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**SOLICITATION AMENDMENT
MODIFICATION DE L'INVITATION**

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

Comments - Commentaires

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Issuing Office - Bureau de distribution
Defence Communications Division. (QD)
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Title - Sujet HF AUDIO SYSTEM REPLACEMENT PROJECT	
Solicitation No. - N° de l'invitation W8474-136546/C	Amendment No. - N° modif. 005
Client Reference No. - N° de référence du client W8474-136546	Date 2016-06-16
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File No. - N° de dossier 017qd.W8474-136546	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2016-07-05	Time Zone Fuseau horaire Eastern Daylight Saving Time EDT
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Note: The last date to submit questions is 22nd June 2016 14.00 Hrs. EDT. Canada may not answer questions received after the last date.

The purpose of this amendment is to:

1. Modify Annex B – Performance Specifications.
2. Answer bidders' questions from 43 to 58 received as of 16 June 2016.

The following shall form part of the RFP:

1. In Annex B – Performance Specifications:

Delete sub-paragraph 5.1 in its entirety.

Insert the following in lieu;

The Operator Console Equipment must enable operators to directly activate Push-to-talk (PTT) with HF radio transmitters.

Note:

All other terms and conditions of the RFP remain unchanged.

Annex G, in excel format, will be provided prior to the RFP closing, when all changes to specifications will have finalized, as it must be submitted with the bid submission.

Bidders' Questions Received as of June 2nd 2016 – Published in Amendment 003.

Q1. Reference: RFP Part 3 – Article 1.1

Please confirm the copies required for Section IV – Certifications.

A1. Only one copy of each certification is required.

Q2. **Reference Annex B – Para 5.10 and 5.11**

How many HF modem patches can take place simultaneously in a center?

A2. Two HF modem patches may take place simultaneously at each operator console or position. Therefore, the number of simultaneous audio patches that may be handled by any centre is a function of twice the number of operator consoles within that centre. The audio patch panel requirement is designed to provide DND with sufficient interconnection flexibility.

Q3. Reference Appendix A3 and Annex B – Paragraph 12.2

What Application Link Enabling (ALE) integration is required? The Interface description document of Appendix A3 does not describe the set up and tear down of ALE session calls but instead describes the full range of HF Radio RRC HF parameters settings that would usually be handled by ALE?

The radio GUI as presented in section 12.2 Annex B does not describe the means of accessing radios using ALE?

A3. “Application Link Enabling” is not required or specified. The requirement and standard for Automatic Link Establishment (ALE) is specified in Annex B, Paragraph. 2.1.

Q4. Reference Annex B – Para 5.6.5, 5.7.5 and 7.3.5

Can LEMO or PJ7 connectors for microphones and headsets be used instead of XLR connectors?

A4. LEMO connectors are acceptable if they conform to XLR dimensions and standards. PJ7 connectors are not acceptable because they usually do not have a latching mechanism, and they are usually not robust enough for use by military operators.

Q5. Reference Annex A – Paragraph 13

At every center is the IP Telephony gateway equipment, that supports Foreign Exchange Office (FXO) interface and VOIP telephony, provided as GFE or does it form part of the current tender deliverables?

A5. There is no IP Telephony gateway equipment at any location at this time. Therefore it will not be provided as GFE under this project. IP Telephony gateways are not required as deliverables of this RFP.

Q6. Reference: Annex A - Paragraph 1.5.2.2

Para 1.5.2.2 requests that the "contractor MUST replace the Operators Consoles including associated equipment". Following the site visit, information was received that existing Operator consoles will remain. Please confirm that all existing operator consoles will remain. Please also confirm the amount of space that will be made available for new console hardware within the existing consoles.

A6. The “associated equipment” referred to in Para 1.5.2.2 is the legacy equipment listed in Para 1.2.2.2. Console furniture, or other equipment not appearing in the list in Para 1.2.2.2 are not intended to be replaced. The console furniture seen at the site visit is standard, but there may be some minor variation in equipment placement from one console to another, which prohibits specifying a maximum space allocation for this system.

Q7. Reference: Annex A – Paragraph 24

The Project Acceptance Test is not listed as a Milestone within Annex C. Is this to be included as part of Annex C Milestone 9 for the completion MACS Trenton install or will a new milestone be created for Project Acceptance?

- A7. The Project Acceptance Test is considered a part of Annex C Milestone 9 for the completion MACS Trenton install.
- Q8. **Reference: Annex A – Paragraph 14**
Will DND allow for a take on trial at each site to ascertain the functionality of all GFE that will remain?
- A8. Take on trials may be included in the Site Audits described in Paragraph 14 of the SOW. GFE functionality might change (at DND's discretion) between the time of the Site Audits and any project installations. DND will take appropriate measures to ensure that GFE conforms to the specifications in Annex B at minimum.
- Q9. **Reference: Annex B - Paragraph 5.5.8**
Must have requirement of NEMA 4 restricts the monitor type and enclosure that can be utilised. Is this the required IP rating for all LCD monitors to be installed within the operator consoles?
- A9. The front panel Ingress Protection (IP) requirement per Para 5.5.8.
- Q10. **Reference: Annex B - Paragraph 5.5.10 & 7.2.9**
Can the maximum brightness exceed 450cd/m2 but be controlled by software for a maximum of 450 cd/m2?
- A10. Para 5.5.10 & 7.2.9 must be amended to read "be able to set the monitor's brightness at the maximum setting of 450 cd/m² or brighter."
- Q11. **Reference: Annex B – Paragraph 5.5.6 & 7.2.5**
Is the 15" LCD a minimum screen size? Would a larger display be acceptable if it meets all the requirements at Annex B Para 5.5?
- A11. 15" LCD is the screen size required as per Para 5.5.6 & 7.2.5. Smaller screens would risk loss of functionality, and larger screens would risk exceeding space constraints.
- Q12. **Reference: Annex B - Paragraph 6.1**
The Compliance Matrix states at para 6.10 that "The HF Audio System must be provided with electronic circuit cards that have front panel access and are easy to replace." Is the design intent simply to have easily removable cards and would top panel or rear panel access be acceptable?
- A12. This is confirmation that the design intent is to have easily removable cards. Top panel access would not have easily removable cards if access is obstructed by other equipment mounted above it in the rack. Rear panel access would not have easily removable cards if access is obstructed by cabling. Hence the requirement for front panel access.
- Q13. **Reference: Annex B - Paragraph 14.2**
It is noted in requirement 14.2 that the CIPISM solution must be contained within a 19" rack, please clarify the maximum Rack unit space allowed to install the CIPISM at each site?
- A13. Annex B Para 14.1 has been amended to read "The HF Audio System CIPISM must be

mountable in a 19" inch rack that must be supplied by the contractor."

Annex B Para 14.2 has been amended to read "Each of the CIPISM installations must be contained in a single 19" inch rack that must be supplied by the contractor."

Therefore the maximum rack unit space allowed to install the CIPISM at each site will be determined by the Contractor's CIPISM design.

Q14. **Reference: Annex B - Paragraph 4.4:**

"The HF Audio Systems must support radio operation, where each operator console must fully operate (transmit and receive) on one receiver-transmitter radio pair in normal operations".

Does this mean a 'local' Tx/Rx pair or any pair on the network?

A14. This means any Tx/Rx pair on the network.

Q15. **Reference: Annex B - Paragraph 5.6.6:**

"Stereo headsets with one channel used for A/G, and the other channel used for G/G communications"

Please confirm that this is the required design intent as it is generally normal practice for one channel to be used for monitoring and the other for operating.

A15. This is confirmation of the stated design intent to facilitate phone-patch. Monitoring will be achieved later through a separate RFP as it is not part of this project.

Bidders' Questions Received as of June 10th 2016 – Published in Amendment 004.

Q16. **Reference: Annex B - Paragraph 6.7:**

"Provide RIPIs and CIPISMs that are reliable to a minimum 99.999% Mean Time Between Failure"

This requirement mixes availability percentages and MTBF. If availability what is the time that 99.999% is measured over?

A16. Mean Time Between Failure (MTBF) was inadvertently inserted into Annex B in para 6.7.

Annex B Para 6.7 has been modified to read ""provide RIPI and CIPISM 99.999% functional availability for 24 hours/day, 365 days/year".

This approximately equates to less than one hour system down time per year.

Q17. **Reference: Annex B - Paragraph 10.9.3 and 10.14.3:**

"16K LD-CELP G.728 Minimum MOS 3.6". and "16KBPS LD-CELP as per G.728"

Would a similar 16K compression suffice, such as ITU G.726 (16kbps)?

A17. See A19.

Q18. **Reference: RFP Part 6 - Paragraph 4.1 – Period of the Contract and Annex A – Para 20.1**

The Contract paragraph 4.1 states that all work must be complete on or before 31 July 2017. Annex A - Paragraph 20.1 states that stations must be operational within the 10 month period after the first PRM. Given the required activities in the RFP to occur from contract award to the first PRM, it is unlikely that both conditions could be met. Is the contractual end date of 31 July 2017 negotiable once a reasonable schedule from contract award to PRM has been agreed?

A18. The intent is that the Contractor must satisfy all deliverables of the contract within one year from the contract award date. Accordingly, Article 4.1 has been modified to allow a maximum of one year to deliver the entire project.

Q 19. We have reviewed the technical requirements and feel that the potential bid responses could be improved both technically and financially by allowing the bidders to suggest a solution if the following requirements were less prescriptive than as currently defined.

Reference Annex B – Section 2:

“The system must support EUROCAE ED 137 VOIP air traffic management standard”.

We understand that the system will be used to communicate with aircraft, maritime and ground forces, however, our understanding of the CAF HF System suggests that the system will not be used in the same way that air traffic control is implemented in a commercial air traffic management system. Our understanding is that initially, calls from aircraft will be monitored using the HF Monitoring system that is currently being implemented. The Operators will respond to the incoming call using the HFAM system which uses the same IP cloud as the HF Monitoring System to pass audio packets across. In general, audio packets can be prioritised to pass through the IP cloud to ensure that they are received in the correct order before being turned back into baseband audio for transmission over the air. In the past, we have operated the equivalent Flight Watch service and made use of a common pool of assets, scanning receivers and an IP network to pass the audio traffic. By making the solution comply with ED 137, Canada is requesting bidders to provide this commercial standard which is not present in some Military solutions.

Will Canada consider a relaxation on adherence with ED 137 Part 1? By removing this commercial standard the requirement for 16k LD-CELP G728 codecs within ED 137 can be substituted with other proven standard 16k codecs such as ITU G726, which we have successfully deployed for a ship Shore (BRASS) capability for another customer.

A19. The intended use of the new HF audio systems is stated in Paragraph 1.6. This paragraph clearly states the general requirement for flight-following communications in accordance with Transport Canada regulations. The requirement to make the solution comply with ED 137 is to ensure interoperability with, and permit future expansion to, ED 137 compliant Air Traffic Control (ATC) Voice Communications Systems (VCS). ED 137 compliant ATC VCS are being viewed by DND as the defacto standard to which future similar systems will be required to comply. The requirements of these standards have been expanded upon, where necessary, within Annex A and Annex B, to suit specific military requirements.

Therefore, Canada will not consider relaxing the requirements of ED 137 Part 1, and will not accept other similar 16K compression such as ITU G.726 (16kbps).

Q20. **Reference Annex B – Section 5 and 12:**

“a 15” LCD screen with a touch screen interface”.

Our understanding of this requirement is that it is not a user requirement within the military CAF HF System. The requirement to use only a 15” monitor with the resolutions specified by Canada constrains not only the suitability in this solicitation, but also on any future requirements placed on the software, which could result in costly and unnecessary future adaptations.

Will Canada consider a relaxation on this requirement to allow bidders to suggest an innovative approach to how the control software GUI is presented and integrated with the Operator’s console?

A20. 15” LCD is the screen size required as per Para 5.5.6 & 7.2.5. Smaller screens would risk loss of functionality, and larger screens would risk exceeding space constraints. Canada does not consider this practical requirement a significant constraint on bidder’s ability to suggest an innovative approach to control, present or integrate the software GUI.

Q21. **Reference: Annex B – Paragraph 4.10**

Paragraph 4.10 of Annex B states, "The HF Audio Systems must be capable of preventing the operator to de-select any of the frequencies without first re-assigning them to other operator/s. This is to prevent the disabling of specific frequencies in operation". Please confirm if this is at a local site level or across all sites across the network.

A21. This requirement applies to operators that use the common CIPISM in a specific geographic location.

Frequency reassignments will not work between different CIPISM locations because propagation conditions will vary from one HF Station to another.

Q22. **Reference: Annex B - Paragraph 9.8**

Paragraph 9.8 of Annex B refers to the generation of in-band signalling tones for keying in-service transmitters. Please confirm whether any suitable method may be used to generate the PTT signal at the Operator positions which may then be used to activate the open collector, dry contact or DC keying as per paragraphs 9.8.4 to 9.8.6.2.

A22. Paragraphs 9.8.4 to 9.8.6.2 specify the requirements of the current in-service HF transmitters for PTT signals. Any suitable method may be used to generate a PTT request at the Operator positions, if the request causes the RIPI to generate the HF transmitter PTT signals required by Paragraphs 9.8.4 to 9.8.6.2.

Q23. **Reference: Annex B - Paragraph 9.9.5**

Paragraph 9.9.5 of Annex B refers to the detection and filtering of narrowband tones for SQ. Please confirm that any suitable method may be used to generate the Squelch activate signal from the Operator positions which may then be used to activate a squelch on each receiver.

A23. Paragraphs 9.9.5 to 9.9.7 specify the requirements of the current in-service HF receivers for squelch tones. Any suitable method may be used to generate a squelch tone request at the Operator positions, if the request causes the RIPI to generate the HF receiver PTT squelch tones required by Paragraphs 9.9.5 to 9.9.7.

Q24. **Reference: Annex A - Paragraph 8.3**

Paragraph 8.3 of Annex A references interfaces between the new HF audio system and the in service RCPs at the receiver and transmitter sites. Following the site visit a "Console Processor" was identified within the operations room. Please advise whether any interface with this processor is required or whether the interface with the Control processors is just at the Receive and Transmit site RCPs.

A24. The "Control Processors" (CPs) in the Operations Rooms are used for residual operator functionality to control radio equipment that is out-of-scope for this project. As such, the CPs will remain installed after this project, but there are no requirements for this project to interface with the CPs. This project is required to interface with the Receive and Transmit site RCPs only.

Q25. **Reference: Annex B - Paragraph 17.1 and 17.2**

Paragraph 17.1 of Annex B appears to be incomplete as CAN/CSA-C22.2 refers to an entire family of standards. Are requirements 17.1 and 17.2 intended to be read together, i.e. the HF Audio equipment must comply with CAN/CSA-C22.2 No. 60950-1-07/UL 60950-1 – Information Technology Equipment – Safety – Pt 1: General Requirements?

A25. The proposed solution must comply with CAN/CSA-C22.2 (the Canadian Electrical Code (CEC)) in its entirety as applicable, as per Paragraph 17.1. Paragraph 17.2 draws particular focus to the Bi-National Standard under the CEC and the Underwriter's Laboratories No. 60950-1 Information Technology Equipment – Safety – Part 1: General Requirements. As such, the proposed solution must comply with both in conjunction.

Q26. **Reference: Annex B - Paragraph 16.2**

Paragraph 16.2 of Annex B states that "The HF Audio Systems must comply with electromagnetic compatibility tests and limits of FCC Part 15." The FCC has no jurisdiction in Canada and therefore FCC Part 15 is not a valid standard in Canada. ICES-003 (ITE) is the applicable EMC standard for digital devices in Canada. Please confirm that the equipment has to meet Canadian Standards.

A26. Annex B Para 16.2 has been modified to read "The HF Audio Systems must comply with electromagnetic compatibility tests and limits of ICES-003 (ITE)."

Q27. **Reference: Annex B - Paragraph 3.10**

Paragraph 3.10 of Annex B states, "The HF Audio System must be software driven and HF Audio System components must be updateable by firmware/software update". Please clarify what updateable means and detail any length of software patching and regression testing support required i.e. resolution of defects caused by Operating System updates.

A27. The word "updateable" means "to have the capability to overwrite old executable system firmware/software with new system firmware/software". Normally, this would be required to permit system patches to resolve firmware/software faults, or to resolve incompatibilities with hardware revisions that may occur over the life of the system.

Q28. **Reference: Annex A - Paragraph 8 and 12.1.1**

Paragraph 8 of Annex A states that "the system design must interface seamlessly with in-service CAF HF System equipment" and Paragraph 12.1.1 of Annex A states, "Training should be delivered in advance of the planned cutover date to the new system". Please confirm that the legacy HF Audio system GFE where indicated within the RFP, will be removed prior to the

installation of the replacement HF Audio System at each site, therefore, there will be a down period at each site where the legacy equipment is removed and the new HF Audio System equipment is installed, set to work and accepted. Explain what the term cut-over date refers to, as this was perceived to be incremental.

A28. Since this system is not a direct one-for-one replacement of legacy equipment, and since some of the legacy operator console equipment and functionality will remain, there will not be a down period at each site when the legacy equipment is removed. This project must be implemented while the legacy equipment continues to run until the planned cut-over date.

See also A6.

Q29. **Reference: Annex A - Paragraph 14.3 and 14.6**

Paragraph 14.3 of Annex A states "The Contractor must commence site audits within fourteen days after the CDR" and paragraph 14.6 states, "The Contractor must complete all site audits as quickly as possible such that DND is able to react to the SAR's recommendations". Can the Site Audit Plan be submitted prior to CDR to allow the Site audits to be completed in time to support the CDR, therefore ensuring the results are available for discussion during CDR?

A29. The Site Audit Plan may be submitted prior to CDR, but the CDR will not be contingent on completion of the site audits. The CDR will be held with or without site audit reports, and will cover, at minimum, the agenda items listed in Annex A, Paragraph 15.4.1. If the Site Audit Plan has already been submitted, or if some site audits have already occurred, those items could be added to the CDR agenda. The agenda items are a minimum requirements of the CDR.

Q30. **Reference: Annex A - Paragraph 1.2.2.2.a**

Paragraph 1.2.2.2.a of Annex A references an "Operator Computer Terminal" as part of the operator console. Following the site visit, please confirm that the legacy display and computer terminal (including keyboard and mouse) within the operator console are to be removed and replaced as part of para 6.1.2.1 "operator computer"

A30. This is further confirmation that the legacy display and computer terminal (including keyboard and mouse) within the operator console are not to be removed and replaced under this project.

See also A6.

Q31. **Reference: Site Visit on 17 May 2016**

It was mentioned at the site visit that the CIPISM Site included delivery of the Equipment cabinet. Where exactly is this identified in the RFP? Upon review of the RFP, this requirement cannot be located. The nearest mention is:

Annex B – Paragraph 14.2; each of the CIPISM installations must be contained in a single 19" inch rack.

Is this meant to be the requirement for delivery of an equipment cabinet with the CIPISM?

A31. See A13.

Q32. **Reference: Site Visit on 17 May 2016**

There was no HF Modem observed at the Operator Console during the site visit. Is this new to the MACS system? Could more data please be provided concerning these modems?

- A32. DND connects radio modems to console equipment as mission requirements dictate.
- Q33. **Reference: RFP Part 6 – Section 10 - Schedule of Milestones – Section 10.9.3**
Must bidders provide a price for this CPS Training as mentioned in 10.9.3?
In Annex C – Basis of Payment – Revision 001 Training courses, as well as Annex H – Financial Bid Evaluation Methodology, Training Requirements in file this training is not shown. Please confirm.
- A33. RFP Part 6 – Section 10.9.3 has been modified to delete CPS Training, as there is no requirement for it.
- Q34. **Reference Annex A – Paragraph 6.2.1**
Subparagraph numbering under section 6.2.1 is incorrect transitioning from 6.2.1.1 to 6.1.2.2 (where there is already a paragraph 6.1.2.2). Additionally the subparagraph numbering shifts from 6.1.2.3 to 6.1.2.5 with no 6.1.2.4 under paragraph 6.2.1. Please confirm correct subparagraph numbering and confirm there is not an item missing from the list of technician console required components.
- A34. Incorrect sub-paragraph numbers have been re-numbered as 6.2.1.2, 6.2.1.3 and 6.2.1.4 in Annex A.
- Q35. **Reference Annex A – Paragraph 28.3 & RFP Section 12**
RFP Paragraphs 12.1 and 12.2 indicate that manuals are to be "provided on or before the last installation", whereas Annex A paragraph 28.3 states, "manuals and documentation are to be provided before system acceptance at each station and support facility." Can you clarify whether it is acceptable to deliver final as built drawings and manuals at project acceptance or whether these documents must be delivered for each site following installation and system acceptance testing.
- A35. RFP Paragraphs 12.1 and 12.2 have been modified to mirror the requirement of the SOW. In other words, the manuals and documentation must be provided before system acceptance at each station and support facility.
- Q36. **Annex B - Performance Specification, Paragraph 4.17 & 8.14**
Requirement 4.17 requests patching between telephone and radios and requirement 8.14 requires the telephone patching to be performed with CSN.
How many patches could be performed simultaneously at a centre? Please confirm that one patch can be performed per operator position? Can a technical position perform a patch as well?
- A36. One telephone patch may take place at each operator console or position. Therefore, the number of telephone patches that may be handled by any centre is a function of the number of operator consoles within that centre. The audio patch panel requirement is designed to provide DND with sufficient interconnection flexibility.
This is confirmation that no telephone patch capability is required at the technician console.

- Q37. Are the site visits mandatory and if so has the window closed to do site visits?
- A37. The Optional Site Visit on 17 May 2016 was organized for the interested bidders and there will not be any more site visits. However, the Mandatory Site visits required as per the Annex A – Statement of Work must be conducted by the Contractor.
- Q38. **Reference A13 in Amendment 003**
- Does DND want the racks to be equipped with doors?
- A38. The racks with or without doors will be acceptable. It is up to the bidders to supply the racks they consider best for their design.
- Q39. **Annex B - Performance Specification, Paragraph 8.26**
- The RFP states that the Ethernet Switches will be GFE. Consequently, are these Ethernet ports provided by Canada through the GFE Ethernet Switches or does the contractor need to supply a switch at the CIPISM?
- A39. The Ethernet ports will be provided by Canada on the GFE Ethernet Switches.
- Q40. **Annex B - Performance Specification, Paragraph 13.2**
- Does the requirement for dual power apply also to the operator and technician consoles or only to the CIPISM and RIPI?
- A40. The requirement has been modified to read “Each CIPISM and RIPI must be equipped with two redundant power feeds with zero delay load sharing. This is to mitigate against failure of a power feed”.
- Q41. **RFP Part 3 - Bid Preparation Instructions, 1.1 and 5.**
- Under Part 3, 1.1: The bid states to provide separate sections for the Technical Bid, Management Bid and Financial Bid.
- Under 5 Section IV: Certifications, it does not state where this should be submitted? Do you need a separate bound section after the Financial Bid for the Certifications? If not, under which section would you like this information delivered? Please confirm.
- A41. Certifications may be submitted separately or in the Financial Bid.
- Q42. **Reference Annex G - Compliance Matrix and Compliance with Annex A – SOW**
- Under Part 3 Bid Preparation Instructions, 2.1.1, it states “In their technical bid, the Bidder should address all the requirements of the *Annex A - Statement of Work on a paragraph-by-paragraph basis* and Annex B - Performance Specification on a paragraph-by-paragraph basis,” hence there is confusion; can you clarify?
- A42. Bidders must have noticed that Annex G does not break down the requirements of Annex A in paragraphs, thus in order to be deemed responsive all responsive bidders must insert “compliant”

in Annex G- Compliance Matrix. However, in their technical bid, bidders must address requirement of Annex A and Annex B on paragraph-by-paragraph basis to provide a detailed bid response to provide proof and demonstration of compliance for the evaluation committee.

Bidders' Questions Received as of June 16th 2016 – Published in Amendment 005.

Q43. Please provide an updated editable version for the compliance matrixes (Annex G) and an editable version of Annex H. Will PWGSC provide other documents that are impacted due to modifications?

A 43. Annex G in its native format i.e. Excel will be provided once the final date to provide answers to bidders' questions has passed. Annex H will not be provided in its native format since it is published only for transparency purposes and bidders are not required to provide it with their bid submission.

Further revisions to Annex A and Annex B or to any other RFP documents will not be provided. It is because Annex G emulates Annex B and thus there is no need to provide updated Annex B. Bidders are expected to keep up with modifications in the RFP documents as they are published. Updated documents will be provided to the winning bidder prior to the contract award.

Q44. The Statement of Work compliance matrix, which is part of the Technical Bid, references our supporting Project Management Plan and subdocuments. Consequently, should the PMP and subdocuments be included in the Technical Bid in order for the Technical Authority to properly assess our Technical Bid in its entirety?

A44. Project Management Plan including proposed project timeline and subdocuments should be submitted in the Technical Bid for compliance demonstration to the technical evaluation team. See RFP Part 3, Article 2 – Section 1 - Technical Proposal for further details. All mandatory requirements of the Annex A and B must be addressed by paragraph-by-paragraph basis in the Technical Bid.

Q45. There is room for misinterpretation of the requirement with regard to the number of interfaces needed. In an effort to remove any doubt, would it be possible to confirm that the attached table correctly captures DND's requirement?

No.	Site name	No of Op. Wkst.	No of Techn. Wkst.	No of Modem Interfaces at the main sites (for wkst. and for Techn wkst.)	No of HF TX Radio Interfaces	No of HF RX Radio Interfaces	No of Analogue Telephony Interfaces	No of Analogue Recording Interfaces	No of VoIP Telephony Interfaces
1	MACS Trenton	6	1	14	8	24	11	11	9
2	MACS Edmonton	1	1	4	8	24	11	11	9
3	MACS Debert	1	1	4	8	24	11	11	9
4	MARCOM AGA STATION East	4	1	10	8	24	11	11	9
5	MARCOM AGA STATION West	4	1	10	8	24	11	11	9
6	JTFN HQ Station	2	1	6	8	24	11	11	9
7	CFSCE HF Training Facility	4	1	10	8	24	11	11	9
8	HF Development Laboratory	2	1	6	8	24	11	11	9

A45. The table has been modified based on the following:

1. There is no modem interface requirement at the technician consoles; and
2. The columns for No. of Analogue Telephony Interfaces, No. of Analogue Recording Interfaces, and No. of VoIP Telephony Interfaces have been deleted because these are not terms defined in the specification. The specification defines the Operator Console Equipment Connection Panel capacity, the Technician Console Equipment Connection Panel capacity, and states the requirements of each type of console in terms of analogue telephony, analogue recording, VoIP telephony and digital recording. To further define the exact interface design requirements would be too restrictive and prescriptive to bidders. However, to emphasize the existing specification, each operator and technician console has one phone set. The phone sets are currently analogue, but could be migrated to VoIP at a later date.

No.	Site Name	No of Operator Wkstns.	No of Techn. Wkstns.	No of Modem Interfaces at the main sites (for Op consoles.	No of HF TX Radio Interfaces	No of HF RX Radio Interfaces
1	MACS Trenton	6	1	12	8	24
2	MACS Edmonton	1	1	2	8	24

3	MACS Debert	1	1	2	8	24
4	MARCOM AGA STATION East	4	1	8	8	24
5	MARCOM AGA STATION West	4	1	8	8	24
6	JTFN HQ Station	2	1	4	8	24
7	CFSCE HF Training Facility	4	1	8	8	24
8	HF Development Laboratory	2	1	4	8	24

Q46. Reference Annex B: Requirement 6.5

Considering that the COTS servers required for the CIPISM functionality have boot-up times higher than 2 minutes and that all servers are provided in MAIN/STAND-BY configuration, and more than that, each one of them are provided with redundant power supplies, we find the requirement of 2 minutes restrictive. Would 5 minutes be acceptable?

A46. 5 minutes would not be compliant. The two minute requirement is, in fact, double the original notional requirement of one minute.

Q47. Reference Annex B: Requirement 7.1.4, 7.1.5, 7.1.6

The requirements address an implementation of remote control functionalities which are limited to the instruction sets of the radios/antenna matrices/ancillary equipment, when from the operational perspective, not all of the instruction sets commands are required. As the effort involved in implementing all these commands is quite high and requires also some major integration effort, can you confirm that the implementation of remote control be limited to what is specified in Annex A3.

A47. This is confirmation that implementation of the radio remote control command set of Appendix A3 is sufficient for remote control of the radio equipment. These XML commands will be interpreted by the existing Radio Control Processors. The Radio Control Processors translate the XML commands to the various proprietary command protocols.

Q48. Reference Annex B: Requirement 8 - CIPISMs Requirements

As it was understood from the DND requirements, the CIPISM is described more as an architectural item, than an individual hardware component. With this in mind, please confirm that some of the features detailed under Paragraph 8 will be in fact be supported by the DND

furnished equipment including Ethernet switches, Routers, RCP (e.g.: 8.11, 8.12, 8.13, 8.20, 8.21, 8.22, etc.).

A48. The CIPISM is described architecturally to prevent the design requirements from being too restrictive and prescriptive to bidders. The GFE is defined in Annex A. It is the responsibility of the contractor to comply with the specifications of Annex B. This is confirmation that the GFE specified may be used in the proposed design as specified to meet the requirements of Annex B.

Q49. **Reference Annex B: Requirement 9 - RIPI Requirements**

As it was understood from the DND requirements, the RIPI is described more as an architectural item, than an individual hardware component. With this in mind, please confirm that some of the features detailed under Chapter 9 will be in fact be supported by the DND furnished equipment including Ethernet switches, Routers, RCP (e.g.: 9.3, 9.4, 9.5, 9.7, etc.).

A49. The RIPI is described architecturally to prevent the design requirements from being too restrictive and prescriptive to bidders. The GFE is defined in Annex A. It is the responsibility of the contractor to comply with the specifications of Annex B. This is confirmation that the GFE specified may be used in the proposed design as specified to meet the requirements of Annex B.

Q50. **Reference Annex B: Requirement 9.8.1**

Having in mind the required quantity for each Transmit Site RIPI interface of providing 8x interfaces to HF transmitters and the drawings described in Annex A (6.4 Note: 3) where for each site smaller quantities are described, would you accept fewer transmitters interfaces at some locations and could you specify actual numbers for each DND transmitter location?

A50. Fewer interfaces than those specified will not be acceptable because it would constrain future scalability.

Q51. **Reference Annex B: Requirement 12.2.4**

Considering the system allows for centralized management control of the user rights and credentials, please confirm if it is accepted that the change of password to be provided is permitted only from the management application, and not from the Operator GUI.

A51. The operator must have the capability to change his/her own password as per Requirement 12.2.4 to dynamically maintain network security.

Q52. **Reference Annex B: Requirement 12.2.9**

As per the clarification answer #37 from Annex F, it was understood that no other applications are required to run at the Operator GUI, then the requirement of minimizing the Operator GUI for the Operator consoles does not make any sense. The minimization requirement makes sense when addressed to the administration workstation. Please clarify that this only applies to the administration workstation and not to the Operator GUI.

A52. The operator must have the capability to minimize his/her own GUI screen as per Requirement 12.2.9. This is primarily to permit GUI flexibility in bidders proposed designs that may include multiple software applications.

Q53. Reference Annex B: Requirement 12.2.10

Please describe what is understood by this requirement at the Operator GUI. This requirement makes sense for the administration workstation. Please clarify that this only applies to the administration workstation and not to the Operator GUI.

A53. The operator must have the capability to copy GUI settings and parameters from one operator GUI to his/her own GUI as per Requirement 12.2.10 to assist with GUI recovery and startup.

Q54. Please confirm how many Radio Technicians GUI and System Administrators are required at each site, as the hardware configuration for these users differs from those of normal operators?

A54. This is to confirm the requirement for one technician console at each CIPISM location. This is also to confirm that a technician must be permitted to login as a technician at any of the local (CIPISM) operator consoles as per Requirement 12.4.4. This is also to confirm that an administrator must be permitted to login to any CIPISM at any CIPISM location from any operator or technician console as per Requirement 12.5.1.

Q55. Is the existing system required to remain completely operational while new hardware is installed? This means at some point, both systems should work in parallel so bidders cannot interfere with the existing hardware. Can we conclude that bidders will not be responsible to remove/depopulate the existing hardware as part of their scope of work?

A55. This is to confirm the legacy systems are required to remain completely operational while the new systems are installed. It is a valid conclusion that bidders will not be responsible to remove/depopulate the existing hardware as part of their scope of work.

Q 56. Annex B Performance Specifications - Section 2.1

As a minimum as part of MIL-STD-188-141 ALE:

1. To reach a specific station, the operator should enter the ALE Address within the operator console GUI to initiate the linking. . On many ALE radios this is similar to dialing a phone number.
2. Upon successful linking, the receiving station generally emits an audible alarm and shows a visual alert to the operator, thus indicating the incoming call. It also indicates the call sign or other identifying information of the linked station, similar to [Caller ID](#).
3. The operator then un-mutes the radio and answers the call then can talk in a regular conversation or negotiates a data link using voice or the ALE built-in short text message format. Alternatively, digital data can be exchanged via a built-in or external modem (serial tone modem) depending on needs and availability. The ALE built-in text messaging facility can be used to transfer short text messages as an "orderwire" to allow operators to coordinate external equipment such as phone patches or non-embedded digital links, or for short tactical messages.

None of these interactions between the operators and the ALE radios are specified in the RFP, whether as part of Appendix A3 describing the full range of HF RRC (Remote Radio Control) parameters exchanged with the radios or as part of the GUI specified in 12.2 Annex B.

Can Appendix A3 and 12.2 Annex B be revised to define the ALE related GUI and RRC messages in XML format required by the HF Audio replacement system to handle ALE?

A56. Annex B is written with the intent to require that the HF Audio System hardware be compatible with MIL-STD-188-141 ALE. However, the synopsis of ALE operation provided in the above question is accurate, and is required by Paragraph 2.1 of Annex B. There are a number of pre-built ALE GUIs on the market, so the exact nature of the GUI was not specified in the performance specification. This is to allow maximum design flexibility to the bidders.

Q57. **Reference Annex B - Section 5.1**

Is it correct, that the term “transmitter control processor” stands for the RCP at the transmitter site?

Our understanding of the system functionality is that the PTT signalling will always go to the transmitter directly without the involvement of the RCP.

So the functionality behind this requirement is not clear. Can you please clarify?

A57. This understanding of Annex B Section 5.1 is correct.

Annex B Section 5.1 has been modified to delete “(not via the transmitter control processors)”

Q58. **Reference Annex B - Para 6.1.**

Having in mind that the criticality and availability of the CFSCE and HF Dev Lab are not on the same level as the ones for the operational system and in order to provide to DND an efficient economical offer, please confirm that for the CFSCE and for HF Dev Laboratory, no redundancy for CIPISM and RIPI is required.

A58. Redundancy for all CIPISMs and RIPIs is mandatory therefore there have not been any system architecture exceptions made for the CFSCE or for the HF Dev Laboratory requirements, unless specifically described in Annex B.