

**Statement of Requirement**  
**The Provision of C-17 Air Traffic Control (ATC) and Operational Control Satcom Data Link Service**

Ref      Requirement  
**A**      **General Requirements**

**A.1**      **Scope of Requirement**

A.1.a      **RAF C-17 Globemaster requires a SATCOM Datalink service contract to provide connectivity to ATC and AOC Data Link communication systems.**

A.1.b      UK C17 require a reliable, civilian air navigation service provider compliant, near Global coverage SATCOM Data Link capability to comply with developing and extant Global Air Traffic Management (GATM) regulations, provide direct controller-pilot communications, operate within reduced lateral separation airspace, provide increased situational awareness to the aircraft operating authority , improve Command and Communications (C2) and provide means of obtaining meteorological data digitally, all through the use of extant installed avionics systems.

A.1.c      C17 Airline Operational Control (AOC) enables automatic communications between aircraft and the Air Mobility Operations Centre (AMOC), Sqn operations and flight operations. Operational communications were traditionally made using expensive SATCOM voice calls, cheaper data link messaging, available via AOC (facilitated via the datalink contract currently in service) have replaced these communications. Furthermore, in order for the UK C-17 to fly across oceanic/remote areas of airspace, a method of communications and surveillance must be established to manage aircraft out of range of traditional VHF (short range) radio and radar systems for an extended period of time. Traditionally, the only means of communication in remote/oceanic airspace has been a High Frequency (HF) radio system. A global modernisation programme which relies upon SATCOM Data Link for communications between aircraft and Air Traffic Control (ATC) is underway encompassing both civilian and military aviation. This upgrade programme has been implemented across the Atlantic region since 2013, with growing restrictions on aircraft without Data Link capability. ACAS (Airborne Avoidance Collision System) guidance on compliance with Global Air Traffic Management Requirements states that an appropriate degree of compliance, either through equipment or demonstration of equivalent capability is required. Data Link (FANS CPDLC and ADS-C) is mandated across the North Atlantic Data Link Mandate (NAT DLM) Area between flight levels 350 and 410. That is what is referred to as Phase 2C of the NAT DLM, and has now been in effect since 30 Jan 2020. If an aircraft is not equipped for FANS CPDLC and ADS-C then it will be directed to under fly/overfly or avoid the airspace by crossing via Iceland/Greenland/Newfoundland<sup>[1]</sup>

<sup>[1]</sup>

| <u>Ref</u> | <u>Requirement</u>  |
|------------|---|
| A.1.d      | This requirement will result in the continued use of Airline Operational Control (AOC) functions presently available to the Royal Air Force. These functions automate data messaging and receipt, with received messages exportable to business analytical services including aircraft utilisation, freight management, engine health monitoring and fuel usage analysis. These functions are key to the 2 Group Fuel Management Information Service (FMIS), part of a wider Fuel Efficiencies and Emissions Reduction (FEER) programme, which has been implemented to meet MoD fossil fuel usage reduction targets |

## **A.2 Definitions**

- A.2.a In addition to the definitions detailed in the Terms and Conditions of the Contract the following definitions shall also apply. Where the definitions below contrast to those detailed in the Terms and Conditions of the Contract then the definitions within the Terms and Conditions of the Contract shall take precedence.

| <u>Definition</u>         | <u>Interpretation</u>  |
|---------------------------|--|
| Contractor's Personal Use | Any use of MOD furnished property, facilities or equipment intended for the primary benefit of the Contractor or the Contractor's Personnel which is contrary to the MOD's interests is considered personal use. |
| Contractor's Personnel    | Any employees, including sub-contractors or other agents working on behalf of the Contractor, shall be deemed the Contractor's Personnel.  |
| Designated Officer        | The Designated Officer is the MOD representative responsible for the Requirement and is as defined at Box 2 of DEFFORM 111 of this Contract.   |

## **A.3 Abbreviations and Acronyms**

- A.3.a In addition to the abbreviations and acronyms detailed in the Terms and Conditions of the Contract the following abbreviations and acronyms will be used.

| <u>Abbreviation or Acronym</u> | <u>Interpretation</u>                     |
|--------------------------------|---|
| ACS                            | Area Control Surveillance                 |
| AOC                            | Airline Operational Control               |
| AMOC                           | Air Mobility Operations Centre            |
| ATC                            | Air Traffic Control                       |
| C2                             | Command and Communications                |
| CPDLC                          | Controller Pilot Data Link Communications |

| <u>Ref</u> | <u>Requirement</u>                         |
|------------|--|
| DAIS       | Defence Assurance and Information          |
| DO         | Desk Officer                               |
| FEER       | Fuel Efficiencies and Emissions Reduction  |
| FMIS       | Fuel Management Information Service        |
| GATM       | Global Air Traffic Management              |
| GFA        | Government Furnished Asset                 |
| GFE        | Government Furnished Equipment             |
| GFF        | Government Furnished Facilities            |
| GFI        | Government Furnished Information           |
| HF         | High Frequency                             |
| IOC        | Initial Operating Capability               |
| IT         | Information Technology                     |
| MoD        | Ministry of Defence                        |
| OEM        | Original Equipment Manufacture             |
| OSD        | Out of Service Date                        |
| RMAD       | Risk Management and Accreditation Document |
| SATCOM     | Satellite Communications                   |
| SOR        | Statement of Requirement                   |
| SUKEO      | Secret United Kingdom Eyes Only            |
| USAF       | United States Air Force                    |
| VHF        | Very High Frequency                        |

#### **A.4 References**

A.4.a In addition to the references detailed in the Terms and Conditions of the Contract the following references shall also apply as well as any subsequent revisions and amendments to the references. This list does not absolve the Contractor from conforming to any other relevant publications.

| <u>Reference</u>                    | <u>Version</u> | <u>Source</u>   |
|-------------------------------------|----------------|---|
| Data Protection Act 2018            | 2018 c. 12     | <a href="http://www.legislation.gov.uk/ukpga/2018/12/contents/enacted">http://www.legislation.gov.uk/ukpga/2018/12/contents/enacted</a>                                     |
| Government Security Classifications | 1.1            | <a href="https://www.gov.uk/government/publications/government-security-classifications">https://www.gov.uk/government/publications/government-security-classifications</a> |

| <u>Ref</u>  | <u>Requirement</u>  |
|-------------|---|
| <b>A.5</b>  | <b>Processes and Related Taskings</b>   |
| A.5.a       | All data stored or processed by the system is not to be copied, shared, moved or disposed of without the express permission of MoD. At contract termination, whether that be MoD or supplier initiated, all data is to be stored by the contract provider for a period not longer than 93 days prior to deletion. All Data is Official in classification. |
| <b>A.6</b>  | <b>Site</b>   |
| A.6.a       | The contractor does not require access to MoD facilities  |
| <b>A.7</b>  | <b>Security</b>   |
| A.7.a       | The Contractor is to ensure that all of the Contractor's Personnel have SC Security clearance. Where the Contractor's Personnel does not have SC clearance that individual will not be allowed access to MOD facilities or data.  |
| A.7.b       | All information related to or generated by this Contract is to be treated in the appropriate manner in accordance with Government Security Classifications. The classification of the material to be handled shall not exceed <i>OFFICIAL</i> in nature.  |
| A.7.c       | All personal data processed under this Contract is to be treated in accordance with the Data Protection Act 2018.   |
| <b>A.8</b>  | <b>Site Access</b>  |
| A.8.a       | The provision of a fit for purpose C-17 SATCOM data Link service utilises the existing C-17 Rockwell Collins CMU-900 Communications Management Unit (to be replaced by Cobham 700D Aviator hardware in 2023) and requires no access by the contracted company to RAF Brize Norton or other MoD Facilities   |
| <b>A.9</b>  | <b>Safety and Environmental Provisions</b>  |
| A.9.a       | When on the Site the Contractor is to comply with all MOD Safety, Health and Environmental Protection regulations and policy.   |
| <b>A.10</b> | <b>Hours of Operation and Times of Delivery</b>   |
| A.10.a      | Due to the operational nature of the UK C-17 the hours of utilisation/required availability of the Data link facility will be 24 hours a day, 7 days a week including public holidays. The C-17 relies on the Inmarsat Aero-I system and the contractor is to provide availability of 99.96%  |

| <u>Ref</u> | <u>Requirement</u> |
|------------|--------------------|
|------------|--------------------|

|             |                          |
|-------------|--------------------------|
| <b>A.11</b> | <b>Quality Assurance</b> |
|-------------|--------------------------|

- |        |   |
|--------|---|
| A.11.a | Due to the operational nature of the UK C-17 the hours of utilisation/required availability of the Data link facility will be 24 hours a day, 7 days a week including public holidays. The C-17 relies on the Inmarsat Aero-I system and the contractor is to provide availability of 99.96%.<br>The Quality assurance checklist can be found here, near the bottom of the list:<br><a href="http://aof.uwh.diif.r.mil.uk/aofcontent/tactical/quality/content/qarelatedforms.htm">http://aof.uwh.diif.r.mil.uk/aofcontent/tactical/quality/content/qarelatedforms.htm</a> |
|--------|---|

|             |                            |
|-------------|----------------------------|
| <b>A.12</b> | <b>Contract Monitoring</b> |
|-------------|----------------------------|

- |        |  |
|--------|--|
| A.12.a | For the purposes of contract monitoring, representatives of the Contractor will routinely report to the Designated Officer on the performance of the Contract.   |
| A.12.b | The Contractor is responsible for the performance of the Contract by any sub-contractors or other agents working on behalf of the Contractor. The Contractor is to deal with any issues relating to any sub-contractors or other agents working on behalf of the Contractor, this however does not exclude sub-contractors or other agents working on behalf of the Contractor from attending any Contract Monitoring meeting or contributing to any report where it is appropriate for such sub-contractors or other agents to do so. |
| A.12.c | If any sub-contractors or other agents working on behalf of the Contractor are found unsuitable, for whatever reason, the Contractor is to engage with the relevant sub-contractors or other agents to broker a resolution.  |

Ref      Requirement

| <u>Ref</u>      | <u>Potential Live Service Requirement</u>  | <u>Additional Information</u>  | <u>Standard of Performance</u>   |
|-----------------|--|--|--|
| <b><u>B</u></b> | <b><u>Deliverable Requirements</u></b>   |  |  |
| <b>B.1</b>      |  |  |  |
| B.1.1           | The provider must be able to support required C-17 ATC and AOC functions                                       | To include Connectivity to Data link ATC communications systems.                                     | Service must be available whenever required.   |
| <b>B.2</b>      |  |  |  |
| B.2.1           | The operations terminal programme is required to be accessible using MoD IT System provided internet browsers. | Chrome version 90.0.4430.93 is currently installed. Must be compatible with future software updates. | Must logon and have full functionality of SATCOM datalink functions.   |
| B.2.2           | The operations terminal internet accessed programme is required to be compatible with C-17 AOC.                | Provision of 8 x aircraft network addresses to process Data Link messages.                           | The contractor is to provide on-going support for Boeing message type up to Boeing SMS 3.2. for the C-17 aircraft through the life of this contract. |

**Deliverable Requirements**

|            |  |   |  |
|------------|--|---|--|
| B.2.3      | The operations terminal internet-based programme is required to have adequate password protection and an encrypted connection between server and client.   | User accounts for administrator and other user roles. Password protection with option of minimum length (8 character) and types of character and encrypted connection (minimum of 128bit SSL) | Is to provide a system that meets the details provided within Additional Information.            |
| B.2.4      | The operations terminal internet accessed programme is required to retain at least 100 Mb of transmitted and received data for post-flight analysis and to maintain an audit trail of operational decisions. | Nil   | See Deliverable Requirements.  |
| <b>B.3</b> |  |   |  |
| B.3.1      | The SATCOM datalink service is required to support current global air transport operations.  | This is to include direct involvement in combat operations.   | Contract permits use across range of general air traffic and military use.                       |
| <b>B.4</b> |  |   |  |
| B.4.1      | The service coverage is to be sufficient to support operational use from Latitudes 75 degrees North to 75 Degrees South and 360 Degrees of longitude.  | Nil   | Coverage availability within required area to be 99.96%.   |
| B.4.2      | The SATCOM datalink service, particularly in respect to connectivity is to be reliable.  | Nil.  | Provide uptime of sat link availability through the Aero-I Inmarsat system of 99.96% or greater. |

| <b><u>Ref</u></b> | <b><u>Potential Live Service Requirement</u></b>  |     |  |
|-------------------|---|-----|--|
| B.4.3             | The system will require compatibility between existing aircraft equipment and software configuration. | Nil | Must be compatible with the C-17 Rockwell Collins CMU-900 Communications Management Unit and Inmarsat I- Band Service (Rockwell Collins hardware to be replaced by Cobham 700D Aviator hardware in 2023) |



OFFICIAL-SENSITIVE COMMERCIAL

OFFICIAL-SENSITIVE COMMERCIAL

OFFICIAL-SENSITIVE COMMERCIAL