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800 De la Gauchetière St. West  
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H5A 1L6

Module de réception des  
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Place Bonaventure, 7<sup>e</sup> étage  
Portail Sud-Est  
800 rue De la Gauchetière Ouest  
Montréal, Québec, Canada  
H5A 1L6

**SOLICITATION ADMENDMENT  
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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Space Programs Directorate (MTD Division)  
6767 route de l'Aéroport  
Longueuil, Quebec, Canada  
J3Y 8Y9



<b>Titre – Sujet</b> <b>Multi-mission Antenna Reservation System (ARS) for the Canadian Space Agency (CSA)</b>	
<b>Solicitation No. - N° de l'invitation</b> 9F044-14-0394	<b>Amendment No. - N° modif.</b> 007
<b>Client Reference No. - N° de référence du client</b> 9F044-14-0934	<b>Date</b> September 23, 2015
<b>GETS Ref. No. - N° de réf. de SEAG</b>  PW-15-00690227	
<b>File No. - N° de dossier</b> 9F044-14-0934	<b>CCC No./N° CCC - FMS No/N° VME</b> N/A
<b>Solicitation Closes - L'invitation prend fin :</b> <b>at - à</b> <b>2:00 pm</b> <b>On - le</b> <b>Thursday, October 8, 2015</b>	<b>Time Zone Fuseau horaire</b> Eastern Daylight Time (EDT)
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<b>Telephone No. - N° de téléphone</b> 450-926-5173	<b>E-mail address - Adresse Courriel</b> pierre.letendre@tpsgc-pwgsc.gc.ca
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> Canadian Space Agency 6767 route de l'Aéroport Longueuil, Quebec, Canada J3Y 8Y9	

**Instructions :** See Herein  
**Instructions :** Voir aux présentes

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<b>Signature</b>	<b>Date</b>

## **PROJECT TITLE**

### **Multi-mission Antenna Reservation System (ARS) for the Canadian Space Agency (CSA)**

This Amendment 007 provides answers to additional questions raised by potential Bidders as of September 21, 2015 (Section 1).

This Amendment 007 also provides a correction to the RFP document as a result of questions raised by potential Bidders (Section 2).

**ALL OTHER TERMS AND CONDITIONS OF THE RFP REMAIN UNCHANGED.**

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## **AMENDMENT 007 – SECTION 1: ANSWERS TO QUESTIONS RECEIVED**

- 42. [ARS072] (Attitude Model Propagation): What is the expected interface regarding attitude modeling? For instance, this could require implementation of attitude algorithms specific to individual satellites and on-board transmitter gimbals (algorithms themselves or blackbox solutions), incorporation of a finite set of satellite modes/orientations (i.e., sun-pointing v. acquisition profile along with use CONOPS) for particular missions, ingest of attitude profiles provided by missions entities routinely, some combination of these, etc...**

*Answer: A combination of it. The solution is the incorporation of a finite set of satellites modes/orientations. A default mode could be defined for routine operations. However, it should also be possible to call for an external model (black-box solution).*

- 43. [ARS710] (Deployability): This requirement's intent appears to be to limit the overall size and scale of ARS by ensuring it can be deployed to a single desktop workstation. For server-based solution, is a single rack hardware deliverable (containing a variety of equipment) acceptable or does the solution need to include desktop workstations?**

*Answer: The software is expected to reside and execute on a single platform. For a server-based system, the ARS must come with a client access, but does not need to include a desktop workstation.*

- 44. Should the delivered ARS be entirely standalone or should the proposal recommend and/or account for some level of integration into a larger network regarding enterprise level services such as anti-virus protection, FTP services, networking infrastructure, etc.?**

*Answer: The ARS will be integrated into a larger network. Virus protection is required as per the SOW.*

- 45. [ARS580] (Live Schedule Board): What is the expected method by which ARS will supply LSB reference information? Will LSB need access to ARS data directly or is it expected that ARS will send (or otherwise provide) LSB contact schedules and other pertinent files similar to sending files to a mission or facility?**

*Answer: The ARS must provide the schedule in a file readable by the LSB as per the ICD. The file would have to be pushed on a specific drive on the network shared by the LSB.*

- 46. In regards to SOW p.13, does the Canadian Space Agency expect the separate sections by distinct files, or can a merged electronic copy be acceptable.**

*Answer: (We are assuming that the question pertains to the format of CDRL-EN3). This is left to the Bidder. A merged electronic copy would be acceptable for as long as all the requirements are covered in the ARS System Design Document (CDRL-EN3).*

- 47. In terms of liability: 2040 26 (2008-05-12) of the SACC Manual provides that “The Contractor is liable for any damages caused by the Contractor, its employees, subcontractors, or agent to Canada or any third party. [...] The Parties agree that not limitation of liability or indemnity provision applies to the Contract unless it is specifically incorporated in full text in the Articles of Agreement”. Would you consider adding a limitation of liability to the Contract for any damages caused by the Contractor, its employees, subcontractors, or agent to Canada or any third party other than for injury to persons or loss of or damage to property?**

*Answer: No. Canada is applying its standard policy in that respect.*

**48. If delivering an option includes hardware purchase, how many years of hardware support costs should be included in the option price? Should any of the optional hardware support costs be included in Price 8?**

*Answer: Each option price must be inclusive of all costs, including additional hardware purchase costs pertaining to that option. Price 8 must not include any of the optional hardware support costs as such services are not required from the Contractor. Under Price 8, Canada is procuring support and maintenance services only for the "Custom ARS Software" to be built by the chosen ARS Contractor and not for any hardware or COTS software that is part of the proposed ARS solution.*

**49. Where should additional labour costs associated with the maintenance and support of the optional software be included; in the option price, for up to 5 years, or in the support prices (8)?**

*Answer: Additional labour costs associated with the maintenance and support of the optional software is to be included in price 8 (for up to five year). In establishing their price for price 8, Bidders must assume that Canada would procure all options and would require support for such options for up to five years as well.*

**50. Does Canada wish to see the price to purchase the hardware and for up to 5 years of hardware support for the 'Additional device' included in Price 7a?**

*Answer: No. 7a is meant to only address the cost of software licenses. If need be (depending on the type of solution proposed by the Bidder and on Canada future needs), the cost of such "Additional device" hardware and related hardware support would be negotiated with the chosen ARS Contractor in due time.*

**51. What assumptions can Bidders make about the CSA security architecture & infrastructure when designing and planning the installation of hardware solutions related to Option 5, Reservation Web-based Interface?**

*Answer: The ARS would be residing on the CSA operational network and be protected behind firewalls. Web-based interface is assumed to be validated and to work seamlessly within the network. External web access will be addressed by the network administrator after commissioning of ARS.*

**52. In cell F73 on the price spreadsheet "Firm Fixed Per Diem Rates for original contract period", the formulae embedded in the spreadsheet imply that the column should in fact contain hourly rates and not per diems. Could Canada please clarify what is required in column E?**

*Answer: Cell F73 should have read "Level of Effort assumption (in days)". Bidders are thus to enter in cell E73 per diem rates for 8 hours of work for the initial contract period.*

**53. DID-102 on page 32 of the SOW defines the required Work Breakdown Structure and Work Package Descriptions. Please provide clarification for the following:**

- a) **"The Contractor must prepare and maintain a WBS Dictionary made up of Work Package Descriptions (WPDs) for every element to the lowest level of the WBS". Is a WPD required for every element in the WBS, or should this requirement state "for every element at the lowest level of the WBS"?** Answer: *It must be for every element at the lowest level of the WBS. Such correction is introduced through this Amendment 007 (under Section 2)*
- b) **"Each WPD must include, as a minimum ..."** Is it required that every WPD field listed (a thru l) be completed at the time of proposal submission? Answer: *This DID-102 covers CDRL PM-2 which is required as an Initial Release at Proposal Submission as per Table A-2.*

**54. From AD2 (p24): "Event 3. Generation of Contact Opportunity Schedule: Upon reception of stimuli (a) [contact opportunity request] from Event 1, the ARS generates a Contact Opportunity Schedule from the Compliant Satellite Contact List and the previous Committed Schedule, then sends back a Request Validity Report to the Mission." Should this be "Contact Opportunity Report" instead of "Request Validity Report"?**

*Answer: Indeed, this should read "Contact Opportunity Report" instead of "Request Validity Report". Such correction is introduced through this Amendment 007 (under Section 2).*

**55. AD2 ARS078 (p31): "The ARS shall automatically compute and return the Contact Opportunity Schedule upon reception of Contact Opportunity Request from a mission." Could you please provide clarification on the definition of Contact Opportunity Schedule? Also, ARS365 states that the Contact Opportunity Schedule computation time must be within 1 minute while ARS406 states that the Contact Opportunity Report must be transmitted within 1 minute after reception of a request. As it appears the Contact Opportunity Schedule is generated as the raw form of the Contact Opportunity Report, does ARS406 encompass ARS365 such that the Contact Opportunity Schedule generation needs to occur within sufficient time to allow for report transmission within 1 minute of request receipt?**

*Answer: Contact Opportunity Schedule is defined in 2.2 Terminology Definitions and also described in AD-3 ICD p.33. Yes, the Contact Opportunity Schedule is generated as the raw form of the Contact Opportunity Report and ARS406 encompasses ARS365 such that the Contact Opportunity Schedule generation needs to occur within sufficient time to allow for report transmission within one minute of request receipt.*

## **AMENDMENT 007 – SECTION 2: CORRECTIONS TO THE RFP PACKAGE:**

- 12. SOW, Appendix B, DID-102 – Preparation Instructions, 3<sup>rd</sup> paragraph, 1<sup>st</sup> sentence is modified as such:**

The Contractor must prepare and maintain a WBS Dictionary made up of Work Package Descriptions (WPDs) for every element at the lowest level of the WBS.

- 13. Change to document AD-2, Article 4.1: Generation of Contact Opportunity**

Event 3: Generation of Contract Opportunity Schedule: Upon reception of stimuli (a) from Event 1, the ARS generates a Contact Opportunity Schedule from the Compliant Satellite Contact List and the previous Committed Schedule, and then sends back a Contact Opportunity Report to the Mission.

**\*\*\*END OF AMENDMENT 007\*\*\***