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Place du Portage, Phase III
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LETTER OF INTEREST
LETTRE D'INTÉRÊT

Comments - Commentaires

Vendor/Firm Name and Address
Raison sociale et adresse du
fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution
Electronics, Simulators and Defence Systems Div.
/Division des systèmes électroniques et des systèmes de
simulation et de défense
11 Laurier St. / 11, rue Laurier
8C2, Place du Portage
Gatineau
Québec
K1A 0S5

Title - Sujet Remote Minehunting and Disposal Sys	
Solicitation No. - N° de l'invitation W8472-105270/A	Date 2010-04-07
Client Reference No. - N° de référence du client W8472-105270	GETS Ref. No. - N° de réf. de SEAG PW-\$\$QF-098-19921
File No. - N° de dossier 098qf.W8472-105270	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2010-07-08	
Time Zone Fuseau horaire Eastern Daylight Saving Time EDT	
F.O.B. - F.A.B. Specified Herein - Précisé dans les présentes Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input checked="" type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Fox, Erin	Buyer Id - Id de l'acheteur 098qf
Telephone No. - N° de téléphone (819) 956-5855 ()	FAX No. - N° de FAX (819) 956-0767
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

LETTER OF INTEREST (LOI)

REMOTE MINEHUNTING AND DISPOSAL SYSTEM (RMDS) PROJECT

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1. Purpose

The Department of National Defence (DND) has a requirement to provide a remote minehunting and disposal capability to detect, classify, identify, and dispose of sea mines that present a threat to Canadian interests or impede the conduct of maritime operations by Canadian Forces (CF) warships.

The objectives of this Letter of Interest (LOI) is to:

- a) provide industry with general information on the Remote Minehunting and Disposal System (RMDS) Project;
- b) provide industry with a preliminary set of RMDS Project high level specifications, list of deliverables, tentative schedules, scope of implementation and in-service support effort and essential program/environmental constraints;
- c) enable DND to examine off-the-shelf (OTS) equipment that is in service with other navies or soon to be in service; and,
- d) enable DND to evaluate and progress a potential RMDS acquisition and ILS.

2. Background

The requirement is for the KINGSTON (KIN) Class Maritime Coastal Defence Vessel (MCDV), which is to be capable of deploying a remote active Mine Counter Measures (MCM) capability, in the form of a Remote Minehunting and Disposal System (RMDS). This capability is intended to be a modular payload design (such as the MCDV Route Survey Payloads) and is to be primarily operated from the MCDVs but will, due to its payload design, also be able to operate from other suitable vessels of opportunity or from a shore position.

The remote minehunting and disposal capability will be employed to counter a sea mine threat to Canadian maritime interests in North America. In addition to the potential threat to North America, Canadian warships are regularly deployed overseas, where the mine threat has been assessed as high, and is likely to remain an enduring threat to maritime forces into the foreseeable future. The remote minehunting and disposal capability may be utilized to ensure safety for Canadian warships in such places where Canada has assumed responsibility, either as part of an allied or coalition operation, or possibly unilaterally, for the safety of shipping and access to ports.

3. Project Scope

The aim of the project is to find an RMDS capability which, though primarily operated from the MCDVs, is portable and operable from crafts of opportunity (COOP) or from shore positions in both North American and overseas littorals.

4. Constraints

The project will soon be conducting definition activities including requirements review, validation and comparative analysis of available technology. DND is specifically only interested in off the shelf systems that, as a whole or as components, meet the definition of North Atlantic Treaty Organization (NATO) Technical Readiness Level (TRL) Nine (9) (<http://www.nurc.nato.int/research/trl.htm>) and are currently in, or are about to enter into, operational service in maritime environments.

5. Requirement

The Requirements are detailed in Annex "A", AUV Requirements, and Annex "B", Disposal System Requirements.

6. Schedule

In providing responses, the following schedule should be utilized as a baseline:

- a) LOI - 2nd Quarter 2010
- b) Potential RFP - 3rd Quarter 2012
- c) Potential Contract award - 2nd Quarter 2013
- d) Potential Full Capability Delivery - 4th Quarter 2014

7. Security

There is no security requirement associated with this LOI, however there would be a security requirement associated with the potential follow-on solicitation.

8. Strategy

The RMDS project is now in the Option Analysis Phase in which current state-of-the-art off-the-shelf (OTS) systems including, but not limited to, Autonomous Underwater Vehicle

(AUV) and mine disposal systems presently in use, or being considered, by other allied navies will be evaluated for suitability.

DND would like to determine what possible solutions exist to meet their needs for an RMDS, as well as rough cost and time estimates for delivery of a solution. As such, DND requests Respondents to:

- a) provide assessments of scope, indicative costs, schedule and propose corresponding project management arrangements, including risk mitigation and quality compliance strategies;
- b) assess export license, security, proprietary data, test/qualification and operational evaluation timings and effort;
- c) investigate possible relationships with service providers and vendors of qualified sub-systems and components;
- d) identify team membership and sources of deliverables such that security, information release, the Controlled Good Registration Program (CGRP), the United States (US) International Traffic in Arms Regulations (ITAR) and other necessary arrangements can be adhered to; and
- e) assess Integrated Logistics Support (ILS) options.

Specific details of information sought are provided in Annex "D", RMDS Information Sought.

The concepts and requirements presented in this document are not final. Manufacturers/vendors are encouraged to comment on feasibility as well as propose alternate approaches/solutions to meeting some or all of the general requirements.

9. Additional Information Requests / Industry Days

After review of all the information packages, additional information and/or demonstration of systems may be requested. Public Works and Government Services Canada (PWGSC) may contact respondents to schedule visits to their facilities to view systems/components or attend demonstrations/presentations. Vendors should plan on giving demonstrations and may provide presentations, however adequate time should be allocated for discussions as well. Alternatively, the Government may invite respondents to provide a briefing to personnel involved in project activities in the National Capital Area.

10. Notes to Interested Vendors

This is neither a call for tender nor a Request for Proposal (RFP), and no agreement or contract for the procurement of the equipment stated above will be entered into solely as a result of this LOI. This announcement does not constitute a commitment by Canada. Canada does not intend to award a contract on the basis of the notice or otherwise pay for the information solicited. Any and all expenses incurred by industry in pursuing this opportunity, including the provision of information and potential visits, are at industry's sole risk and expense.

Any discussions on this subject with project staff representing DND or PWGSC, or any other Government of Canada representative, or other personnel involved in project activities, shall not be construed as an offer to purchase or as commitment by DND, PWGSC or Government of Canada as a whole.

Although the documents/information/data collected may be provided as commercial-in-confidence and will not be provided to a third party outside of Canada, Canada reserves the right to use the information to assist them in drafting performance specifications and for budgetary purposes. Requirements are subject to change, which may be as a result of information provided in response to this LOI. Vendors are advised that any information submitted to Canada in response to this LOI may, or may not, be used by Canada in the development of the potential subsequent RFP. The issuance of this LOI does not create an obligation for Canada to issue a subsequent RFP, and does not bind Canada legally or otherwise, to enter into any agreement or to accept or reject any suggestions.

There will be no short-listing of vendors for the purposes of undertaking any future work, as a result of this LOI. Similarly, participation in this LOI is not a condition or prerequisite for the participation to any RFP.

Vendors responding to this LOI should identify any submitted information that is to be considered as either company confidential, proprietary or if the response contains controlled goods.

Interested vendors may submit their package to the PWGSC Contracting Authority, identified paragraph 13 below. Four (4) hard copies and four (4) soft copies are requested.

A point of contact for the Vendor should be included in the package.

11. Enquiries

All enquiries and other communications related to this LOI shall be directed exclusively to the PWGSC Contracting Authority. All enquiries must be submitted to the Contracting Authority no later than fifteen (15) calendar days before the closing date. Enquiries received after that time may not be answered.

Care should be taken by vendors to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary " will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the questions or may request that the vendor do so, so that the proprietary nature of the question is eliminated, and the enquiry can be answered with copies to all vendors. Enquiries not submitted in a form that can be distributed to all vendors may not be answered by Canada.

Changes to this LOI may occur and will be advertised on the Government Electronic Tendering System (MERX). It is each vendor's responsibility to verify changes, if any, on MERX.

12. Closing Date

Responses to this LOI are to be submitted to the PWGSC Contracting Authority identified below, on or before the date indicated on page 1 of this document.

13. PWGSC Contracting Authority

Erin Fox
Supply Specialist
Electronics, Munitions and Tactical Systems Procurement Directorate

11 Laurier Street, PDP III, 8C2
Gatineau, PQ
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AUV Requirements

General Requirements

1. Proposed submissions shall incorporate the following essential capabilities to detect, classify, and identify sea mines, and the growing threat from underwater improvised explosive devices (U/W IEDs). The submissions can consist of a total, all encompassing system, individual systems integrated to cover the capabilities, or a combination of systems tiered to accomplish the requirements described herein:
 - a. Operate primarily from the KIN Class vessels, by trained ship's personnel;
 - b. Operate within the normal operating envelope of the KIN Class vessels and without modifications to the existing vessels' structure.
 - c. Accommodate minimum personnel augmentation for Naval Mine Countermeasures (NMCM) operations;
 - d. Minimize exposure of deployed personnel to danger during the NMCM operations from detection to disposal;
 - e. Deploy from crafts of opportunity, including Rigid-Hulled Inflatable Boats (RHIB), and from shore locations;
 - f. Be compatible with other allied MCM systems, including data exchange;
 - g. Incorporate an on-board inertial navigation system capable of reliable and repeatable positional accuracy;
 - h. Safe and reliable operation while all components are mounted or stored on deck of the KIN Class vessel or COOP, or deployed in sea water, including during launch and recovery;
 - i. Withstand, without deterioration, an ambient air temperature range between - 20 deg. C and + 45 deg. C and a relative humidity of up to 95% while all components are mounted or stored on the deck of the KIN Class vessel or COOP and not in use;

Sensor Requirements

- 2 Replies shall include responses to the following MCM sensor system requirements:

- a. Detect changes with respect to a previous 'baseline' image of the seabed established by previous route surveys;
- b. Automated change capability to allow for rapid comparison of collected sonar imagery with previously existing "baseline" imagery;
- c. Upgradeable and adaptable underwater sonar and camera systems, and analysis software to allow for future operating conditions and technology integration;
- d. Computer-aided detection and computer aided classification (CAD/CAC);
- e. Sensor capabilities to include the following:
 - i. Reliable detection and unambiguous display of cylindrical, bottom laid, moored and floating mines 0.5 m in diameter and one m long, at a maximum water depth of 200m;
 - ii. Reliable detection and unambiguous display of bottom laid mines, having a target strength of at least -25 decibels (dB), shall be detected on soft mud as well as hard sand bottoms;
 - iii. Resolution of the position of the above mines, during detection, within a + or - 5.0 degree vertical arc, a + or - 2.5 degree horizontal arc and + or - 5 % of the selected range setting;
 - iv. Arrays arranged to provide three dimensional scanning may be considered for this application;
 - v. Satisfy the requirements specified above with speed over the bottom up to an average of 3 knots at 200 m below the ocean surface;
- f. Displays that provide separate classification, detection and visual correlation, with selectable swath width, range scales for the detection and classification displays

Disposal System Requirements

1. Proposed submissions shall incorporate the following essential capabilities to remotely dispose of sea mines, and the growing threat from underwater improvised explosive devices (U/W IEDs). The submissions shall accomplish the requirements described herein:
 - a. Operate primarily from the KIN Class vessels, by trained ship's personnel;
 - b. Operate within the normal operating envelope of the KIN Class vessels and without modifications to the existing vessels' structure.
 - c. Accommodate minimum personnel augmentation for Naval Mine Countermeasures (NMCM) operations;
 - d. Minimize exposure of deployed personnel to danger during the NMCM operations from detection to disposal; and
 - e. Deploy from crafts of opportunity, including Rigid-Hulled Inflatable Boats (RHIB), and from shore locations.

2. The state-of-the-art OTS disposal system shall incorporate the following capabilities and features:
 - a. Underwater, remote controlled, expendable mine identification and neutralization vehicle system (operational, trials and training versions);
 - b. Surface control station that is operable from the standard CF 7.3m RHIB – the minimum size;
 - c. Inspection vehicles, complete with ancillary equipment for launch/recovery including an inert warhead component for each vehicle;
 - d. Stable operations in currents up to 3 knots;
 - e. Operational depth up to 200m;
 - f. Speed - relative to currents - of 3 knots;
 - g. Hovering capability on station in currents up to 5 knots;
 - h. Slightly positive buoyancy;
 - i. Two man lift in storage or operational condition;

- j. Remote operator control and sensor information;
- k. Range from control vessel up to 1000m;
- l. Endurance per run of 60 minutes;
- m. Ability to operate in varying light level conditions;
- n. Possess a high-resolution capability for homing, acquisition and classification/identification to a range of 100m of self;
- o. Video camera with colour and black and white capabilities in varying intensity lighting;
- p. Sonar and video data position, date/time and target tagging and logging;
- q. Withstand, without deterioration, an ambient air temperature range between - 20 deg. C and + 45 deg. C and a relative humidity of up to 95% while all components are mounted or stored on the deck of the KIN Class vessel or COOP and not in use;
- r. Storage cradle of container for wet deck use;
- s. Control panel for remote use on a 7.3m RHIB (the minimum size), including displays for sonar, video and position parameters;
- t. Must be useable by someone wearing standard environmental gear (i.e. cold weather gloves);
- u. Inert warhead control for simulated neutralization;
- v. 12/24VDC for operations, 220/20VAC 50/60Hz mains supply for shore based test and training equipment and vehicle recharge;
- w. Separate explosive charge storage from the disposal vehicle if applicable;
- x. Munitions magazine;
- y. Initial sparing and consumable stores for a 3-year period including technical and operator manuals;
- z. Initial cadre training for the system operators; and
- aa. In-service Logistics Support (ILS).

3. Operational exercise and trial results applicable to the proposed Mine Disposal System when deployed as a part of a NMCM system are to be included in the response to this inquiry. These results should demonstrate current progress towards achieving the operational capabilities specified herein.

Information Sought

1. As well as system capability and costing information, replies shall also provide the following information:
 - a. Company profile.
 - b. What experience does your organization have with MCM, AUV, and Uninhabited Underwater Vehicle (UUV) systems?
 - c. Provide your company's solution to address RMDS meeting the requirements outlined in the associated appendices.
 - d. What experience does your organization have with Open Architecture (OA) processing software?
 - e. What experience does your organization have in using OTS equipment in a Naval environment?
 - f. Operational exercise and trial results applicable to the proposed AUV when deployed as a naval mine hunting system is to be included in the response to this inquiry. These results should demonstrate current progress towards achieving the operational capabilities specified herein.
 - g. What challenges and solutions would your organization consider to be relevant to OA?
 - h. What experience does your organization have in meeting the intent of military specifications such as, but not limited to: shock, vibration, electromagnetic compatibility, electromagnetic interference, electrical supply, and safety?
 - i. How many OA updates has your organization completed?
 - j. What process would your organization follow to provide OA components to other suppliers?
 - k. How would your organization manage and support phased deliveries?
 - l. How would your organization approach operator and maintainer training with phased deliveries?
 - m. How would your organization participate in a Canadian MCM community of interest?

- n. How would your organization envision foreign involvement in a Canadian MCM community of interest?
- o. How would your organization manage information and equipment as it applies to Controlled Technology Access Transfer (CTAT)?
- p. How would your organization manage foreign government, including International Traffic in Arms Regulations (ITAR), controlled information and equipment?
- q. What factory environmental tests would your organization perform to demonstrate reliability?
- r. What warranties for total system performance would your organization provide?
- s. How would you propose to provide short-term in-service support including maintenance, upgrades, enhancements/improvements, deficiency corrections, patches, spares, configuration management, life-cycle material/software management and integrated logistic support?
- t. What would be the estimated cost for short-term in-service support?
- u. How would you propose to provide long-term in-service support, including maintenance, upgrades, enhancements/improvements, deficiency corrections, patches, spares, configuration management, life-cycle material/software management and integrated logistic support?
- v. What would be the estimated cost for long-term system support?
- w. What existing Government Furnished Information (GFI) would your organization require?
- x. What existing Government Furnished Equipment (GFE) would your organization require?
- y. What would be your projected timeline for delivery and installation/integration of systems following contract award?
- z. Provide an indicative pricing matrix for multiple unit/system purchases?
- aa. What does your organization consider a rough order of magnitude (ROM) level of effort for this project in person hours?

Acronyms

1. The following acronyms, and their decode, are contained within the document and attached annexes:

AUV	Autonomous Underwater Vehicle
CAD/CAC	Computer–Aided Detection and Computer Aided Classification
CF	Canadian Forces
CGRP	Controlled Good Registration Program
COOP	Crafts of Opportunity
CTAT	Controlled Technology Access Transfer
dB	Decibel
DND	Department of National Defence
GFE	Government Furnished Equipment
GFI	Government Furnished Information
ILS	Integrated Logistics Support
ITAR	International Traffic in Arms Regulations
KIN	KINGSTON Class MCDV
LOI	Letter of Interest
MCDV	Maritime Coastal Defence Vessel
MCM	Mine Counter Measures
NATO	North Atlantic Treaty Organization
NMCM	Naval Mine Countermeasures
OA	Open Architecture
OTS	Off-The-Shelf
PWGSC	Public Works and Government Services Canada
RFP	Request for Proposal
RHIB	Rigid-Hulled Inflatable Boats
RMDS	Remote Minehunting and Disposal System
ROM	Rough Order of Magnitude
TRL	Technical Readiness Level
US	United States
UUV	Uninhabited Underwater Vehicle
U/W IED	Underwater Improvised Explosive Devices