

**RETURN BIDS TO:  
RETOURNER LES SOUMISSIONS À:**

**Bid Receiving  
PWGSC  
33 City Centre Drive  
Suite 480  
Mississauga  
Ontario  
L5B 2N5  
Bid Fax: (905) 615-2095**

**REQUEST FOR PROPOSAL  
DEMANDE DE PROPOSITION**

**Proposal To: Public Works and Government  
Services Canada**

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

**Proposition aux: Travaux Publics et Services  
Gouvernementaux Canada**

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).

**Comments - Commentaires**

<b>Title - Sujet</b> AUGMENTED COGNITION	
<b>Solicitation No. - N° de l'invitation</b> W7719-115066/A	<b>Date</b> 2011-06-08
<b>Client Reference No. - N° de référence du client</b> W7719-115066	
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$TOR-015-5641	
<b>File No. - N° de dossier</b> TOR-0-32455 (015)	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2011-06-28</b>	
<b>Time Zone</b> <b>Fuseau horaire</b> Eastern Daylight Saving Time EDT	
<b>F.O.B. - F.A.B.</b> Specified Herein - Précisé dans les présentes	
<b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input type="checkbox"/> <b>Other-Autre:</b> <input checked="" type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Abela, Aaron	<b>Buyer Id - Id de l'acheteur</b> tor015
<b>Telephone No. - N° de téléphone</b> (905) 615-2061 ( )	<b>FAX No. - N° de FAX</b> (905) 615-2060
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> DEPARTMENT OF NATIONAL DEFENCE DEFENCE R&D CANADA - TORONTO 1133 SHEPPARD AVE W. TORONTO Ontario M3K2C9 Canada	

**Instructions: See Herein**

**Instructions: Voir aux présentes**

**Vendor/Firm Name and Address**

**Raison sociale et adresse du  
fournisseur/de l'entrepreneur**

**Issuing Office - Bureau de distribution**

Public Works and Government Services Canada  
Ontario Region  
33 City Centre Drive  
Suite 480  
Mississauga  
Ontario  
L5B 2N5

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

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## **PART 1 - GENERAL INFORMATION**

### **1. Introduction**

The bid solicitation is divided into (6) six parts plus attachments and annexes, as follows:

- Part 1 General Information: provides a general description of the requirement;
- Part 2 Bidder Instructions: provides the instructions, clauses and conditions applicable to the bid solicitation;
- Part 3 Bid Preparation Instructions: provides bidders with instructions on how to prepare their bid;
- Part 4 Evaluation Procedures and Basis of Selection: indicates how the evaluation will be conducted, the evaluation criteria that must be addressed in the bid, if applicable, and the basis of selection;
- Part 5 Certifications: includes the certifications to be provided;
- Part 6 Resulting Contract Clauses: includes the clauses and conditions that will apply to any resulting contract.

The Annexes include the Statement of Work, the Basis of Payment and Evaluation Criteria.

### **2. Summary**

- 1) Defence R&D Canada - Toronto requires services in the field of augmented cognition to assist with the evaluating and integrating of physiological technologies in support of DRDC's research programs on multimodal displays for controlling Unmanned Aerial Vehicles (UAVs), and adaptive e-learning systems.
- 2) The maximum funding available for the Contract resulting from the bid solicitation is \$120,000.00 (Goods and Services Tax or Harmonized Sales Tax extra, as appropriate).
- 3) There is no security requirement associated with this procurement.
- 4) The period of the contract for work to be performed from the date of award to 31 MARCH 2013.
- 5) The requirement is subject to the provisions of the Agreement on Internal Trade (AIT).
- 6) The requirement is subject to a preference for Canadian goods and/or services

### **3. Debriefings**

After contract award, bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the Contracting Authority within 15 working days of receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

## **PART 2 - BIDDER INSTRUCTIONS**

### **1. Standard Instructions, Clauses and Conditions**

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All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the *Standard Acquisition Clauses and Conditions* (<http://ccua-sacc.tpsgc-pwgsc.gc.ca/pub/acho-eng.jsp>) Manual issued by Public Works and Government Services Canada.

Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.

The 2003 (2011-05-16) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

Subsection 5.4 of 2003, Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:

Delete: sixty (60) days

Insert: ninety (90) days

## **2. Submission of Bids**

Bids must be submitted only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit by the date, time and place indicated on page 1 of the bid solicitation.

Due to the nature of the bid solicitation, bids transmitted by facsimile to PWGSC will not be accepted.

## **3. Enquiries - Bid Solicitation**

All enquiries must be submitted in writing to the Contracting Authority no later than ten (10) calendar days before the bid closing date. Enquiries received after that time may not be answered.

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by bidders 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 Bidder do so, so that the proprietary nature of the question is eliminated, and the enquiry can be answered with copies to all bidders. Enquiries not submitted in a form that can be distributed to all bidders may not be answered by Canada.

## **4. Applicable Laws**

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

Bidders may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their bid, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the bidders.

## **5. Basis for Canada's Ownership of Intellectual Property**

The Defence Research & Development Canada - Toronto has determined that any intellectual property rights arising from the performance of the Work under the resulting contract will belong to Canada, on the following grounds:

“ The Main purpose of the contract, or of the deliverables contracted for, is to generate knowledge and information for public dissemination”.

### **PART 3 - BID PREPARATION INSTRUCTIONS**

#### **1. Bid Preparation Instructions**

Canada requests that bidders provide their bid in separately bound sections as follows:

Section I: Technical Bid ( four hard copies)  
 Section II: Financial Bid ( two hard copies)  
 Section III: Certifications (one hard copy)

Prices must appear in the financial bid only. No prices must be indicated in any other section of the bid.

Canada requests that bidders follow the format instructions described below in the preparation of their bid:

- (a) use 8.5 x 11 inch (216 mm x 279 mm) paper;
- (b) use a numbering system that corresponds to the bid solicitation.

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process [Policy on Green Procurement](http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html>). To assist Canada in reaching its objectives, bidders are encouraged to :

- 1) use paper containing fiber certified as originating from a sustainably-managed forest and/or containing minimum 30% recycled content; and
- 2) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

#### **Section I: Technical Bid**

In their technical bid, bidders should demonstrate their understanding of the requirements contained in the bid solicitation and explain how they will meet these requirements. Bidders should demonstrate their capability in a thorough, concise and clear manner for carrying out the work.

The technical bid should address clearly and in sufficient depth the points that are subject to the evaluation criteria against which the bid will be evaluated. Simply repeating the statement contained in the bid solicitation is not sufficient. In order to facilitate the evaluation of the bid, Canada requests that bidders address and present topics in the order of the evaluation criteria under the same headings. To avoid duplication, bidders may refer to different sections of their bids by identifying the specific paragraph and page number where the subject topic has already been addressed.

#### **Section II: Financial Bid**

**1.1** Bidders must submit their financial bid in accordance with Annex "B" Basis of Payment. The total amount of Goods and Services Tax or Harmonized Sales Tax must be shown separately, if applicable.

**1.2 SACC Manual Clauses**

C3011T (2010-01-11) Exchange Rate Fluctuation

**Section III: Certifications**

Bidders must submit the certifications required under Part 5.

**PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION**

**1. Evaluation Procedures**

- (a) Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids.
- (c) The evaluation team will determine first if there are three (3) or more bids with a valid Canadian Content certification. In that event, the evaluation process will be limited to the bids with the certification; otherwise, all bids will be evaluated. If some of the bids with a valid certification are declared non-responsive, or are withdrawn, and less than three responsive bids with a valid certification remain, the evaluation will continue among those bids with a valid certification. If all bids with a valid certification are subsequently declared non-responsive, or are withdrawn, then all the other bids received will be evaluated.

**1.1 Technical Evaluation**

**1.1.1 Mandatory Technical Criteria**

Mandatory technical criteria are included in Annex "C".

**1.1.2 Point Rated Technical Criteria**

Point rated technical criteria are included in Annex "C".

**1.2 Financial Evaluation**

**1.2.1. Mandatory Financial Criteria**

i) Maximum Funding

- a) The total proposed cost for the term of the contract cannot exceed \$120,000.00 (taxes Included).
- b) YEAR ONE: Maximum funding from the date of Contract award to 31 MARCH 2012 = \$60,000.00 (taxes Included).  
  
YEAR TWO: Maximum funding from 01 APRIL 2012 - 31 MARCH 2013 = \$60,000.00 (taxes Included).
- c) The travel budget has a maximum expenditure of \$10,000 plus \$1,350.00 HST (for a total of \$13,500.00). This figure is included as part of the overall ceiling price.

- d) The maximum amount for the purchase of equipment (e.g., eye-tracker and other physiological monitoring technologies and associated computers, etc.), software (e.g., brain-computer interface and other licenses, etc.), journal articles and books, and other materials must not exceed \$15,000.00 plus \$1,950.00 HST (for a total of \$16,950.00) for the duration of the contract. This figure is included as part of the overall ceiling price.
- ii) a) Bidders must submit their financial bid in accordance with the Basis of Payment in Annex "B" in Canadian Dollars. The total amount of Goods and Services Tax or Harmonized Sales Tax must be shown separately, if applicable.
- iii) The Financial Bid must include details of the following elements for each phase of the Work, as applicable, resulting in an all inclusive ceiling price, fob destination, GST/HST extra.
- a) Equipment: The items required to complete the Work and identify the pricing basis inclusive of Customs Duty. These items will be deliverable to Canada upon completion of the project if purchased for this specific project.
- b) Materials, Supplies and Miscellaneous Services: General categories and the pricing basis. Indicate whether the items are likely to be used or consumed during the course of the Work.
- c) Travel and Living Expenses: estimated number and cost of journeys together with the basis of these costs in accordance with current Treasury Board Travel and Living Guidelines (see <http://www.tbs-sct.gc.ca/hr-rh/gtla-vgcl/>)
- d) Subcontracts: Identify proposed subcontractors and provide the same cost breakdown information detailed herein.
- e) Other Charges: Any other direct charges anticipated such as long distance communication and rentals and provide the estimated costs and relevance to the proposed Work.
- f) Labour: For each individual and/or labour category to be employed on the project: indicate the proposed time rates and the estimated time to be spent by each.

## 2. Basis of Selection

### 2.1 Highest Rated Within Budget

1. To be declared responsive, a bid must:
  - (a) comply with all the requirements of the bid solicitation;
  - (b) meet all mandatory technical evaluation criteria; and
  - (c) obtain the required minimum of 70 percent overall of the points for the technical evaluation criteria which are subject to point rating. The rating is performed on a scale of 200 points
2. Bids not meeting (a), (b) or (c) will be declared non responsive.. The responsive bid with the highest number of points will be

recommended for award of a contract, provided that the total evaluated price does not exceed the budget available for this Requirement.

3. In the event of a tie for the highest score, the lowest priced proposal among those tied will be recommended for award of contract; the price used in the evaluation will be the aggregate of the proposed ceiling prices for both Year 1 and Year 2 of the proposal.

## **PART 5 - CERTIFICATIONS**

Bidders must provide the required certifications to be awarded a contract. Canada will declare a bid non-responsive if the required certifications are not completed and submitted as requested.

Compliance with the certifications bidders provide to Canada is subject to verification by Canada during the bid evaluation period (before award of a contract) and after award of a contract. The Contracting Authority will have the right to ask for additional information to verify bidders' compliance with the certifications before award of a contract. The bid will be declared non-responsive if any certification made by the Bidder is untrue, whether made knowingly or unknowingly. Failure to comply with the certifications or to comply with the request of the Contracting Authority for additional information will also render the bid non-responsive.

### **1. Certifications Precedent to Contract Award and Certifications Required with the Bid**

Bidders must submit the certifications as provided below:

#### **1.1 Certifications Precedent to Contract Award**

The certifications listed below should be completed and submitted with the bid but may be submitted afterwards. If any of these required certifications is not completed and submitted as requested, the Contracting Authority will so inform the Bidder and provide the Bidder with a time frame within which to meet the requirement. Failure to comply with the request of the Contracting Authority and meet the requirement within that time period will render the bid non-responsive.

##### **1.1.1 Federal Contractors Program - Certification**

Federal Contractors Program - over \$25,000 and below \$200,000

Suppliers who are subject to the Federal Contractors Program (FCP) and have been declared ineligible contractors by Human Resources and Skills Development Canada (HRSDC) are no longer eligible to receive federal government contracts over the threshold for solicitation of bids as set out in the Government Contracts Regulations. Suppliers may be declared ineligible contractors either as a result of a finding of noncompliance by HRSDC, or following their voluntary withdrawal from the FCP for a reason other than the reduction of their workforce to less than 100 employees. Any bids from ineligible contractors, including a bid from a joint venture that has a member who is an ineligible contractor, will be declared non-responsive.

The Bidder, or, if the Bidder is a joint venture the member of the joint venture, certifies its status with the FCP, as follows:

The Bidder or the member of the joint venture

- (a) ( ) is not subject to the FCP, having a workforce of less than 100 full-time or part-time permanent employees, or temporary employees having worked 12 weeks or more in Canada;

(b) ( ) is not subject to the FCP, being a regulated employer under the Employment Equity Act, S.C. 1995, c. 44;

(c) ( ) is subject to the requirements of the FCP, having a workforce of 100 or more full-time or part-time permanent employees, or temporary employees having worked 12 weeks or more in Canada, but has not previously obtained a certificate number from HRSDC, having not bid on requirements of \$200,000 or more;

(d) ( ) has not been declared an ineligible contractor by HRSDC, and has a valid certificate number as follows: \_\_\_\_\_.

Further information on the FCP is available on the HRSDC Web site.

### **1.1.2 Status and Availability of Resources.**

The Bidder certifies that, should it be awarded a contract as a result of the bid solicitation, every individual proposed in its bid will be available to perform the Work as required by Canada's representatives and at the time specified in the bid solicitation or agreed to with Canada's representatives. If for reasons beyond its control, the Bidder is unable to provide the services of an individual named in its bid, the Bidder may propose a substitute with similar qualifications and experience. The Bidder must advise the Contracting Authority of the reason for the substitution and provide the name, qualifications and experience of the proposed replacement. For the purposes of this clause, only the following reasons will be considered as beyond the control of the Bidder: death, sickness, maternity and parental leave, retirement, resignation, dismissal for cause or termination of an agreement for default.

If the Bidder has proposed any individual who is not an employee of the Bidder, the Bidder certifies that it has the permission from that individual to propose his/her services in relation to the Work to be performed and to submit his/her résumé to Canada. The Bidder must, upon request from the Contracting Authority, provide a written confirmation, signed by the individual, of the permission given to the Bidder and of his/her availability.

### **1.1.3 Education and Experience**

The Bidder certifies that all the information provided in the résumés and supporting material submitted with its bid, particularly the information pertaining to education, achievements, experience and work history, has been verified by the Bidder to be true and accurate. Furthermore, the Bidder warrants that every individual proposed by the Bidder for the requirement is capable of performing the Work described in the resulting contract.

## **1.2 Certifications Required with the Bid**

Bidders must submit the following duly completed certifications with their bid.

### **1.2.1 Canadian Content Certification**

This procurement is conditionally limited to Canadian goods.

Subject to the evaluation procedures contained in the bid solicitation, bidders acknowledge that only bids with a certification that the good(s) offered are Canadian goods, as defined in clause A3050T, may be considered.

Failure to provide this certification completed with the bid will result in the good(s) offered being treated as non-Canadian goods.

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The Bidder certifies that:

( ) the good(s) offered are Canadian goods as defined in paragraph 1 of clause A3050T.

**1.2.2** SACC Manual Clause A3050T (2010-01-11) Canadian Content Definition

## **PART 6 - RESULTING CONTRACT CLAUSES**

The following clauses and conditions apply to and form part of any contract resulting from the bid solicitation.

### **1. Statement of Work**

The Contractor must perform the Work in accordance with the Statement of Work at Annex "A".

**1.2** SACC Manual Clause K3410C (2008-12-12) Canada to Own Intellectual Property Rights in Foreground Information

### **2. Standard Clauses and Conditions**

All clauses and conditions identified in the Contract by number, date and title are set out in the *Standard Acquisition Clauses and Conditions* (<http://ccua-sacc.tpsgc-pwgsc.gc.ca/pub/acho-eng.jsp>) Manual issued by Public Works and Government Services Canada.

#### **2.1 General Conditions**

2040 (2011-05-16), General Conditions - Research & Development

#### **2.2 Supplemental General Conditions**

4001 (2010-08-16) Hardware Purchase, Lease and Maintenance apply to and form part of the Contract

4003 (2010-08-16) Licenced Software

### **3. Security Requirement**

There is no security requirement.

### **4. Term of Contract**

#### **4.1 Period of the Contract**

The period of the Contract is from date of contract award to 31 MARCH 2013

### **5. Authorities**

#### **5.1 Contracting Authority**

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TOR-0-32455

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The Contracting Authority for the Contract is:

Name: Aaron Abela

Title: Supply Officer

Public Works and Government Services Canada

Acquisitions Branch

Directorate: Ontario Region

Address: 33 City Centre Drive Suite 480C

Mississauga, Ontario L5B 2N5

Telephone: (905) 615-2061

Facsimile: (905) 615-2060

E-mail address: aaron.abela@pwgsc.gc.ca

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

## 5.2 Project Authority

(TBA at the time of Contract Award)

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Organization: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

Fax: \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

The Project Authority is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Project Authority; however, the Project Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

## 5.3 Contractor's Representative

(TBA at the time of Contract Award, if required)

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Organization: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

Fax: \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

## 6. Payment

### 6.1 Ceiling Price

The Contractor will be reimbursed for the costs reasonably and properly

incurred in the performance of the Work, plus a fixed fee as determined in accordance with the Basis of Payment in Annex "B" to a ceiling price of \$ \_\_\_\_\_. Customs duties are included and Goods and Services Tax or Harmonized Sales Tax is extra, if applicable.

The ceiling price is subject to downward adjustment so as not to exceed the actual costs reasonably incurred in the performance of the Work and computed in accordance with the Basis of Payment.

## 6.2 Method of Payment

### 6.2.1 Method of Payment - Progress Payments

1. Canada will make progress payments in accordance with the payment provisions of the Contract, no more than once a month, for cost incurred in the performance of the Work, up to **90** percent of the amount claimed and approved by Canada if:
  - (a) an accurate and complete claim for payment using form PWGSC-TPSGC 1111, Claim for Progress Payment, and any other document required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
  - (b) the amount claimed is in accordance with the basis of payment;
  - (c) the total amount for all progress payments paid by Canada does not exceed **90** percent of the total amount to be paid under the Contract;
  - (d) all certificates appearing on form PWGSC-TPSGC 1111 have been signed by the respective authorized representatives.
2. The balance of the amount payable will be paid in accordance with the payment provisions of the Contract upon completion and delivery of the item if the Work has been accepted by Canada and a final claim for the payment is submitted.
3. Progress payments are interim payments only. Canada may conduct a government audit and interim time and cost verifications and reserves the rights to make adjustments to the Contract from time to time during the performance of the Work. Any overpayment resulting from progress payments or otherwise must be refunded promptly to Canada.

### 6.2.2 SACC Manual Clause A9117C (2007-11-30) T1204 Direct Request By Customer Department.

## 7. Invoicing Instructions

### 7.1 Invoicing Instructions - Progress Claim

1. The Contractor must submit a claim for payment using form PWGSC-TPSGC 1111, Claim for Progress Payment.

Each claim must show:

- (a) all information required on form PWGSC-TPSGC 1111;
- (b) all applicable information detailed under the section entitled "Invoice Submission" of the general conditions;

Each claim must be supported by:

- (a) a copy of time sheets to support the time claimed;
- (b) a copy of the invoices, receipts, vouchers for all direct expenses, travel and living expenses;
- (c) a copy of the monthly progress report.

The Goods and Services Tax or Harmonized Sales Tax (GST/HST), as applicable, must be calculated on the total amount of the claim before the holdback is applied. At the time the holdback is claimed, there will be no GST/HST payable as it was claimed and payable under the previous claims for progress payments.

- 3. The Contractor must prepare and certify one original and two (2) copies of the claim on form PWGSC-TPSGC 1111, and forward it to the Contracting Authority identified under the section entitled "Authorities" of the Contract for appropriate certification after inspection and acceptance of the Work takes place.

The Contracting Authority will then forward the original and two (2) copies of the claim to the Contract Authority for certification and onward submission to the Payment Office for the remaining certification and payment action.

- 4. The Contractor must not submit claims until all work identified in the claim is completed.

## 8. Certifications

- 8.1 Compliance with the certifications provided by the Contractor in its bid is a condition of the Contract and subject to verification by Canada during the term of the Contract. If the Contractor does not comply with any certification or it is determined that any certification made by the Contractor in its bid is untrue, whether made knowingly or unknowingly, Canada has the right, pursuant to the default provision of the Contract, to terminate the Contract for default.

## 8.2 SACC Manual Clauses

A3060C (2008-05-12) Canadian Content Certification

## 9. Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

## 10. Priority of Documents

If there is a discrepancy between the wording of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

- (a) The Articles of Agreement;

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Buyer ID - Id de l'acheteur

tor015

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- (b) The Supplemental General Conditions 4001 (2010-08-16) Hardware Purchase, Lease and Maintenance
- (c) The Supplemental General Conditions 4003 (2010-08-16) Licenced Software
- (d) 2040 (2011-05-16), General Conditions - Research and Development
- (e) Annex A, Statement of Work;
- (f) Annex B, Basis of Payment;
- (g) Annex C, Claim Form PWGSC-TPSGC 1111
- (h) the Contractor's bid dated \_\_\_\_\_

**11. Foreign Nationals (Canadian Contractor)**

SACC Manual Clause A2000C (2006-06-16) Foreign Nationals (Canadian Contractor)

**12. Foreign Nationals (Foreign Contractor)**

SACC Manual Clause A2001C (2006-06-16) Foreign Nationals (Foreign Contractor)

**13. Insurance**

SACC Manual Clause G1005C (2008-05-12) Insurance

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**ANNEX "A"****STATEMENT OF WORK****1. Title: Augmented Cognition to Support Adaptive Intelligent Interface Design****2. Short Title: Augmented Cognition****3. Objective:**

3.1. To provide competent augmented cognition expertise for evaluating and integrating psychophysiological technologies in support of DRDC's research programs on multimodal cueing (auditory, tactile, and vision) for controlling uninhabited aerial vehicles (UAVs), and methods for optimizing adaptation strategies to improve learning and training effectiveness and efficiency in an e-learning environment.

**4. Background:**

4.1. DRDC Toronto has recently initiated two applied research projects:

4.1.1. 13QH Multi-modal Displays for Controlling UAVs. Military organizations are using robotic technologies involving human-robot interactions such as uninhabited aerial vehicles (UAVs) to play an increasing role in providing intelligence, surveillance and reconnaissance (ISR). To improve ISR capability, the Canadian Forces (CF) has recently prepared a Statement of Work which describes the requirements of a technical investigation to be performed in support of the Joint Unmanned Aerial Vehicle Surveillance Target and Acquisition System (JUSTAS) program. The JUSTAS program entails the acquisition of medium-altitude, long-endurance (MALE) UAVs. Defence Research and Development Canada (DRDC) - Toronto has been involved in studying Human Factors issues in UAVs. This has been directed at producing knowledge, tools and simulators that can be used by Department of National Defence (DND)/CF to improve both acquisition and training activities.

4.1.2. 14AV Intelligent Tutoring Systems. One of the most challenging activities for a distance education facilitator is to be responsive to student needs and customize the learning experience to the student's individual learning preference, help socialize the student to the institution, and keep the learner engaged in spite of the isolated environment. To achieve these goals, DRDC Toronto has initiated an Applied Research Project (ARP) to investigate mechanisms to improve effectiveness and efficiency for the CF distance learning capability. A mechanism to facilitate the learning experience is adaptive learning technology. One adaptation strategy is to respond to the changes of a learner's attention and workload in real-time. The changes can be measured by using physiological monitoring technologies such as an eye tracking system and electroencephalography (EEG) and/or electrocardiogram (ECG) systems.

4.2. The next step for DRDC Toronto, under Thrusts 13QH (Command) and 14AV (Plan, Recruit, Train, Educate and Career Manage), is to use augmented cognition technology to investigate adaptation strategies for a multimodal display (auditory, tactile, and vision) for providing sensory cueing in the ground-control station (GCS) interface for controlling UAVs, and to improve effectiveness and efficiency for the CF distance learning capability.

**5. Scope:**

5.1. To provide advanced interface expertise for evaluating and integrating physiological technologies in support of DRDC's research programs on multimodal displays for controlling UAVs, and adaptive

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e-learning systems which investigates the connections between workload and stress levels with physiological indexes and thus to provide adaptation strategies to improve learning and training effectiveness and efficiency in an e-learning environment.

## 6. Deliverables

6.1 The work items listed below must be executed by the Contractor:

6.2 An initial meeting between the Contract Authority and Contractor will be held at DRDC Toronto or at a mutually agreed upon location no later than two (2) weeks after contract is awarded. The Contractor must propose methods for meeting the requirements of this Statement of Work and provide a preliminary project schedule for approval by the Contract Authority.

6.3 Conduct a survey and a thorough literature review to examine the state-of-art augmented cognition methodologies and technologies, which will support the design of intelligent tutoring systems to facilitate adaptive learning. The focus of the review is on the connection between the stress/workload levels and physiological indexes, and between attention and pupil diameter.

6.4 Produce a report to document the findings of the literature review which includes, but not limited to, critiques of each article in terms of relevance to the design of intelligent tutoring systems, UAV control GCS interfaces and for facilitating Human-Robot Interactions

6.5 Provide advice on the integration feasibility of multiple psychophysiological enablers (e.g., eye-tracker, EEG, and ECG, etc.) for a demonstrable use of various technologies in simulation and its extensibility and feasible configurations for DRDC intelligent tutoring systems, the DRDC UAV GCS interface and for the DRDC Human-Robot Interaction research test-bed

6.6 Liaise with manufacturers of physiological technologies (e.g., eye tracker, ECG, and EEG) to best integrate physiological technologies with the DRDC intelligent tutoring system, the DRDC UAV GCS interface, and the DRDC Human-Robot Interaction research test-bed.

6.7 Assist in resolving configuration problems of Augmented Cognition technologies with the DRDC intelligent tutoring system, the DRDC UAV GSC interface, and the DRDC Human-Robot Interaction research test-bed, experimental design, data analysis, and reporting research findings at various venues.

6.8 Conduct a survey and a thorough literature review to examine the state-of-art augmented cognition methodologies and technologies, which will support the design of the DRDC simulated UAV Ground Control System (GCS) interfaces and DRDC Human-Robot Interaction research

6.9 Submit a literature review draft report that must be submitted by November 30th, 2011 to document the methodologies, findings, and articulate a set of design recommendations/frameworks of using Augmented Cognition technologies in intelligent tutoring systems.

6.10 Submit a literature review draft report that must be submitted by March 31st, 2012 to document the methodologies, findings, and articulate a set of design recommendations/frameworks of using Augmented Cognition technologies in human-robot interactions to facilitate DRDC intelligent adaptive interface research.

6.11 Submit a literature review draft report that must be submitted by July 31st, 2012 to document the methodologies, findings, and articulate a set of design recommendations/frameworks of using Augmented Cognition technologies in UAV GCS interfaces.

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6.12 Submit a final draft report that must be submitted at the completion of the contract to the Contract Authority via e-mail no later than 31 DECEMBER 2012. The report must include a brief background, details of all work items undertaken, and conclusions and recommendations where applicable (e.g., conditions of utilization of UAV GCS software).

6.13 The clarity of the written communication in the reports must meet the approval of the Contract Authority. The contractor must to perform technical editing to meet DRDC Toronto and American Psychological Association publication standards and support the publication processes. All references with both text and photos (including those that were not reviewed) need to be put into an EndNote™ database with detailed information (e.g., author, title, abstract, keywords, comments, etc.).

6.14 The final reports must be submitted at the completion of the contract to the Contract Authority no later than 28 FEBRUARY 2013. It is to be provided in two media formats: two (2) bound copies of each final report; an electronic copy of each report in both Microsoft Word and PDF formats in CD-ROM and/or DVD or by e-mail (where appropriate and accepted by the Contract Authority). The DRDC report formatting style and outline, provided by the Contract Authority, will be used for all reports. In addition, the title page of each report must include a DRDC Toronto report number, to be provided by the Contract Authority following the review of the report, and must contain the following notice:

© Her Majesty the Queen as represented by the Minister of National Defence, 2011

© Sa majesté la reine, représentée par le ministre de la Défense nationale, 2011

6.15 All material including equipment and software as well as results of the work must be delivered to the Contract Authority and will become property of DRDC Toronto on behalf of the Crown.

6.16 The cost incurred to purchase any equipment, software or other materials must be identified in the claims for payment. At the completion of each month and resulting progress claim, DRDC will receive any equipment, software or materials purchased as part of the deliverables. If the Contractor wishes to keep the purchased items for future trials, the cost will be at the expense of the Contractor with DND paying a reasonable rental fee for the use of the equipment while in the field.

## **7. Security Classification:**

7.1. The work to be carried out is not classified and the Contractor will work off-site

## **8. Period of Work Being Done:**

8.1. Start Date: 1 August 2011.

8.2. End Date: 31 Mar 2013.

## ANNEX "B"

## BASIS OF PAYMENT

## A. FIRM REQUIREMENT PRICING

Year (1) of Contract - Contract Award Date to 31 MARCH 2012.		
A. LABOUR: At firm hourly rates including overhead.		
Labour Category	Firm Hourly Rate & Estimated Number of Hours	
<b>Title:</b> Principal Investigator		
1	\$ _____	Est. _____ hrs.
2	\$ _____	Est. _____ hrs.
3	\$ _____	Est. _____ hrs.
<b>Title:</b> _____	Hourly Rate	
1	\$ _____	Est. _____ hrs.
2	\$ _____	Est. _____ hrs.
3	\$ _____	Est. _____ hrs.
<b>Title:</b> _____		
1	\$ _____	Est. _____ hrs.
2	\$ _____	Est. _____ hrs.
3	\$ _____	Est. _____ hrs.
<b>Total Cost of Labour:</b>	\$ _____	Est. _____ hrs.
B. DIRECT CHARGES: At actual cost.		
	Estimated Cost	
Equipment & Software	\$ _____	
Materials and Supplies:	\$ _____	
Subcontracts:	\$ _____	
Other Charges:	\$ _____	
Travel and Living:	\$ _____	
In accordance with the Contractor's current travel policy but not to exceed Treasury Board Guidelines on travel and living in effort at time travel occurs.		
Website: <a href="http://www.tbs-sct.gc.ca/travel/travel_e.html">http://www.tbs-sct.gc.ca/travel/travel_e.html</a>		
<b>Total Cost of Direct Charges:</b>	\$ _____	Est. _____ hrs.
C. PROFIT		
Profit to be calculated at Fixed Fee:	\$ _____	Firm.
<b>Total Ceiling Cost of Items A, B &amp; C:</b>	\$ _____	

Solicitation No. - N° de l'invitation

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

W7719-115066/A

tor015

Client Ref. No. - N° de réf. du client

File No. - N° du dossier

CCC No./N° CCC - FMS No/ N° VME

W7719-115066

TOR-0-32455

Year (2) of Contract - 01 APRIL 2012 to 31 MARCH 2013.		
A. LABOUR: At firm hourly rates including overhead.		
Labour Category	Firm Hourly Rate & Estimated Number of Hours	
<b>Title:</b> Principal Investigator		
1	\$ _____	Est. _____ hrs.
2	\$ _____	Est. _____ hrs.
3	\$ _____	Est. _____ hrs.
<b>Title:</b> _____	Hourly Rate	
1	\$ _____	Est. _____ hrs.
2	\$ _____	Est. _____ hrs.
3	\$ _____	Est. _____ hrs.
<b>Title:</b> _____		
1	\$ _____	Est. _____ hrs.
2	\$ _____	Est. _____ hrs.
3	\$ _____	Est. _____ hrs.
<b>Total Cost of Labour:</b>	\$ _____	Est. _____ hrs.
B. DIRECT CHARGES: At actual cost.		
	Estimated Cost	
Equipment & Software	\$ _____	
Materials and Supplies:	\$ _____	
Subcontracts:	\$ _____	
Other Charges:	\$ _____	
Travel and Living:	\$ _____	
In accordance with the Contractor's current travel policy but not to exceed Treasury Board Guidelines on travel and living in effort at time travel occurs.		
Website: <a href="http://www.tbs-sct.gc.ca/travel/travel_e.html">http://www.tbs-sct.gc.ca/travel/travel_e.html</a>		
<b>Total Cost of Direct Charges:</b>	\$ _____	Est. _____ hrs.
C. PROFIT		
Profit to be calculated at Fixed Fee:	\$ _____	Firm.
<b>Total Ceiling Cost of Items A, B &amp; C:</b>	\$ _____	
<b>TOTAL CEILING COST for YEAR 1 + YEAR 2 = \$ _____</b>		

Solicitation No. - N° de l'invitation

W7719-115066/A

Amd. No. - N° de la modif.

File No. - N° du dossier

TOR-0-32455

Buyer ID - Id de l'acheteur

tor015

Client Ref. No. - N° de réf. du client

W7719-115066

CCC No./N° CCC - FMS No/ N° VME

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- All inclusive ceiling price in Canadian Dollars, fob destination, GST/HST extra.
  - A 10% holdback will be applied to each claim submitted on a monthly basis (GST/HST excluded).
  - Labour is based on a firm hourly rate for the duration of the contract

### **Travel and Living Expenses**

Travel and Living: in accordance with the Contractor's current travel policy but not to exceed Treasury Board Guidelines on travel and living in effect at time travel occurs. Website:

[http://www.tbs-sct.gc.ca/travel/travel\\_e.html](http://www.tbs-sct.gc.ca/travel/travel_e.html).

Travel may occur between DRDC Toronto (3 times a year) or any other locations such as Ottawa (once a year), New Brunswick (once a year), and Canadian Forces Base Gaagetown (once a year) deemed necessary by the Scientific Authority to assist in the integration and experimentation of various psychophysiological technologies in support of DRDC projects

### **Data and Information Deliverables**

Payment will be made on a on-going basis upon submission of progress reports to evaluate the work, to the Contract Authority, that is to be attached to each monthly claim.

This is to include:

1. A description of the Work as a whole during the period of the report. Sufficient sketches, diagrams, photographs, etc., must be included, if necessary, to describe the progress Accomplished.
2. An explanation of any variation from the work plan
3. A description of trips or conferences connected with the Contract during the period of the report.
4. A narrative documenting any problems with any set of data, including any corrective actions taken, resolutions and any flagged data are to be reported.

### **Category Ceiling Costs**

Applicable to Sections A & B only. The amounts shown in the respective categories of the above Basis of Payment are estimates and it is the intention that changes from item to item will be accepted for billing purposes as the work proceeds, provided that the total cost of the contract does not exceed the Ceiling Price and the changes have the prior approval of the Contracting Authorizing designated herein.

**ANNEX "C"****EVALUATION CRITERIA****A. MANDATORY EVALUATION CRITERIA****Augmented Cognition**

	Criteria	Cross Reference to Proposal, Annex, Page no. Etc.,
1	The Principal Investigator must have a Ph.D. and/or post-doctoral training in Cognitive Psychology, Neuroscience, or Modeling and Simulation, specializing in Human-Computer Interaction as stated in the Annex "A" Statement of Work.	
2	The Principal Investigator must have at least five (5) years demonstrated experience in relevant work to intelligent adaptive interface/system design as stated in the Annex "A" Statement of Work.  The proposal must include a resume demonstrating how the experience over a five year period has been obtained.	
3	The Principle Investigator must reference a minimum of 5 publications he or she has authored on data analysis and performance matrix using unobtrusive psychophysiological measures, such as EEG and eye tracking to address brain plasticity and information processing in real world settings	

**B. POINT-RATED CRITERIA**

Point Rated Technical Criteria	Rating
<b>1. Comprehension of the Scope of Tasks (Maximum 20 points):</b> Points may be awarded over the whole range of available points, as applicable. If a criteria is not addressed it will be given a score of 0.	
1.1 The bidder should demonstrate an understanding of the full and complete scope of tasks and service delivery as described in the Statement of Work. (Maximum 10 points)  - The proposal should include a short introduction, with a brief evaluation of the need for the project, the objectives of the proposed work, the reasons for carrying it out as proposed, and the benefits to be derived.	<b>10 - Excellent.</b> The bidder has a thorough understanding of the full scope and tasks associated to the requirement. <b>8 - Good.</b> The bidder has a good understanding of the full scope and tasks associated to the requirement <b>6 - Adequate.</b> The bidder has a adequate understanding of the full scope and tasks associated to the requirement

<p>- Simply rewording the stated need and background of the Request for Proposal is not sufficient to demonstrate an understanding.</p>	<p><b>4 - Limited.</b> Response falls somewhere between descriptions above and below. <b>1 - Weak.</b> The bidder does not demonstrate an understanding of the full scope and tasks associated to the requirement</p>	
<p>1.2 The bidder should demonstrate an understanding of the roles, responsibilities and accountabilities with respect to the Statement of Work. (Maximum 10 points)</p> <p>- Sufficient detail should be provided to demonstrate the Bidder's grasp of the requirement and the Bidder's competence to meet it.</p>	<p><b>10 - Excellent.</b> The bidder has provided an excellent amount of detail indicating full comprehension pertaining to the roles, responsibilities and accountabilities of the requirement. <b>8 - Good.</b> The bidder has provided a good amount of detail indicating an acceptable level of comprehension pertaining to the roles, responsibilities and accountabilities of the requirement. <b>6 - Adequate.</b> The bidder has provided an adequate amount of detail indicating a satisfactory level of comprehension pertaining to the roles, responsibilities and accountabilities of the requirement. <b>4 - Limited.</b> Response falls somewhere between descriptions above and below.. <b>1 - Weak.</b> The bidder has provided a weak amount of detail indicating an unsatisfactory level of comprehension pertaining to the roles, responsibilities and accountabilities of the requirement.</p>	
<p><b>Subtotal for the Comprehension of the Scope of Tasks - Maximum 20 points</b></p>		
<p><b>2. Approach and Methodology (Maximum 20 pts):</b> Points may be awarded over the whole range of available points, as applicable. If a criteria is not addressed it will be given a score of 0.</p>		
<p>2.1 The bidder should demonstrate methodologies and techniques that will be used to perform tasks. (Maximum 20 points).</p>	<p><b>20 - Excellent.</b> The bidder has demonstrated an excellent correlated proposal pertaining to the methodologies and techniques to be used.</p>	

<p>- The proposal should clearly outline it's approach and proposed methodology to meet the requirements, as well as the degree of success expected.</p> <p>- The proposed technical approach must be compliant with the requirements as specified in the Statement of Work (SOW).</p> <p>- The proposal should list the Key Performance Parameters and identify its proposed approach for verifying its compliance to the specifications to detailed in the SOW.</p>	<p><b>16 - Good.</b> The bidder has demonstrated a good correlated proposal that identifies the methodologies and techniques to be used.</p> <p><b>14 - Adequate.</b> The bidder has demonstrated an adequate correlated proposal pertaining to the methodologies and techniques to be used.</p> <p><b>8 - Limited.</b> Response falls somewhere between descriptions above and below.</p> <p><b>1- Weak.</b> The bidder has demonstrated a weak correlated proposal pertaining to the methodologies and techniques to be used.</p>	
<p><b>Subtotal for the Approach and Methodology - Maximum 20 points</b></p>		
<p><b>3. Expertise (Maximum 70 pts):</b> If a criteria is not addressed it will be given a score of 0. The proposal should demonstrate their expertise by outlining the articles and or journals they have authored in relation to the criteria listed below.</p>		
<p>3.1 The Principal Investigator having authored articles in the following subject matters: (Maximum 40 points)</p> <p>a) Virtual Reality</p> <p>b) Interactive Design and Manufacturing or Perception Journals on Augmented Cognition.</p> <p>c) Cognitive Rehabilitation, Learning, Virtual Environment Training</p> <p>d) Sensor Data Visualization</p>	<p><b>40 - Excellent.</b> -Bidder has listed articles that have been authored in all four subject disciplines.</p> <p><b>32 - Very good.</b> -Bidder has listed articles that have been authored in 3 out of 4 subject disciplines.</p> <p><b>24 - Good.</b> -Bidder has listed articles that have been authored in 2 out of 4 subject disciplines.</p> <p><b>16 - Fair.</b> -Bidder has listed articles that have been authored in 1 out of 4 subject disciplines.</p> <p><b>0 - Weak.</b> -Bidder has not listed articles that have been authored in either of the four subject disciplines.</p>	
<p>3.2 The Principal Investigator having authored or edited books or authored chapters in books on augmented cognition covering the following subject matters: (Maximum 30 points)</p>	<p><b>30 - Excellent.</b> -Bidder has referenced authored articles in all 3 subject matters.</p> <p><b>24 - Good.</b> --Bidder has referenced authored articles in 2 out of 3 subject matters.</p>	

<p>a) The use of psychophysiological measures as real-time measures of cognitive state</p> <p>b) The technology and software integration for adaptive system design,</p> <p>c) The virtual reality system design for experimentation.</p>	<p><b>18 - Fair.</b> -Bidder has referenced authored articles in 1 out of 3 subject matters.</p> <p><b>0 - Weak.</b> - -Bidder has not referenced authored articles in either of the 3 subject matters.</p>	
<p><b>Subtotal for the Approach and Methodology - Maximum 70 points</b></p>		
<p><b>4. Current Experience (Maximum 90 pts):</b> If a criteria is not addressed it will be given a score of 0. The proposal should demonstrate their expertise by outlining the articles and or journals they have authored in relation to the criteria listed below.</p>		
<p>4.1 The Principal Investigator having (or having had) patents (or patents pending) on technologies or software related to extracting and visualizing sensor data (Maximum 10 points)</p> <p>- To demonstrate the Principal Investigator should list patents that have been granted or are pending.</p>	<p><b>10 - Excellent.</b> The Principal Investigator has been granted or has pending, 2 or more patents relating to technologies or software related to extracting and visualizing sensor data.</p> <p><b>8- Very Good</b> The Principal Investigator has been granted or has pending, 1 or more patents for technologies or software related to extracting and visualizing sensor data.</p> <p><b>0 - Weak</b> The Principal Investigator has not developed or has pending any patents for technologies or software related to extracting and visualizing sensor data.</p>	
<p>4.2 The Principal Investigator having developed simulator tools in the last ten (10) years that demonstrate interface design techniques for military applications that integrate at least one psychophysiological technology (Maximum 20 points)</p> <p>To demonstrate the Principal Investigator should list and a</p>	<p><b>20 - Excellent.</b> The Principal Investigator has developed, 2 or more simulator tools demonstrating interface design techniques that integrates psychophysiological technology.</p> <p><b>16- Very Good</b> The Principal Investigator has developed, 1 or more simulator tools demonstrating interface design techniques that integrates psychophysiological technology.</p>	

description of the simulator tools that have been developed.	<b>0 - Weak</b> The Principal Investigator has not developed any simulator tools demonstrating interface design techniques that integrates psychophysiological technology.	
<p>4.3 The Principal Investigator has demonstrated experience dealing with simulation issues, including: (Maximum 20 points)</p> <p>A) Cueing effectiveness B) Constructive Simulation C) Distributed Simulation D) Simulator Sickness</p> <p>- To demonstrate the Principal Investigator should list and describe their simulation experience specifically modeled against each of the different modes of simulation listed.</p>	<p><b>20 - Excellent.</b> The Principal Investigator has demonstrated experience in all 4 topics. <b>16- Very Good</b> The Principal Investigator has demonstrated experience in 3 of the 4 topics. <b>12 - Good</b> The Principal Investigator has demonstrated experience in 2 of the 4 topics. <b>8 - Fair</b> The Principal Investigator has demonstrated experience in 1 of the 4 topics <b>0 - Weak</b> The Principal Investigator has not demonstrated their experience any of the topics.</p>	
<p>4.4 The Principal Investigator having demonstrated at least (3) years current experience with calibrating and integrating various psychophysiological technologies (e.g., eye tracker, ECG, and EEG) with simulators in experimental paradigms. (Maximum 20 points)</p> <p>- The proposal must indicate and describe examples over a 3 year period (within the last 10 years) how the criteria has been met. Acceptable criterion includes, reports and publications.</p>	<p><b>20 - Excellent.</b> Bidder has referenced 4 or more authored articles or publications. <b>16- Very Good</b> Bidder has referenced 3 authored articles or publications. <b>12 - Good</b> Bidder has referenced 2 authored articles or publications. <b>8 - Fair</b> Bidder has referenced 1 authored articles or publications. <b>0 - Weak</b> Bidder has not listed any authored articles or publications.</p>	
<p>4.5 The Principal Investigator having demonstrated at least (3) years' current experience in applying brain computer interface (BCI) approaches to develop better communication strategies for human-robotic interactions, especially under</p>	<p><b>10 - Excellent.</b> Bidder has referenced 4 or more authored articles or publications. <b>8- Very Good</b> . Bidder has referenced 3 authored articles or publications.</p>	

<p>theater of war conditions. (Maximum 20 points)</p> <p>- The proposal must indicate and describe examples over a 3 year period (within the last 10 years) how the criteria has been met. Acceptable criterion includes, reports and publications.</p>	<p><b>4 - Good</b> Bidder has referenced 2 authored articles or publications.</p> <p><b>2 - Fair</b> Bidder has referenced 1 authored articles or publications.</p> <p><b>0 - Weak</b> Bidder has not listed any authored articles or publications.</p>	
<p>4.6 The Principal Investigator having grants or contracts in the last ten (10) years to study augmented cognition (e.g., topics that include the design of:</p> <p>a) Close-loop adaptive systems B) The integration of off-the-shelf psychophysiological sensors with training simulators</p> <p>C) The creation of multimodal sensor data fusion algorithms</p> <p>D) The experimental design and testing of adaptive systems using psychophysiological measures in military training.</p>	<p><b>10 - Excellent</b> The Principal Investigator has demonstrated that they have received grants in all 4 augmented cognition topics.</p> <p><b>8 - Very Good</b> The Principal Investigator has demonstrated that they have received grants in 3 of the 4 augmented cognition topics.</p> <p><b>6 - Good</b> The Principal Investigator has demonstrated that they have received grants in 2 of the 4 augmented cognition topics.</p> <p><b>4 - Fair</b> The Principal Investigator has demonstrated that they have received grants in 1 of the 4 augmented cognition topics.</p> <p><b>0 - Weak</b> The Principal Investigator has demonstrated that they have received grants in 0 of the augmented cognition topics.</p>	
<b>Subtotal for the Approach and Methodology - Maximum 90 points</b>		
<b>Total Score (Maximum points overall: 200, Minimum points overall: 140</b>		