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When replying please quote:

Ref.: NT-NT4-4.52, NT-NS2-35 — **E.OSG - NACC61057**

31 May 2016

To: States, Territories and International Organizations

Subject: **Invitation to the Workshop for the Implementation of Navigation Infrastructure to Support Performance-Based Navigation (PBN) and Global navigation satellite system (GNSS) Precision Approach Operations in the NAM/CAR/SAM Regions - Project RLA/09/801 – Multi-Regional Civil Aviation Assistance Programme (MCAAP)**  
(Lima, Peru, 15 to 17 August 2016)

Action

Required: **Register participants by 15 July 2016**

Sir/Madam,

I wish to invite your Administration/Organization to participate in the Workshop for the Implementation of Navigation Infrastructure to Support Performance-Based Navigation (PBN) and Global navigation satellite system (GNSS) Precision Approach Operations in the NAM/CAR/SAM Regions, to be held in Lima, Peru from 15 to 17 August 2016.

The workshop objective is to provide technical and operational information to the States, Air Navigation Service Providers (ANSP) and users for the effective implementation of the air navigation infrastructure to support PBN and GNSS precision approach operations.

The workshop is designed to support the implementation of Aviation System Block Upgrade (ASBU) B0 modules mainly: B065/APTA- *Optimization of approach procedures including vertical guidance*, B0-10/ FRTO *Improved Operations through Enhanced En-Route Trajectories*, B0-05/CDO: *Improved Flexibility and Efficiency in Descent Profiles* and B0-20/CCO *Improved Flexibility and Efficiency in Departure Profiles - Continuous Climb Operations*.

The workshop will consist of presentations by subject matter experts on navigation infrastructure of the States, industry and ICAO with wide experience in global and regional implementation, standards and documents of ICAO, current status and evolution of navigation infrastructure to support PBN and GNSS precision approach operations. Information on ionospheric and troposphere effects on GNSS and ground and flight testing considerations will also be presented.

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This event is mainly oriented to authorities, planners and specialists in the management of air navigation systems, particularly on navigation systems, specialists in the installation, maintenance or operation of navigation systems, inspectors in flight pilots' navigation systems and maintenance personnel of commercial aviation.

The draft agenda is attached under **Attachment A**. The final version of the agenda will be placed in the Meetings Section of the following web page: <http://www.icao.int/NACC/Pages/default.aspx> as it becomes available. The general information for this event including the venue and hotel recommendations are available.

I am pleased to invite your Administration/Organization to participate in this event, by sending to this Regional office the participants registration form (**Attachment B**), not later than **15 July 2016**.

Please be aware that the event will be carried out in Spanish with simultaneous interpretation services in English. No documentation is foreseen for distribution during the event; therefore, it is recommended that participants bring a lap-top.

Kindly inform whether your Administration/Organization plans to send contributions to the workshop in the form of presentations, no later than **22 July 2016**.

Furthermore, in accordance with the 2016 Activities Plan approved by the Steering Committee of the Regional Technical Cooperation Project for the Caribbean Region – *Multi-Regional Civil Aviation Assistance Programme (MCAAP) (RLA/09/801)*, I am pleased to inform that the Project is offering for this event one fellowship to each Project Member<sup>1</sup>.

The fellowship includes Daily Subsistence Allowance (DSA) to cover lodging and per diem. Your Administration shall provide the candidate with the air ticket to/from Lima, Peru, and ensure that the candidate has the necessary travel documents, vaccinations, and visa prior to departure. The duly completed Fellowship Nomination Form must be received in this Regional Office by **25 July 2016**. The steps to apply for a fellowship, the nomination form and other useful information are published on the Project RLA/09/801 website at: <http://www.icao.int/NACC/Pages/edocs-tc.aspx>.

Regarding the fellowship offered to the Eastern Caribbean States through ECCAA, please note that the candidate appointment decision should be made between your Administration and ECCAA. Once coordination has been completed, the nomination form of the candidate representing the Eastern Caribbean States **should be sent to this Regional Office by ECCAA**.

To participate in the workshop, your Administration might consider the previous financing alternative, fellowships under an ICAO Project approved by your country; or own resources of your Administration.

It is worth mentioning that this event is made possible through the contribution of your State to Regional Project RLA/09/801, as part of the annual fee sent to ICAO has been established for this purpose.

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<sup>1</sup> *RLA/09/801 Project Member States are: Bahamas, Barbados, Cuba, Curaçao, Dominican Republic, Haiti, Jamaica, Mexico, OECS States through ECCAA (Antigua and Barbuda, Grenada, Saint Kitts and Nevis, Saint Lucia and Saint Vincent and the Grenadines), Trinidad and Tobago and Central American States through COCESNA (Belize, Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua).*

If you require further information, please contact Mr. Julio Siu, Deputy Regional Director of the ICAO NACC Regional Office (jsiu@icao.int).

Accept, Sir/Madam, the assurances of my highest consideration.

A blue digital signature of Melvin Cintron is overlaid on a circular ICAO logo. The logo contains the text 'ICAO - OACI - HKAO' and 'FIRMA Digital' on the left and 'Digital Signature' on the right.

for  
Melvin Cintron  
Regional Director  
North American, Central American and  
Caribbean (NACC) Regional Office

**Enclosure:**

*As indicated*

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## ATTACHMENT A

### WORKSHOP FOR THE IMPLEMENTATION OF NAVIGATION INFRASTRUCTURE TO SUPPORT PBN AND GNSS PRECISION APPROACH OPERATIONS IN THE NAM/CAR/SAM REGION

(Lima, Peru 15 to 17 August 2016)

#### DRAFT AGENDA

**SESSION 1: GLOBAL AND REGIONAL IMPLEMENTATION CONSIDERATION OF NAVIGATION INFRASTRUCTURE TO SUPPORT PBN AND GNSS PRECISION APPROACH OPERATIONS IN THE NAM/CAR/SAM REGIONS**

- Global Air Navigation Plan consideration on navigation infrastructure to support PBN and GNSS precision operations
- Regional Air Navigation Plans implementation consideration on navigation infrastructure to support PBN and GNSS precision operations in the NAM/CAR and SAM Regions

**SESSION 2: ICAO STANDARDS AND RECOMMENDED PRACTICES (SARPS) AND DOCUMENTATION OF NAVIGATION INFRASTRUCTURE TO SUPPORT PBN AND GNSS PRECISION APPROACH OPERATIONS**

- ICAO SARPs and documentation on navigation infrastructure to support PBN and GNSS precision operations
- Considerations of radiofrequency spectrum of the navigation infrastructure

**SESSION 3: CURRENT GNSS SITUATION AND EVOLUTION**

- Ground-Based Augmentation System (GBAS) current situation and evolution
- GBAS world implementation
- Brazilian GBAS experience
- Satellite-Based Augmentation System (SBAS) current situation and evolution
- SBAS world implementation
- SBAS NAM/CAR/SAM experience
- GNSS integrity implementation (Receiver autonomous integrity monitoring (RAIM) availability prediction tool)

**SESSION 4: IONOSPHERIC AND TROPOSPHERIC EFFECTS ON GNSS**

**SESSION 5: GROUND AND FLIGHT TESTING CONSIDERATION**

- Current situation of Flight Inspection Unit in the NAM/CAR/SAM Regions
- Evolution of ground and flight testing

**SESSION 6: FINAL RECOMMENDATIONS AND CONCLUSION**

Workshop of final recommendation and conclusion

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North American, Central American and Caribbean Office (NACC)  
Oficina para Norteamérica, Centroamérica y Caribe (NACC)

**Workshop for the Implementation of Navigation Infrastructure to support PBN and GNSS precision approach operations in the NAM/CAR/SAM Region**

**Taller para la Implementación de Infraestructura de Navegación para Soportar PBN y las Operaciones de Aproximación de Precisión GNSS (PBN/GNSS)**

Lima, Peru, 15 to 17 August 2016 / Lima, Perú, 15 al 17 de agosto de 2016

**REGISTRATION FORM / FORMULARIO DE REGISTRO**

1.	<b>Position in your Delegation:</b> <i>(Please select one option)</i>	<b>Chief Delegate /</b> <b>Jefe de la Delegación</b>		<b>Delegate / Delegado</b>	
	<b>Posición dentro de su Delegación:</b> <i>(Por favor seleccione una opción)</i>	<b>Adviser / Asesor</b>		<b>Observer / Observador</b>	
		<b>Speaker / Conferencista</b>		<b>Moderator / Moderador</b>	
2.	<b>Country / Organization</b> <b>País / Organización</b>				
3.	<b>Salutation / Encabezamiento</b>	<b>Mr. / Sr.</b>		<b>Mrs. / Sra.</b>	<b>Miss / Srta.</b>
4.	<b>Name / Nombre</b>				
5.	<b>Official Position or Title /</b> <b>Cargo o Título Oficial</b>				
6.	<b>Official Telephone / Teléfono oficial</b>				
7.	<b>Mobile (to contact you in case of an emergency)</b> <b>Celular (para contactarle en caso de emergencia)</b>				
8.	<b>Official E-mail / Correo-e oficial</b>				
9.	<b>Hotel and address where you will be staying during the event / Hotel y dirección donde se estará hospedando durante el evento</b>				
10.	<b>Please indicate if accompanied by your family</b> <b>Por favor indique si lo acompaña su familia</b>	<b>Yes / Sí</b>		<b>#</b>	
11.	<b>Dates of total stay in the venue Country</b> <b>Fechas de estancia total en el País del evento</b>				
12.	<b>Please indicate if you have any medical condition or allergies / Por favor indique si usted tiene alguna condición médica o alergias</b>				
13.	<b>Emergency contact information in your country of origin /</b> <b>Información de contacto para emergencias en su país de origen</b>	<b>Name</b> <b>Nombre</b>			
		<b>Relationship</b> <b>Relación</b>			
		<b>Telephone</b> <b>Teléfono</b>			

Please send this form to: / Por favor envíe este formulario a:

E-mail: [icaonacc@icao.int](mailto:icaonacc@icao.int); [icaosam@icao.int](mailto:icaosam@icao.int)

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