

RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:
Travaux publics et Services gouvernementaux
Canada
Place Bonaventure, portail Sud-Est
800, rue de La Gauchetière Ouest
7^{ème} étage
Montréal
Québec
H5A 1L6
FAX pour soumissions: (514) 496-3822

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

Title - Sujet REPLACEMENT SYSTÈME TELECOM RADIO	
Solicitation No. - N° de l'invitation 9F030-130555/C	Date 2014-11-04
Client Reference No. - N° de référence du client 9F030-13-0555	
GETS Reference No. - N° de référence de SEAG PW-\$MTA-309-12977	
File No. - N° de dossier MTA-3-36352 (309)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2014-11-21	
Time Zone Fuseau horaire Heure Normale du l'Est HNE	
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Paradis, Mary	Buyer Id - Id de l'acheteur mta309
Telephone No. - N° de téléphone (514) 496-3874 ()	FAX No. - N° de FAX (514) 496-3822
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: AGENCE SPATIALE CANADIENNE 6767 ROUTE DE L AEROPORT 9F030- SÉCURITÉ ET INSTALLATIONS ST HUBERT Québec J3Y8Y9 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

Travaux publics et Services gouvernementaux Canada
Place Bonaventure, portail Sud-Est
800, rue de La Gauchetière Ouest
7^{ème} étage
Montréal
Québec
H5A 1L6

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



Item Article	Description	Dest. Code Dest.	Inv. Code Fact.	Qty Qté	U. of I. U. de D.	Unit Price/Prix unitaire FOB/FAM	Destination	Plant/Usine	Delivery Req. Livraison Req.	Del. Offered Liv. offerte
1	REPLACEMENT DU SYSTÈME TELECOM RA DIO REQUIS DES PIÈCES ET DE LA MAIN D'OEUVRE POUR LE REMPLACEMENT DU SYSTÈME DE TÉLÉCOMMUNICATION RADIO APPARTENANT À L'AGENCE SPATIALE DU CANADA, AU CENTRE SPATIAL JOHN. H. CHAPMAN, ST-HUBERT (QUÉBEC). • SELON L'ANNEXE 'A' - BESOIN CI-JOINT.	9F030	9F030	1	Chaque	\$		XXXXXXXXXXXX		

REISSUE OF BID SOLICITATION

This bid solicitation cancels and supersedes previous bid solicitation number 9F030-130555/B dated 2014-07-02 with a closing of 2014-07-18 at 14h00. A debriefing or feedback session will be provided upon request to bidders/offerors/suppliers who bid on the previous solicitation.

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TITLE: REPLACEMENT OF THE EXISTING RADIO TELECOMMUNICATION SYSTEM

PART 1 - GENERAL INFORMATION

1. Security Requirement

There is no security requirement associated with the requirement.

2. Requirement

The requirement is detailed under Annex 'A' - Requirement

3. Communications notification

As a courtesy, the Government of Canada requests that successful bidders notify the Contracting Authority in advance of their intention to make public an announcement related to the award of a contract.

4. 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.

5. Trade Agreement

This requirement is not subject to the provisions of the North American Free Trade Agreement (NAFTA) and the Agreement of Internal Trade (AIT).

PART 2 - BIDDER INSTRUCTIONS

1. Standard Instructions, Clauses and Conditions

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 (2014-06-26) 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: one hundred and twenty (120) days

1.1 SACC Manual Clauses

B1000T 2014-06-26 Condition of Material

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.

3. Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than **seven (7) 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. Improvement of Requirement During Solicitation Period

Should bidders consider that the specifications or Statement of Work contained in the bid solicitation could be improved technically or technologically, bidders are invited to make suggestions, in writing, to the Contracting Authority named in the bid solicitation. Bidders must clearly outline the suggested improvement as well as the reason for the suggestion. Suggestions that do not restrict the level of competition nor favour a particular bidder will be given consideration provided they are submitted to the Contracting Authority at least **7 calendar days** before the bid closing date. Canada will have the right to accept or reject any or all suggestions.

5. Applicable Laws

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in the **Province of Quebec**.

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.

6. Term of contract

6.1 Delivery date

Complete delivery

The Contractor must make the complete delivery **before March 31, 2015**.

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 (2 hard copies)
Section II: Financial Bid (1 hard copy)
Section III: Certifications (1 hard copy)

Prices must appear in the financial bid only at Annexe 'B' - Pricing. 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>). To assist Canada in reaching its objectives, bidders are encouraged to:

- 1) use paper 8.5 x 11 inch (216 mm x 279 mm) containing fibre 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 the technical bid, bidder must demonstrate that they fully understand the requirement and how they will meet the requirements.

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 request 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.

Substantial information

Bidders must demonstrate their compliance with the following sections of the bid solicitation by providing substantial information describing completely and in detail how the requirement is met or addressed. Bidders must provide with their technical bid, a document indicating clearly where the substantial information for each of the sections identified at Annexe 'A' - Requirement can be found.

Section II: Financial Bid

1.1 Bidders must submit their financial bid in accordance with Basis of Payment (See clause 6 of Part 6 - Resulting contract clauses). The total amount of the applicable taxes must be shown separately.

1.2. Exchange Rate fluctuation

C3011T 2013-11-06 Exchange Rate Fluctuation Risk Mitigation

1.3 Pricing

The bidder must supply firm unit prices, in Annex 'B' - Pricing, in Canadian dollars, delivery and duty paid (DDP) to (***The Canadian Space Agency (CSA), 6767 Route de L'Aéroport, St. Hubert, Qc***), all applicable taxes extra. The transport charges to the **CSA** site must be included together with the applicable customs and excise taxes.

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.

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- (b) An evaluation team composed of representatives of Canada will evaluate the bids.
- (c) The evaluation team will determine first if there are two (2) or more bids with a valid Canadian Content certification. In the 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 two 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

Conformity to the mandatory technical criteria which are included in Annex 'C' - Mandatory Evaluation Criteria.

1.2 Financial Evaluation

1.2.1 Mandatory financial criteria

- a. Compliance with the methods for setting the proposed prices;
- b. Firm prices must be provided for **all items** listed on Annex 'B' - Pricing;

SACC Manual Clause

A0220T	Evaluation of Price -bid	2014-06-26
A0222T	Evaluation of Price - Canadian /Foreign bidders	2014-06-26

1.3. Price Evaluation

The prices at Annex 'B' - Basis of payment will be evaluated as follows:

- A= Is the total firm price for item no's: 1 to 28
- B= Is the total firm price for all items under this section

Total firm price (A) + Total of firm price (B) = Total price of contract (Applicable taxes extra)

2. Basis of Selection

2.1 Basis of Selection - Mandatory Technical Criteria

- A. A bid must comply with the requirements of the bid solicitation and meet all mandatory technical evaluation criteria to be declared responsive.
- B. The responsive bid with the lowest evaluated price will be recommended for award of a contract.

Note: The lowest evaluated price is the total price of item A and B as indicated at Annex 'B' - Pricing.

PART 5 - CERTIFICATIONS

Bidders must provide the required certifications and associated information to be awarded a contract.

The certifications provided by bidders to Canada are subject to verification by Canada at all times. Canada will declare a bid non-responsive, or will declare a contractor in default in carrying out any of its obligations under the Contract, if any certification made by the Bidder is found to be untrue whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority may render the bid non-responsive or constitute a default under the contract.

1. Certifications Required Precedent to Contract Award

1.1. Integrity Provisions -Associated Information

By submitting a bid, the Bidder certifies that the Bidder and its Affiliates are in compliance with the provisions as stated in Section 01 Integrity Provisions - Bid of Standard Instructions 2003. The associated information required within the Integrity Provisions will assist Canada in confirming that the certifications are true.

1.2 Federal Contractors Program for Employment Equity - Bid Certification

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's Members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity 'FCP Limited Eligibility to Bid' list (http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml) available from Employment and Social Development Canada (ESDC) - Labour's website.

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the 'FCP Limited Eligibility to Bid' list at the time of contract award.

2. Additional Certifications Required 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 inform the Bidder of a time frame within which to provide the information. Failure to comply with the request of the Contracting Authority and to provide the certifications within the time frame provided will render the bid non-responsive.

2.1 Canadian Content Certification

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This procurement is conditionally limited to Canadian goods and Canadian services.

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

Failure to provide this certification completed before contract award will result in the goods and services offered being treated as non-Canadian goods and non-Canadian services.

The Bidder certifies that:

() a minimum of 80 percent of the total bid price consist of Canadian goods and Canadian services as defined in paragraph 5 of clause A3050T.

For more information on how to determine the Canadian content for a mix of goods, a mix of services or a mix of goods and services, consult Annex 3.6.(9), Example 2, of the Supply Manual.

2.2. SACC Manual clause

A3050T	Canadian content definition	2010-01-11
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3. Certification Required With Bid

Industry Canada Certificate number required

It must be noted that any radio equipment provided must be homologated and include an Industry Canada certification number as required by the Radiocommunication Act and the Radiocommunication Regulations. The certification numbers must be provided when submitting the tender at the bid closing time and date.

Please consult the following websites for details on how to obtain Industry Canada certification numbers following the deposit of the Engineering technical submission.

<http://laws-lois.justice.gc.ca/eng/acts/R-2/> <http://laws-lois.justice.gc.ca/eng/regulations/SOR-96-484/>

PART 6 - RESULTING CONTRACT CLAUSES

1. Security Requirement

There is no security requirement associated with the requirement.

2. Requirement

The Contractor must provide the items detailed under the Annex "A" - Requirement.

3. 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://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

3.1 General Conditions

2010A (2014-06-26), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

4. Term of Contract

4.1 Delivery date

Total Delivery

The Contractor must make the complete delivery **before March 31, 2015**.

5. Authorities

5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Mary Paradis
Title: Contracting officer
Public Works and Government Services Canada
Acquisitions Branch
Directorate: Quebec region
Address: 800 rue de la Gauchetière, ouest
Montreal, Qc
Telephone: 514-496-3874
Facsimile: 514-496-3822
E-mail address: mary.paradis@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 Contractor's Representative

Name and telephone number of the person to contact:

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General enquiries:

Name: _____
Telephone: _____
Facsimile: _____
E-mail address: _____

Delivery follow-up:

Name: _____
Telephone: _____
Facsimile: _____
E-mail address: _____

5.3 Contact at customer department

(To be completed by Canada at the time of award)

For all information related to invoicing and /or payments you may communicate with:

Customer department: _____
Name: _____
Telephone number: _____
Fax number: _____
E-mail: _____

6. Payment

6.1 Basis of Payment - Firm Unit Price(s)

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm unit price , as specified in Annex 'B'- Pricing for a total cost of \$ _____ *(to be inserted at contract award)*. Customs duties are included and all applicable taxes is extra, if applicable.

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

6.2 Limitation of Price

SACC Manual clause

C6000C Limitation of Price 2011-05-16

6.3 Method of payment

SACC Manual clause

H1000C Single Payment 2008-05-12

6.4 SACC Manual clauses

C2000C Taxes - Foreign-based Contractor 2007-11-30

C2605C Canadian Customs Duties and Sales Tax
- Foreign-based Contractor 2008-05-12

7. Invoicing Instructions

1. The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions.
Invoices cannot be submitted until all work identified in the invoice is completed.
2. Invoices must be distributed as follows:
 - (a) The original and one (1) copy must be forwarded to the address shown on page 1 of the Contract for certification and payment.

8. Certifications

8.1 Compliance

The continuous compliance with the certifications provided by the Contractor in its bid and the ongoing cooperation in providing associated information are conditions of the Contract.

Certifications are subject to verification by Canada during the entire period of the Contract. If the Contractor does not comply with any certification, fails to provide the associated information, or is 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.

8.1 SACC Manual clauses

A3060C Canadian Content Certification 2008-05-12

9. Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in _____ (*will be indicated in the contract*).

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;
- (b) the 2010A (2014-06-26) ,General conditions - Goods (medium complexity) ;
- (c) Annex 'A' - Requirement ;
- (d) Annex 'B' - Pricing ;
- (e) Annex 'C' - Mandatory technical criterias
- (f) the Contractor's bid dated _____, as amended on _____.

11. SACC Manual Clauses

B7500C	Excess Goods	2006-06-16
G1005C	Insurance	2008-05-12
A2000C	Foreign nationals (Canadian contractor)	2006-06-16
A2001C	Foreign nationals (Foreign contractor)	2006-06-16
A9068C	Government site regulations	2010-01-11

12. Transportation costs

The contractor must ship the goods prepaid via _____ (*insert the method of transportation*) including all delivery charges to (**The Canadian Space Agency, 6767 Route de l'Aéroport, St. Hubert, Qc**). Prépaïd transportation costs must be shown as a separate item on the invoice, supported by a certified copy of the prepaid transportation bill of lading.

13. Shipping instructions

Shipping Instructions - Delivery at destination

Goods must be consigned to the destination specified in the Contract and delivered: Delivered Duty Paid (DDP) (**The Canadian Space Agency, 6767 Route de l'Aéroport, Qc**). Incoterms 2000 for shipments from a commercial contractor.

ANNEX "A" REQUIREMENT

TITLE: THE REPLACEMENT OF EXISTING RADIO TELECOMMUNICATION SYSTEM AT THE JOHN H. CHAPMAN CENTER OF THE CANADIAN SPACE AGENCY, ST. HUBERT, QUEBEC

Introduction:

The CSA wishes modernize the John H. Chapman Space Centre communication system with the aim of improving the quality of its communications, of complying with the new bandwidth requirements, and of modernizing the radio equipment of users according to the requirements identified.

This document is the result of the assessment of the actual radio communication requirements of five (5) Space Centre user groups.

Description of the existing system:

The existing radio communication system is a conventional broadband (25 KHz) analog modulation system with two duplex frequencies, including two repeaters connected to a filtration and distributed antenna array in the John H. Chapman Space Centre. This system currently provides adequate radio coverage both inside all the buildings as well as on the outdoor grounds of the centre. The system infrastructure consists of the following components:

- Two UHF/100W analog repeaters;
- Two controllers;
- One TX-RX manufactured filtration system, T-Pass model;
- A distributed antenna array comprised of coaxial cables, six Bluewave model 421 and 422 antennas and five power splitters.

Currently, the CSA operates two duplex channels as well as a simplex frequency for their radio operations.

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- Channel 1: 460.7 MHz / 465.7125 MHz;
- Channel 2: 460.125 MHz / 465.1375 MHz;
- Simplex channel: 469.5 MHz.

Nota: Industry Canada's license number for the CSA two duplex pairs is 3886477. Their license numbers for the simplex frequency is 4848122, 4930543, 38886477 and 3884679.

Description of the system required:

The radio communication system must be a digitally modulated Dynamic Access system with frequencies including the radio equipment that will be connected to the filtration and the distributed antenna array of the existing coverage.

Any radio equipment identified and provided in this project must be homologated and include an Industry Canada certification number as required by the Radio communication Act and the Radio communication Regulations

[.http://laws-lois.justice.gc.ca/fra/lois/R-2/](http://laws-lois.justice.gc.ca/fra/lois/R-2/) <http://laws-lois.justice.gc.ca/fra/reglements/DORS-96-484/>

The certification numbers must be provided when submitting the tender in the price grid.(The price grid is not included for this exercise).

The system must meet the required minimum characteristics and be made up of the following components:

The repeaters:

The system must consist of two (2) repeaters. Each repeater must be equipped with its own battery to enable an autonomous minimum 8-hour operation in case of a power supply failure. The two (2) repeaters will be dedicated to voice and must allow access to 4 simultaneous voice channels, which provides the desired channel availability. The system must allow dynamic channel access to all users.

Essential Criteria:

- Allows up to four (4) simultaneous communications (two per frequency)
- Rapid access dynamic path assignment (**Full Trunking**)
- Automatic number identification (*PTT ID*)
- Call Alert
- Group Call, Basket Group and Individual-private Call
- Emergency alerts sent over a selected group
- "Text and e-mail" messaging support
- Support of telemetry and other data transmission applications
- "Isolated worker" function support
- Remote radio deactivation

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- Partial fault tolerance

Filtration:

The existing filtration should be reused. The successful tenderer will be responsible for tuning the filtration system. In the event of a change of frequencies, this filtration will have to be re-tuned.

Coverage system:

The existing system of antennas connected to the repeaters must be reused.

Proceedings with Industry Canada:

At the beginning of the mandate, the successful tenderer must submit an engineering technical submission to Industry Canada on behalf of the CSA for submitting the radio licence applications for the required frequencies.

LIST OF THE DIGITAL RADIO SYSTEM EQUIPMENT

Radio equipment repeater system:

Repeaters:

Essential criteria:

- 2 UHF repeaters
- 2 booster batteries with case for 8 hours of battery life
- Frequency range: 403-470 MHz
- Channel spacing: 12.5 MHz
- Dimensions: must be installable on a standard equipment rack, 48.5 cm wide x 42 cm deep.
- Electrical power supply: 100-240 V a.c. (13.6 V d.c.)

User radio equipment:

Radio equipment compatible with the system:

The CSA has identified requirements for three models of radio equipment that must all be compatible with the system and must respond to the different specific criteria of the industrial environment, and possess the following minimum characteristics:

Note: *The dimensions and maximum weights appearing in this quote have been established on the basis of the current equipment. The users have clearly established that the new equipment **must** be smaller than the existing equipment.*

Portable model # 1:

Portable model #1 will be used by a single communication group. It must be able to make individual calls, display the caller, connect to users in a high-noise environment, and send them adjustable fixed level alarms that don't depend on the variable volume level of the radio. This radio model must be resistant to dust and immersion.

Essential criteria:

- Digital UHF portable
- 403-470 MHz frequencies
- 12.5 kHz channel spacing
- Minimum imperviousness level: IP57
- Maximum dimensions and weight with battery
 - 137mm X 57mm X 44 mm (height X width X depth)
 - 470 g
- Colour display
- Short UHF antenna
- Thin lithium-ion battery
- Belt clip attachment
- Integrated Bluetooth audio
- "Man-down" function
- Call Alert
- Ready for text and data messaging

Accessories included:

- Rapid charger
- Spare battery

Portable model # 2:

Portable model #2 will be used by three communication groups with extended coverage. It must be able to make individual calls and display the caller. Portable model #2 must be thin and light; it must be easily worn under a jacket in order to support surveillance operations. This radio model must be resistant to dust and water splashing.

Essential criteria:

- Digital UHF portable
- 403 - 470 MHz frequency
- 12.5 kHz channel spacing
- Minimum imperviousness level: IP 54

-
- Maximum dimensions and weight with battery
 - 127.5mm X 61.5mm X 45 mm (height X width X depth)
 - 370 g
 - Colour display
 - Very short UHF antenna (25 to 30 mm maximum)
 - Thin lithium-ion battery
 - Integrated Bluetooth audio
 - Vibration mode
 - Belt support
 - Ready for text and data messaging

Accessories included:

- Rapid charger
- Multiple charger

Portable model # 3

Portable model #3 will be used by two communication groups. It must be robust, compact and lightweight with keys that are easy to use. Its connector must allow quick connection of the accessories without tools. This radio must be resistant to dust and rain.

Essential criteria:

- Digital UHF portable
- 403-470 MHz frequencies
- 12.5 kHz channel spacing
- Minimum imperviousness level: IP 55
- Maximum dimensions and weight with battery
 - 137mm X 57.5mm X 44 mm (height X width X depth)
 - 470 g
- Short UHF antenna
- Thin lithium-ion battery
- Monochrome screen
- Belt clip attachment

Accessories included:

- Rapid charger
- Multiple charger
- Micro-loudspeaker
- Spare battery

Bases:

Note: *The maximum dimensions that appear in this specification were established on the basis of the space available for installation in the control room console.*

Essential criteria:

- Separate adapter for control head
- Programmable buttons
- Control head with display
- 403-470 MHz frequencies
- 12.5 kHz channel spacing
- Maximum control head dimensions 55mm x 180mm x 80 mm (height X width X depth)

Accessories:

- Power supply and control cables extended 5 meters
- Table microphone
- Magnetic base antennas
- Power supply
- Under mount

List of equipment required by sector

Security service:

- Ten (10) model #3 portables with the following accessories:
 - Ten (10) spare lithium-ion batteries
 - Ten (10) micro-loudspeakers
 - Ten (10) belt attachments (clips)
 - One (1) six (6) slot multi-charger
- Four (4) model #2 portables with the following accessories:
 - Four (4) spare lithium-ion batteries
 - Four (4) single chargers
 - Four (4) belt attachments (clips)
- Two (2) bases with the following accessories:
 - Two (2) power supplies
 - Two (2) magnetic-based antennas
 - Two (2) table microphones
 - Under mount
 - Power supply and control cables extended 5 meters

Facilities:

- Fourteen (14) model #1 portables with the following accessories:
 - Fourteen (14) spare lithium-ion batteries
 - Fourteen (14) belt attachments (clips)

- Fourteen (14) single chargers
- Six (6) model #2 portables with the following accessories:
 - Six (6) spare lithium-ion batteries
 - Six (6) belt attachments (clips)
 - Six (6) single chargers

Communications:

- Twelve (12) model #2 portables with the following accessories:
 - Twelve (12) spare lithium-ion batteries
 - One (1) six (6) slot multi-charger
 - Six (6) individual chargers
 - Twelve (12) belt attachments (clips)

Shipping / Receiving:

- Two (2) model #3 portables with the following accessories:
 - Two (2) spare lithium-ion batteries
 - Two (2) individual chargers
 - Two (2) belt attachments (clips)

Information Technology:

- Twelve (12) model #2 portables with the following accessories:
 - Twelve (12) spare lithium-ion batteries
 - Twelve (12) belt attachments (clips)
 - One (1) case with strap
 - Twelve (12) individual chargers

Operating modes by sector:

Security service:

- Will use a single communication group with extended coverage.
- The availability of channel accessibility is very important.
- The agents use micro-loudspeakers with headsets
- The control must respond to requests from other sectors on a daily basis
- On occasion, will use a simplex channel.
- The agents must always be able to operate everywhere inside the buildings as well as on the Space Centre terrain.

Facilities:

- Will use a single communication group with extended coverage.

- Will on occasion, use a simplex pathway channel.
- Must be able to talk to security / control on a daily basis
- Make individual calls
- Caller display
- Do not use accessories
- Connect to users in a high-noise environment, and send them adjustable fixed level alarms that don't depend on the variable volume level of the radio.

Communications Sector:

- Will continue to use the simplex frequency that was dedicated to them.
- The successful tenderer must apply for a Canada-Wide simplex frequency
- Will communicate with Control or the other sectors as required

IT Sector:

- Will use a duplex pathway channel (via repeater) which will be dedicated
- Will not communicate with Control or the other sectors

Shipping / Receiving Sector:

- Will use a single communication group with extended coverage.
- Will communicate with Control as required

Successful tenderer's responsibilities:

The successful tenderer will be responsible for the installation, the complete configuration of the proposed radio communication system, the quality of the radio coverage inside the John H. Chapman Space Centre buildings, the configuration, programming, delivery, and installation of all the equipment and hardware necessary for the installation, and shall, at the end of the project, carry out performance tests on the entire system in order to demonstrate that the performance of the new system is at least equal to, if not better than the current system.

Installation of the new system:

- The successful tenderer will install the repeaters as well as the booster batteries in the existing repeater cabinet.
- He will program the repeaters, will adjust the power according to the licences issued by Industry Canada and will verify performance, and will conduct the conformity tests associated with the technical specifications after the installation.
- He will install two separate control heads for the bases in the Control Room as well as the bases and their power supply in the existing cabinet intended for this purpose. He will pass the control and power supply wiring from the control heads to the bases and will install the magnetic base antennas at a safe distance from people working in this area.

-
- He will dismantle the old repeaters as well as the two bases, the power supply, the control heads and the antennas.

Proceedings with Industry Canada:

At the beginning of the mandate, the successful tenderer must deposit an engineering technical submission with Industry Canada on behalf of the CSA in order to obtain the radio licenses that are required for the operation of the new digital radio system. These applications must include the technical details that reflect the installations of all the system components. It must be noted that any radio equipment provided must be homologated and include an Industry Canada certification number as required by the Radio communication Act and the Radio communication Regulations. The certification numbers must be provided when submitting the tender in the price grid (The price grid is not included for this exercise).

Filtration:

It is likely that the same frequencies can be reused in narrow band digital mode. The existing filtration should be reused. It must be calibrated to ensure that it meets the manufacturer's optimal technical performance. In the event of a change of frequencies, it will also have to be calibrated to meet the manufacturer's optimal technical performance with the new frequencies.

The successful tenderer must provide the technical measurement documents demonstrating compliance with the manufacturer's standards.

The distributed antenna array:

The system of antennas connected to the existing repeaters must be checked, measured and must be reused. The successful tenderer must provide the technical measurement documents demonstrating compliance with the optimal performance standards. The successful tenderer will, among other things, verify the indoor and outdoor antennas, the coaxial cables, the power splitters and the connectors.

The radio coverage:

The successful tenderer will conduct signal surveys in all the internal building spaces and on the outdoor grounds of the centre. He must ensure that the signal measured reflects the expected optimal performance conditions.

User training:

The successful tenderer will provide two on-site training sessions for a maximum of 20 CSA employees. This training will cover the different modes of operation of the various equipment models and a demonstration of the types of calls.

ANNEX 'B' - PRICING

SECTION A

EQUIPMENT

#	Qty	Description (All items as detailed at Annex ' A' -Requirement	model #	Manufact urer	Industry Canada certification #	Unit price	Total price
1	2	UHF Repeaters				\$_____	\$_____
2	1	8 port network switch				\$_____	\$_____
3	2	12V/ 120A batteries				\$_____	\$_____
4	2	Battery case				\$_____	\$_____
5	1	Installation hardware				\$_____	\$_____
6	2	Rapid access dynamic voice assignment (Trunking)				\$_____	\$_____
Total repeaters							\$_____
Portable model # 1:							
7	14	Equipment with thin lithium-ion batteries				\$_____	\$_____
8	14	Spare thin lithium-ion batteries				\$_____	\$_____
9	14	Belt clips				\$_____	\$_____
10	14	Individual chargers				\$_____	\$_____

Total portable model # 1							\$ _____
Portable model # 2:							
11	34	Equipment with thin lithium-ion batteries				\$ _____	\$ _____
12	34	Spare thin lithium-ion batteries				\$ _____	\$ _____
13	34	Belt clips				\$ _____	\$ _____
14	1	Six slot multiple charger				\$ _____	\$ _____
15	28	Individual charger				\$ _____	\$ _____
16	1	Case				\$ _____	\$ _____
Total portable model # 2							\$ _____
Portable model # 3:							
17	12	Equipment with thin lithium-ion batteries				\$ _____	\$ _____
18	12	Spare thin lithium-ion batteries				\$ _____	\$ _____
19	12	Belt clips				\$ _____	\$ _____
20	10	Micro-loudspeakers				\$ _____	\$ _____
21	1	Six slot multiple charger				\$ _____	\$ _____
22	2	Individual charger				\$ _____	\$ _____
Total portable model # 3							\$ _____
Fixed stations (bases)							
23	2	Separate control head equipment				\$ _____	\$ _____
24	2	Power supplies				\$ _____	\$ _____
25	2	Magnetic base antennas				\$ _____	\$ _____
26	2	Table microphones				\$ _____	\$ _____
27	2	5 metre extended power supply and control cable				\$ _____	\$ _____

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Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur
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9F030-13-0555

File No. - N° du dossier
MTA-3-36352

CCC No./N° CCC - FMS No/ N° VME

28	1	Installation hardware				\$ _____	\$ _____
Total bases							\$ _____

	<p>Total Section A : Price of equipment</p> <p>(repeaters+ portable model no.1 + portable model no. 2+ portable model no. 3+ bases)</p> <p style="text-align: right;">\$ _____</p> <p>Grand total Section A :</p> <p>\$ _____</p>
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SECTION B

OTHER COSTS (As detailed at Annex'A'-Requirement)

1	* Labour, engineering technical submission costs, preparation, installation and commissioning	\$ _____
2	*Training cost	\$ _____
3	Transport charges (FOB destination)	\$ _____
	Total Section B	\$ _____
	Grand total (Section A + B)	\$ _____

* **Labour, engineering technical submission costs, preparation, installation and commissioning**

Please give details to justify these costs :

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* **Training costs:**

Please give details to justify the training costs:

ANNEX "C"
MANDATORY TECHNICAL CRITERIAS

Mandatory evaluation criteria

In order to be considered, all propositions must cover all the mandatory technical criteria identified below. All of which must be respected and accompanied, **at the bid closing date and hour**, so as to allow for a technical evaluation. IN THE ABSENCE OF WHICH, THE BID WILL BE REJECTED.

Note:

To comply with the presentation of the evaluation criteria, refer to Part 3 - BID PREPARATION INSTRUCTIONS in the bid solicitation , Section 1 - Technical Bid.

Mandatory technical criteria	
Certification number(s) The radio equipment provided must be homologated and include an Industry Canada certification number as required by the Radiocommunication Act and the Radiocommunication regulations. The certification number(s) must be provided at the bid closing date and time.	Please indicate the certificate number(s) _____ _____ _____ _____
Training The contractor must provide two on-site training sessions for a maximum of 20 Canadian Space Agency employees. The training will cover the different modes of	Please indicate if this criterion will be met: ___ YES ___ NON

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opération of the various equipment models and a demonstration of the types of calls.

One on the day of the delivery and installation of the equipment and the other will be one week after the installation.

The training will take place at the Canadian Space Agency at St. Hubert, Province of Quebec.

Or

Please propose us other dates for the training.
