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Request For Proposal in Support of the Evolve to Open Morpheus Test and Reference Centre Mission Recorder Unit Product Selection

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Revision History

Issue/Draft	Date	Comments/Reason for Change
1	6th June 2018	Initial Issue

Export Marking

Confirmation is required against each marking

Export Marking	Confirmation
ITAR Data	☐
EAR Data	☐
Military data	☐
Dual Use data	☐
Not Export Controlled	☒

ITAR Information

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US Entity	Applicable USML Rating	US Authorisation Reference	Affected Page / Section Number
N/A			

Technical Data Export Rating Category/Categories applicable to this document

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Export Rating	Date	Comments
N/A		

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Referenced Documents

Reference	Document Title	Issue
[1] Annex A	MRU Compliancy Matrix	1
[2] Annex B	F470	Rev 7
[3] Annex C	F00415 GDUK Purchase Order Terms and Conditions	Rev 14

External Distribution

Recipient	Company	Role

Acronyms & Abbreviations

Acronym/Abbreviation	Definition

Glossary

Term	Definition
Series Code	This is an alpha-numeric code for each category of Primary Record which is used to associate the Retention Period with Records

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1.0 Background

As part of the UK Ministry of Defense (Authority) initiative to upgrade existing Bowman and future Land vehicle designs, it has been determined that there will be a need for Mission Recorders to be installed in future platforms.

2.0 Introduction

General Dynamics Mission Systems (GDMS) intends to conduct product evaluations to identify solutions for Mission Recorder Units (MRU's) for the Evolve to Open (EvO) programme, and implementation into the Morpheus Test and Reference Centre (MTRC).

This request is for:

- Information about the features, capabilities and limitations of your product(s) that helps to permit "off the shelf" purchases of systems, subsystems and/or components.
- Compliancy statements to the requirements of this Request For Proposal (RFP)
- The provision of two evaluation units and information on existing Mission Recorder / NAS in the market place to determine suitability for use in modular, open architecture systems that GDMS may demonstrate to the Authority.

Technical information submitted in response to this RFP shall be unrestricted for use within the GDMS EvO team and the Authority.

Pricing data is requested, however it will be treated as sensitive information and will not be disclosed outside of GDMS without written consent.

Respondents are advised that any information submitted in response to this RFP may be used by GDMS to select products for the MTRC. However, GDMS is not bound to accept any RFP or to consider it further in any associated documents.

The issue of this letter is not a commitment by GDMS, or the Authority to place any form of contract. Consequently, any expenditure work or effort of you participating in this exercise is entirely at your own risk. GDMS reserves the right to accept or reject any or all proposals received.

Companies responding to this RFP should identify any submitted information that is to be considered as either company confidential or proprietary.

All enquiries and other communications related to this RFP shall be directed exclusively to the GDMS Procurement Team via the email address matthew.davies@gd-ms.uk with copy to Supply.chain@gd-ms.uk with "GDMS EvO MRU Procurement" in the subject line.

Responses to this RFP should be submitted to the GDMS Procurement Team, on or before the close of business on 22nd June 2018. Responses may be e-mailed and if deemed necessary a CD may be sent via courier as well. As part of the evaluation process, your response will be entered into our evaluation tool; hence submission of printed material is not acceptable.

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3.0 Mission Recorder Programme Phases

On receipt of RFP responses, GD will conduct an analysis with the Authority's working group. A full planning increment has been allocated to evaluate the RFP products and submissions. Assume for this RFP that procurement will be in two (2) phases:

1) Evaluation
2) MTRC Option

Unit	Evaluation Phase Quantity	Evaluation Phase Date Required	MTRC Option Quantity	MTRC Phase Date Required
MR	2	4th July 2018	11	January 2019

Table 1: Forecasted Quantities

Suitable MRUs will be selected, from evaluation of the MRU units in the EvO development labs and feedback from the Authority's working group. Following this a further quantity 11 units will be required to be integrated into the MTRC.

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5.0 Information Request

Respondents to this RFP are requested to provide information to help evaluate the candidate system against the requirements at Annex A. This RFP has been structured to simplify both the generation of the response by the respondent, and the subsequent analysis of the response by GDMS. Non-adherence to the template below may result in the response being not reviewed or considered. This does not preclude provision of additional pertinent data. Respondents are requested to directly address at least the following questions. In your response refer to the paragraph numbering system in this RFP.

5.1 Corporate Overview and Capabilities

a. Sub-Contractors are requested to express their interest in this project and to demonstrate their past corporate experience, and their corporate capabilities in respect to the system proposed.

b. Sub-Contractors are requested to indicate willingness to participate in joint integration testing at the General Dynamics open architecture test bed as part of the evaluation and competitive process.

c. Sub Contractors are requested to indicate interest in participating in and arranging live demonstrations of their product

d. Sub-Contractors are requested to indicate ability to support General Dynamics Information Security Policy to safeguard against malicious software. As part of the risk assessment, GDMS on behalf of the Authority may request an exhaustive examination of all source code and associated files used to compile and build your product, if selected for use by EvO. This inspection would be conducted at the Sub Contractors facility.

e. Sub Contractors are requested to complete the attached Annexe B F470 export classification for their offered product

5.2 Product Overview

a. Sub-Contractors are requested to provide the product nomenclature, model number, etc.

b. Provide descriptive materials on their MR products identifying any optional capabilities or sub functions.

c. Provide applicable quality system and standards for the product.

d. Provide information on the history and status of this product and/or its elements: when developed and platforms/land systems where currently in service. Identify the class of platforms that the product described in your response, (including all capabilities) is currently deployed.

e. Provide the system EMI certification status and specification.

f. Provide system environmental limits, certifications and standards. Include at least the following:

   i. Altitude;

   ii. Humidity;

   iii. Operating and Storage temperatures;

   iv. Immersion (Driving Rain may be considered);

   v. Shock (Operational, Bench Handling, Crash Hazard) survivability;

   vi. Sand and dust; and

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vii. Salt Fog;

viii. Vibration (Composite Tracked and Wheeled Vehicle)

g. Provide the details on DEF STAN 23-09 compliance for connectors. The keying of the Ethernet connectors are either Type A or N polarization depending on the network security classification. Provide the options that are available.

5.3 Operational

a. Sub-Contractors are requested to provide a product specification overview for the product.

b. Provide details to the following operational characteristics:

i. Details of the product expected operating temperature at +49C ambient, including self-heating and solar load of 1120 W/m^2. Provide details of the product operating in extreme cold conditions. Does the product require a heater to operate in extreme cold or is it only required at startup?

ii. Provide details of power (volts, amps, phase, MIL specification, reverse polarity protection, etc.), weight (Kg/lbs), dimensions (mm/in), for the product. What is the expected power requirements?

iii. Provide details on how to mitigate power fail or brown out conditions. Is there an interface for UPS power failure notifications? What time period would be required to safely commit applications and operating system to a power down safe condition?

iv. Provide any details on nuclear hardening. What mitigations of Transient Radiation Effects on Electronics are provided? Does the product provide a means of nuclear event detection and circuit protection in the presence of ionizing dose gamma radiation? What mitigations are provided for single-event effects (SEE)?

v. Provide any details on security. What security mitigations are made to the system? What security mitigations are made for the removable storage? What security mitigations are provided for the execution environment?

vi. Provide details on the Ethernet ports. Are they terminated at an Ethernet NIC/processor or are they part of an embedded Ethernet switch fabric. Are these ports reserved for specific purposes such as test or maintenance functions?

vii. Provide details on Time References that would be required for time stamping. Timing references may include NTP, IRIG-B, and GPS. Where is the timing reference to be provided (network, or USB)?

viii. Provide details on application space to perform data recording of customized data formats. Does the product provide an application for the recording of HUMS data as defined in DEF STAN 23-09 for GVA platforms?

ix. Provide details on audio recording. Identify SIP session messages for setup, control, record, pause, set parameters and teardown. Does the recording/playback utilize any SIP services as modeled by EUROCAE ED-137 Part 3?

x. Provide details on video recording. Identify SIP multi-media session messages for setup, control, record, pause, set parameters and teardown. Does the recording/playback utilize any SIP multi-media services?

xi. Provide any details of managing a Network Attached Storage (NAS). How is the drive mounted for clients? What file sharing methods are available (AFP, SMB, NFS, EXT4,

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BTRFS)? Is there a cross platform sharing capability? What are the authentication methods? Are there any features for backing up data terminals or smart displays?

5.4 System Interfaces

a. Potential Sub Contractors are requested to provide an overview of the device interfaces.

b. Identify all external interfaces to the product, their physical, functional, and electrical characteristics.

5.5 Open Architecture and standards compliance

a. Potential Sub Contractors are requested to provide a self-assessment of the system using open source guidelines.

b. Is the product designed so that it can take advantage of standard COTS components?

c. To what degree are the product and components interchangeable and how is this achieved?

6.0 SUPPORT DATA

a. Potential Sub Contractors are requested to describe the Logistics Support Analysis (LSA) currently performed for the system.

b. Describe the Safety/Hazard Analysis performed for the system.

c. Describe the Technical Data Package developed for the system and available for customer use.

d. Describe the user documentation available – i.e., style and type of Operator's and Maintainer's Manuals.

e. Describe the Training Program and associated Training Support Materials for both Operational and Maintenance procedures.

a. Provide the following technical performance metrics: Mean Time between Failure (MTBF), testability performance metrics (i.e., fault isolation capability to one, two and three shop replaceable assemblies) and first line Mean Time to Repair (MTTR).

b. Describe any special support and test equipment requirements necessary to sustain the system at the 1st and 2nd lines of maintenance.

c. Describe any level of performance-based or conditional-based logistic support available or planned for your system. Is predictive maintenance included in this support? Do any of the product components qualify for a dispose on failure within the parameters of the Authority's logistics? Which components are these?

7.0 DATA RIGHTS

a. Potential Sub Contractors are requested to identify who owns the rights to the system and/or its components (including software)?

b. Will Government Purpose Rights be offered or provided?

c. Describe the degree of design disclosure that is provided with the system and any license or terms that limit the use of such information.

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d. Where the system is manufactured? If not in the U.K., is there an option to manufacture and support in the United Kingdom? If applicable, identify all major component suppliers for your system (organization, base country).

e. Provide an indication of the ability to provide UK based software support capability for future spiral development activities.

8.0 Procurement Data – To Be Provided Separately from Technical Information

a. An offer to provide two (2) Evaluation Units (including proposed terms) to GDMS by the 4th July 2018. In your offer include full documentation suite, training, software, firmware, test and integration support (including test equipment), installation, and applicable acceptance testing (factory, field).

b. A firm price quotation valid till 24th December 2018 for 11 off units (without modification). Including details of price break points and delivery lead time from receipt of order.

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