate over tactical networks. This data will be disseminated over tactical satellite/terrestrial networks to allow sharing between datalink systems and Command and Control (C2) systems. The U. S. Air Forces 46 TS requires a Space Telecommunications Flexible Framework (STFF) Facility to enhance the current tactical datalink test capability, enabling them to fully utilize tactical satellite communication, to conduct interoperability testing in a realistic/near real environment

1.2 Scope

The contractor shall analyze, assist in designing, and provide recommendations on a bill of material/software and hardware enhancements to increase STFF capabilities for data transfer capability via satellite communication payloads. STFF must be interoperable with both the space and non-space commercial and military assets for Situational Awareness (SA) and tactical targeting data through use of ‘communication gateways’ that interoperate over tactical networks.

1.3 Technical Requirements

The contractor shall identify proposed STFF test architectures to include the identification of any certifications (RF, crypto, etc.), security boundaries, test equipment, hardware and software and support equipment that are required to support

the integration/demonstration of a tactical communications IP network satellite payload.

The Contractor will provide the 46TS with insight and guidance for Eglin AFB/STFF to acquire any long lead equipment, certifications or accreditations.

The contractor shall identify test architecture design to include: CONOPS, functional capabilities, system and subsystem diagrams, list of performance parameters, metrics for performance parameters, ICD(s), Hardware List, Software Lists, test equipment list, lab support equipment list.

The contractor for STFF will provide direct support to 46TS Eglin AFB, FL to assist in actual test and evaluation of Space based datalink systems.

The Contractor will propose follow-on resource requirements to assist in advancing the capability, with the objective of making the 46TS Test Facility able to analyze and test Space based datalink communications without the support of the contractor.

1.4 Deliverables

Deliverable product under this effort will be a technical analysis and road map to build a cost-effective Low Earth Orbit (LEO) satellite communication Tactical DataLink (TDL) test capability. This will include recommendations on required capabilities and specific equipment needed to achieve the objective of testing LEO based tactical datalink systems.

2.0 GENERAL INFORMATION

2.1 Security Clearance

The minimum level of security clearance to work on this delivery order is Secret. Selected Contractor employees shall possess and maintain a Secret/ SAR clearance during the term of the contract.