

**RETURN BIDS TO:
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**Bid Receiving - PWGSC / Réception des
soumissions - TPSGC**
11 Laurier St. / 11, rue Laurier
Place du Portage , Phase III
Core 0A1 / Noyau 0A1
Gatineau
Québec
K1A 0S5
Bid Fax: (819) 997-9776

**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 LOI FOR DCID PROJECT	
Solicitation No. - N° de l'invitation W8486-122985/A	Date 2012-04-18
Client Reference No. - N° de référence du client W8486-122985	GETS Ref. No. - N° de réf. de SEAG PW-\$\$QF-103-22681
File No. - N° de dossier 103qf.W8486-122985	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2012-05-29	
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: Eddy, Kathie	Buyer Id - Id de l'acheteur 103qf
Telephone No. - N° de téléphone (819) 956-0768 ()	FAX No. - N° de FAX (819) 956-5650
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: CPO1 ARMY 101 COLONEL BY DR. CHEF OF THE LAND STAFF(CLS) OTTAWA Ontario K1A0K2 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée See Herein	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
FOR
CANADIAN FORCES
DISMOUNTED COMBAT IDENTIFICATION SYSTEM**

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1. Objectives

The Government of Canada is investigating the procurement of an enhanced Dismounted Combat Identification System for the Canadian Forces. As part of the process, the Government of Canada is providing manufacturers with this Letter of Interest (LOI) to solicit information and feedback. Responses will be used to assist in finalizing the requirements, and further developing specifications and costing models. Ultimately, the intent is to procure Military Off the Shelf (MOTS) equipment through a competitive bidding process.

2. Background and Definitions

The modern battle space is both adaptive and dispersed. Areas of operation tend to be fluid and lack a discernable fighting front. The battle space contains pockets of enemy and friendly forces, often intermixed with local populations. Friendly forces operate next to or with allied forces, and air assets are often employed by ground forces to support operations. Additionally, there is a challenge of distinguishing friendly forces, noncombatants and enemy forces in the fog of war. For all of these reasons, the Canadian Forces has focused on improving its sensors, communications systems, Situational Awareness (SA) systems, and combat identification (ID) capabilities.

The Dismounted Combat Identification System is the system by which individual dismounted land forces are identified as friendly forces. Compared to our current combat identification system, the improved system is intended to provide increased identification ranges, better all-around coverage, and be fully interoperable with existing and emerging sensor technology. The current CF Electro-Optic sensors cover the visual, Near Infrared (NIR), Mid-Wave Infrared (MWIR), and Long-Wave Infrared (LWIR) regions. Refer to Annex B for additional information on spectral coverage.

The following definitions are provided:

- a. **Device.** It is the physical equipment that transmits or reflects energy towards the sensor for the purpose of identification. A device may be active or passive.
- b. **System.** Individual devices intended to be worn together by the individual soldier are collectively considered as the combat ID “system”. A system may contain active and/or passive devices;
- c. **Sensor.** It is the equipment that allows for enhancement of viewing capabilities. Examples include binoculars, night-vision equipment, or thermal viewers;
- d. **Active.** An active device is one that is self-powered and transmits energy towards a sensor. Examples of active devices include NIR beacons, glow-sticks/chemical lights, thermal emitters and visible lights;

- e. Passive. A passive device is one that reflects energy towards a sensor. Examples of passive devices include reflective flags and patches;
- f. Interrogator. A system that uses query and response techniques. Positive identification is confirmed through the receipt of a specific response to a specific query.
- g. Detect. The discovery by any means of the presence of a person, object or phenomenon of potential military significance (AAP-6(2011)).
- h. Recognize. The determination of the nature of a detected person, object or phenomenon, and possibly its class or type. This may include the determination of an individual within a particular class or type (AAP-6(2011)).
- i. Identify. The process of attaining an accurate characterization of a detected entity by any act or means so that high confidence real-time decisions, including weapons engagement, can be made (AAP-6(2011)).

3. General Requirements

The Dismounted Combat Identification System must allow soldiers viewed through sensors to be detected, recognized, and identified in all visibility and weather conditions. The system as a whole must be capable of covering all the spectral regions shown in Annex B.

As the system is intended to identify friendly forces during air-to-ground and ground-to-ground operations, it must provide three-dimensional line of sight coverage.

During pre-mission preparations:

- a. The combat identification devices must be easily donned or removed;
- b. The system must allow the user to pick and choose individual spectral regions, as desired by the tactical situation and threat;
- c. Devices must be mountable and compatible with the small pack, rucksack, close combat modular fighting rig, enhanced combat uniform, and CG 634 helmet, combat vehicle crew modular helmet.

During the mission, the combat identification devices must not fall off, be obscured, impede movement, or change position by field movements such as running, crawling, and climbing. The user must be able to turn off or remove any of the individual regions unassisted.

The individual devices must be able to operate in climatic categories A1-A3, B1-B3, and C0-C1 in accordance with AECTP-230 edition 1 (leaflet 2311), and be sufficiently rugged to withstand shock and vibration during transport or engagements. The devices must be resistant to chemical agents, decontamination agents, petroleum, oil and lubricants, insect repellents, camouflage creams, salt water, alcohol, body oils and cleaning agents. Human factors, such as sizes of

switches, use of controls, and ease attaching/detaching, should be carefully considered. The devices must not pose any safety or health hazard to the operator or supporting personnel.

4. Schedule

The anticipated schedule is as follows:

- a. LOI final submissions due to PWGSC Contracting Authority – 29 May 2012.
- b. Potential RFP – January 2013.
- c. Potential Contract Award – April 2013.

5. Security

There is no security requirement associated with this LOI, however a potential future solicitation could include a security requirement.

6. LOI Instructions

Respondents are requested to provide an overall narrative regarding their system in response to the general requirements found at Annex A. Further to this, respondents are requested to complete Appendix 1 to Annex A for each device in their Dismounted Combat ID System. It is requested that respondents provide as much detail as possible, especially for yes/no responses.

Respondents should list and explain any assumptions that they make in their responses. Furthermore, respondents should identify what specific testing standard were used. Examples include NATO STANAGS, Military Standards, National Standards or similar. If internal tests were used, respondents are requested to elaborate on the test conditions and criteria.

Responders are requested to be as complete as possible in their responses. The accuracy of responses is crucial to obtaining approval to move forward with the project. An underestimate of the cost will leave the project under-funded and an over-estimate could make the project unaffordable.

7. Disclaimer

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 herein will be entered into 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 companies in pursuing this opportunity are at the vendor's sole expense.

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. Requirements are subject to change, which maybe 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.

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

Participation in this LOI is not a condition or prerequisite for the participation to any RFP.

8. PWGSC Contracting Authority

Kathie Eddy Electronics, Munitions and Tactical Systems Procurement Directorate Defence and Major Projects Sector (DMPS) 11 Laurier Street, Place du Portage, Phase III, 8C2, Gatineau QC K1A 0S5 Telephone: 819-956-0768 Facsimile: 819-956-5650 kathie.eddy@tpsgc-pwgsc.gc.ca

9. Additional Information Request

After review of all the information packages, the DND project staff may request additional information, briefings, and/or demonstrations from the respondents. The Government of Canada, through the PWGSC Contracting Authority identified in Section 8, may contact respondents for further information.

10. Enquiries

All enquiries and other communications related to this LOI shall be directed exclusively to the Contract Authority. All enquires must be submitted to the PWGSC Contract Authority identified in Section 8 no later than five (5) calendar day before closing date. Enquires received after that time may not be answered.

Care should be taken by vendors to explain each question in Annex A and Appendix 1 to Annex A in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of 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 proprietary nature. Canada may edit the questions or may request the vendor to do so, so that the proprietary nature of the question is eliminated, and the enquiry can be answered with copies to the other vendors. Enquiries not submitted in a form that can be distributed to all vendors may not be answered by Canada.

11. Notes to Vendors

Suppliers wishing to submit a response are requested to respond in writing by the closing date on Page 1 of this notice.

If there are any discrepancies between the English and the French versions of this LOI, the English version shall take precedence.

Any questions or clarifications related to this LOI or any other related inquiries shall be directed to the PWGSC Contracting Authority identified in Section 9.

Four (4) hard copies and four (4) soft copies of the information packages are requested.

Supplier point of contact information should be included in the package.

ANNEX A – QUESTION AND ANSWER

Note: Respondents are encouraged to provide a response to the LOI for their specific device, even if it cannot provide the full spectral coverage required for the system. Respondents have this opportunity to comment on the adequacy and clarity of the requirement as currently expressed, and may offer suggestions regarding potential alternative solutions that would meet the general requirements in Section 3.

1. Please provide a point of contact, if further questions or clarification is required.
2. Brief description of your company. Are you a manufacturer or supplier/distributor?
3. List all Combat ID devices offered by your company. Include NSNs where applicable.
4. Are you able to deliver a complete Combat ID system or are you proposing a specific device(s)? A system must provide full spherical coverage of the soldier and cover the spectral regions in Annex B.
5. Provide a general overview of your system and how the devices operate together. If you are providing only a single device, how would you propose it be integrated with the system as a whole?
6. Other relevant information, including data sheets and other technical documentation.

APPENDIX 1 TO ANNEX A – DEVICE INFORMATION

Note: Please complete the following table for each device proposed. Device #_____

Name: _____

Item No.	Question	Response
1	Does the device currently exist or is it being developed? If it currently exists, is it in use by any military force(s)?	
2	List all accessories accompanied by the device.	
3	Is the device available to be trialed by the CF?	
4	What is the earliest time that device deliveries can begin after receipt of order (ARO)?	
5	At what rate can the device be delivered (e.g. 100/month)?	
6	Indicate the cost per device given the following quantities:	
	-1	
	-100	
	-1,000	
	-10,000	
	-100,000	
Performance Requirements		
7	Is the device passive, active, or a combination of passive and active?	
8	In which spectral region (A to D) does the device operate?	
9	What are the identification, recognition, and detection range of the device, as per	

	definitions in paragraph 2 of the LOI, for the spectral region(s) the device is intended to operate? Indicate all assumptions, constraints, and testing parameters such as atmospheric conditions (i.e. visibility), environment (i.e. temperature, type of region) and viewing device used.	
10	Does the system allow for pre-mission customization/configuration in terms of selecting which spectral regions are used? Is special software or hardware required?	

11	Does the system allow for reconfiguration during the mission (i.e. can the devices be turned OFF in a spectral region or removed during the mission)?	
12	Can the device, or a combination of devices provide full spherical coverage?	

Physical Requirements

13	What are the physical dimensions of the device?	
14	What is the mass of the device?	

Interface Characteristics

15	Where are the recommended mounting points and what is the method of attachment? Are tools required?	
16	What is the estimated time required to don (put on) / doff (take off) the device?	
17	Does the device permit easy identification and manipulation in darkness with the bare hand, or when the user is wearing Temperate Combat or Cold Weather Gloves?	
18	Is the device accessible to the user when in any of the standard firing positions (prone, sitting, kneeling, or standing)?	

Specialty Engineering

19	Are there recommended training requirements for operators?	
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20	Is the device guaranteed by warrantee?	
21	Is the device maintained by repair or disposal?	
22	If the device is maintainable:	
	a. What is the mean time between failure (MTBF)?	
	b. What is the average turn around time for repair?	
	c. Is DND able to conduct the repairs, to what level?	
	d. Is special test/repair equipment required?	
	e. Are there recommended training requirements for maintainers?	
23	How is the device disposed of?	
Environmental Characteristics		
24	What are the environmental impacts of the device?	
25	Is the device submersible, and if so, at	
	what depth and for how long?	
26	What is the operating temperature range of the device?	
27	Is the device sufficiently rugged to withstand shock and vibration during tactical transport and target engagements?	
28	Has the device been tested in accordance with MIL-STD-810 or a similar standard?	
Passive Device (if applicable)		
29	What is the intended spectral range of the device (i.e. the region of maximum reflectance)? Describe the method of testing.	

30	What is the reflectivity of the device? Indicate the conditions of the test (i.e. temperature, angle of incidence, wavelength, etc).	
31	What is the maximum angle of diffuse reflection (reflection cone)?	
Active Device (if applicable)		
32	How is the device turned ON / ACTIVATED and/or OFF / DEACTIVATED? Are tools required?	
33	Can the device be turned OFF / DEACTIVATED when required?	
34	What is the estimated time required to turn ON / ACTIVATE and/or OFF / DEACTIVATE the device?	
35	Is there means to tell if the device is ON / ACTIVATED (i.e. emitting) in NIR/MWIR/LWIR without using sensor equipment?	
36	Does the device have a flashing mode? At what rate(s)?	
37	Can the devices be synchronized at the section and/or platoon level?	
38	Can the device be interrogated? If so, what is the procedure for interrogation?	
39	What is/are the emission source(s) used by the device? (Ex.: 1x Red LED and 1x NIR LED, incandescent light, black body radiation, chemiluminescence, etc.)	
40	What is the spectral bandwidth and wavelength of the light emitted?	
41	If applicable, what is the Nominal Ocular Hazard Distance (NOHD) and the	
	Extended Nominal Ocular Hazard Distance (ENOHD) of the device?	
42	What is the source of energy used by the device (i.e. batteries, chemical reaction, etc.)?	
43	How long does the device emit energy /	

	what is the expected battery life (assume 23°C)?	
44	If batteries are used:	
	a. What type of battery is used (NSN if available)?	
	b. How many batteries are required?	
	c. Are mechanisms in place to prevent incorrect insertion of the batteries?	

ANNEX B – REQUIRED SPECTRAL COVERAGE

Region	Band	Spectral Wavelength	Example Sensor
A	Visible	400 – 700 nm	Binocular
B	NIR	~ visible to 900 nm	Night Vision Goggle
C	MWIR	3.6 – 4.9 µm	Hand Held Thermal Imager
D	LWIR	7.5 – 14 µm	Thermal Weapons Sight