

SACC/04/31/06

JFC - TDL Capability Investigation Statement of Work

Background:

1. Joint Forces Command (JFC) has requested that the SACC DT undertake a capability investigation into Command and Control and Shared Situational Awareness [redacted].
2. The investigation will address what actions are required to deliver either, a Link 16 Tactical Data Link (TDL) capability integrated¹ into [redacted]
3. The recommended short term solution has an implementation start date of April 2016.
4. Consideration would have to be given to the [redacted] safety case and the requirements for additional training for personnel using [redacted] to ensure that flight safety is not compromised through the provision of excessive TDL information to Control and Report Centre (CRC) [redacted], Air Battle Management staff (e.g. Master controller, Identification officer or weapons controllers plus assistants).
5. [redacted] provides a Link 1 based system architecture. Link 1 provides a simple data exchange of air tracks between dissimilar systems. It is used in NATO to connect national legacy Air C2 systems to Link 11 or Link 16 TDL processors, as well as providing cross border connectivity between neighbouring national systems and to NATO Combined Air Operations Centre (CAOC).
6. It is expected that expertise needed to cover this task is current knowledge of, in-use UK TDL systems (TDL equipped platforms and those TDLs used in the UK Air C2 Ground Environment) as well as understanding of the [redacted] and of UK Air Battle Management operations. Additional knowledge of Ground Based Air Defence Systems and Air-Maritime integration will benefit the execution of this task. All staff must be cleared to access SECRET UK EYES ONLY material. Access to and storage of such classified material is deemed necessary.
7. All named tenderer resources shall have suitable security clearance for this project, as access to data and sites is required [redacted]. The Contractor shall provide a statement confirming that each named resource has the necessary security clearance. Provision a clearance certificate will be necessary for some site visits.

Stakeholders will include but not limited to:

Stakeholder Group	Relevance
SACC DT	Responsible for the delivery of the task output. Support authority [redacted] Management of GUARDIAN project
Joint Forces Command	Capability (option) Sponsor ISS (Tech EG for TDL policy and standards)
Air Command	Includes: ASACS Force Command [redacted], JDLMO (Link 16 network management/design) Air Cap Del CoA Air C2 (GUARDIAN sponsor)

¹ Integration will be assumed to be based on at least a NATO STANAG 5501 (Link 1) compliant interface.

FAST DT	Consumer of Link 16 information (Typhoon)
Navy Command	Consumer of Link 16 information (T45, T23/26)
ADATS DT	Radio Site Protection
Airbus Defence & Space	[redacted]
DIO	Infrastructure owner e.g. Masts, buildings
JSENS DT	[redacted]
IBM	[redacted]

Task Objective:

8. To undertake an investigation on behalf of SACC DT for Joint Forces Command to provide a recommendation as to the most rapid way of implementing [redacted]. The output of the investigation will be a formal report.

Report Aims:

9. The Contractor shall provide access to a dedicated Project Manager as a single point of contact.
10. The Contractor shall identify top level User / System requirements in the following areas:
 - a. TDL Functional
 - b. Non-functional
 - c. Radio coverage
 - d. Site locations and supporting civil works
 - e. System Reliability and Availability
 - f. IER's
11. The Contractor shall identify capabilities that are available 'off the shelf' and how rapidly a recommended option could be implemented, taking into account DE&S Approval Procedures.
12. What functional capabilities the solution would offer. As a minimum this shall include basic line of sight coverage (without relay).
13. What is the best medium term solution?
14. Through the implementation of this task the Contractor shall assess the following technical topics as a minimum for each solution investigated. This list is not exhaustive and the Contractor shall assess further topics as necessary to inform and support their findings and recommendation.
 - a. Review 'Off the Shelf' Data Link Processor capability options and associated timescales for delivery.
 - b. Provide list of key cost drivers pertinent to each option identified, that cover procurement and implementation costs as well as through life support costs.
 - c. Provide an estimated timeline to delivery with transition route map.
 - d. Identified assumptions and constraints.
 - e. Scope of civil works requirements.
 - f. Scope of Line Of Sight/Beyond Line Of Sight backbone communications bearer requirements.

- g. Identification of impacts to the current communications network for data bandwidth, availability and Quality of Service.
- h. **[redacted]**
- i. Test and acceptance strategy (inc. platform tasking or transportable Link16 test equipment)
- j. ILS and Support solutions
 - a. Codification
 - b. Contractor Logistic Support
 - c. System support (Commercial Of The Shelf and Military Of The Shelf items)
- k. TDL terminal of choice, support approach, availability (spares)
- l. Security, in accordance with the standards set out in JSP440, Chapter 8
 - a. System
 - b. Physical
- m. Crypto fill (by hand or remote key distribution)
 - a. Key Management
- n. Frequency Clearance Agreement
 - a. Electro Magnetic Compatibility
 - b. *Link 16* network management

In the execution of this task, the following travel needs to be considered for costing purposes:

Location	Number	Duration (working days)
Abbeywood (DE&S)	5	1
Northwood (JFC)	5	1
High Wycombe (Air Cmd)	2	1
[redacted]	[redacted]	[redacted]
Contractor site meetings	4	2 (could include overseas to NATO Programming Centre)
Abbeywood (DE&S) Phase output presentations	2	1

Video conferencing facilities are available at Northwood as well as Abbeywood, access to these may reduce the T&S burden. Access to these is not guaranteed but may be sought on request. **[redacted]**

Presentation:

Limited distribution due to the sensitive subject matter. The Contractor will be made aware of the intended report recipients.

Study Output:

For each site visited a survey report will be produced by the contractor and fed into both the quick look report and the final report.

Phase 1; Deliver a quick look report, that has been accepted by the Authority, containing the recommended short term solution with top level supporting arguments against all topic areas (basic capabilities with limitations, radio coverage and support considerations) to DE&S no later than 1700 on the 28th of Sept 2015. Assumes a contract let date of 24 July 2015.

Following the delivery of the Phase 1 Report SACC DT will have a 10 working day Review Period to either accept the delivered output or request a re-drafted output. The contractor shall make the required changes and re-submit the Phase Report to SACC DT within 10 working days.

Phase 2; Deliver a final report that has been accepted by the Authority, clearly stating the recommendations and solution roadmap that meets the aims and objectives of the task. All underpinning topics clearly assessed along with identified assumptions and constraints listed, to DE&S no later than 1700 on the 15th of Dec 2015.

Following the delivery of the Phase 2 Report SACC DT will have an extended Review Period, lasting until the 8th of January 2016 to either accept the delivered output or request a re-drafted output. The contractor shall make the required changes and re-submit the Phase Report to SACC DT within 10 working days.