When replying please quote:

Ref.: NT-N1-8.3.13 — **EMX0077**   6 February 2014

To: States, Territories and International Organizations

Subject: **Invitation – ICAO/FAA Workshop on ADS-B and Multilateration Implementation (ADS-B/IMP)**
             Mexico City, Mexico, 19 to 22 May 2014

             ADS-B Task Force Follow-up Meeting
             Mexico City, Mexico, 23 May 2014

Action
Required:

      1)   Submission of presentations by the deadlines provided in this letter
      2)   Register participation by **30 April 2014**
      3)   CAR Project Members: submit fellowship nomination form by **28 April 2014**

Sir/Madam:

      I have the honour to invite your administration/organization to participate in the ICAO/FAA Workshop on ADS-B and Multilateration Implementation (ADS-B/IMP) to be convened at the ICAO NACC Regional Office, Mexico City, Mexico, from 19 to 22 May 2014. The event will be organized by ICAO and the United States Federal Aviation Administration (FAA), and supported by Servicios a la Navegación en el Espacio Aéreo Mexicano (SENEAM) Mexico who will host a visit to their ADS-B facilities at the Mexico City International Airport.

      The workshop refers to the Regional Performance Objectives (RPOs) of the NAM/CAR Regional Performance-Based Air Navigation Implementation Plan (NAM/CAR RPBANIP); specifically, RPO 4 - *Improve Situational Awareness*; implementation of ICAO Aviation System Block Upgrades (ASBUs) B0 modules: B075/SURF - *Safety and Efficiency of Surface Operations*; B084/ASURF - *Initial Capability for Ground Surveillance*; the promotion of radar data sharing; Automatic Dependent Surveillance-Broadcast (ADS-B) activities in the NAM/CAR Regions; and Conclusion 3/6 - *ADS-B trials and analysis in the CAR Region* from the Third North American, Central American and Caribbean Working Group Meeting (NACC/WG/3).

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The main objectives of the workshop are:

- Provide a complete overview of ADS-B and Multilateration concepts
- Explain the importance of ADS-B and Multilateration as technical enablers for ICAO ASBUs
- Provide operational guidance for these surveillance techniques
- Promote ADS-B activities - trials and operational implementation - with identification of any concern/limitation for State implementation, and agreements for the regional implementation ADS-B target date
- Provide information on aspects to be considered in the planning and implementation of ADS-B surveillance and Multilateration systems

The event is designed for technical and operational professionals dedicated to the planning, use, and implementation of surveillance systems and situational awareness improvements; staff that are involved in the planning or replacement of radar systems; users of surveillance systems within States/Territories; and representatives of international organizations in the NAM/CAR Regions.

After the workshop, and in coordination with the NAM/CAR Air Navigation Implementation Working Group (ANI/WG) and the ADS-B Task Force Rapporteur, Mr. Carlos Jimenez, a follow-up meeting of the ADS-B Task Force is scheduled on 23 May 2014, at the ICAO NACC Regional Office in Mexico City, Mexico. All workshop participants and ADS-B Task Force members are invited to attend.

The working languages of the workshop and meeting will be English and Spanish, and simultaneous interpretation will be provided if sufficient participants of both languages provide timely registration.

The Provisional Programme of the workshop is at **Attachment A,** and the meeting Draft Agenda is at **Attachment B**.

You are kindly requested to complete and return the Registration Form at **Attachment C** for each participant by e-mail by **30 April 2014.**

The list of suggested hotels, ICAO NACC Regional Office location, and hotel sector maps as well as other useful information are available on the *"Visiting Our Office?"* Section of the ICAO NACC Regional Office website (http://www.icao.int/NACC/Pages/visitors_info.aspx). Participants are encouraged to make reservations directly with the hotel(s) in a timely manner.

States/Territories/international organizations are also invited to share their experience with implementation of these systems and support the workshop with a 20-minute presentation. Presentations that your administration/organization may wish to submit/present at the event should be forwarded to this Regional Office by e-mail in PowerPoint format no later than **25 April 2014**.

Furthermore, in accordance with the 2013-2016 Activities Plan of the Regional Technical Cooperation Project for the Caribbean Region – *Implementation of the Performance Based Air Navigation Systems for the CAR Region (RLA/09/801)*, I am pleased to inform you that this event is offering one fellowship to each Project Member[1].

Considering the above, your Administration is invited to propose a candidate for award of a fellowship *as soon as possible*. The fellowship includes daily subsistence allowance (DSA) to cover lodging and expenses; your Administration shall provide the candidate with the air ticket to/from Mexico City, Mexico, and ensure that the candidate has the necessary travel documents, vaccinations, and visa prior to departure.

Regarding fellowships 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**.

Please provide confirmation as to whether your Administration is interested in proposing a fellowship candidate to attend the ICAO/FAA Workshop on ADS-B and Multilateration Implementation (ADS-B/IMP) as soon as possible. You should return the Fellowship Nomination Form (**Attachment D**) duly completed to this Regional Office by **28 April 2014**.

A fellowship form must be completed for each nominee. All pages must be completed, including your Administration's signature and seal (page 2), as well as the doctor's signature who performs the medical examination on the medical portion of the form (page 6). Submit the Fellowship Nomination Form to the e-mail addresses provided below:

> **ICAO NACC Regional Office**
> Mr. Julio Garriga
> Regional Officer, Technical Cooperation
> Ms. Claudia López
> Technical Cooperation Associate
> icaonacc@icao.int; jgarriga@icao.int; clopez@icao.int;

If you require any further information regarding the workshop, please contact Mr. Julio Siu, Regional Officer, Communications, Navigation and Surveillance (jsiu@icao.int), and/or his assistant Ms. Lizette Morales (lmorales@icao.int).

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[1] ***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).*

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

Loretta Martin
Regional Director
North American, Central American and
Caribbean (NACC) Regional Office

Enclosure:
A – Provisional Programme
B – Draft Agenda
C – Registration Form
D – Fellowship Nomination Form

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International Civil Aviation Organization
Organización de Aviación Civil Internacional
North American, Central American and Caribbean Office (NACC)
Oficina para Norteamérica, Centroamérica y Caribe (NACC)
ICAO/FAA Workshop on ADS-B and Multilateration Implementation
Taller OACI/FAA sobre Implementación ADS-B y Multilateración
Mexico City, Mexico, 19 to 22 May 2014 / **Ciudad de México, México, 19 al 22 de mayo de 2014**

PROGRAMME / PROGRAMA

DAY ONE / DÍA UNO *Monday 19 May 2014 / Lunes 19 de mayo de 2014*

08:30 – 09:00	Registration / Registro
09:00 – 09:30	Opening Ceremony / Ceremonia de Apertura **Opening Remarks / Palabras de apertura** • *Loretta Martin* *Regional Director International Civil Aviation Organization – ICAO* *Directora Regional, Organización de Aviación Civil Internacional – OACI*
	Group Picture / Foto de Grupo
09:30 – 10:30	• ***Module 1: ICAO Presentation - Introduction to ADS-B matters / ASBU Implementation*** ***Módulo 1: Presentación de la OACI - Introducción a cuestiones de ADS-B / Implementación ASBU*** • ***Module 2: Introduction to Surveillance*** ***Módulo 2: Introducción a la Vigilancia*** *- Surveillance Definition / Definición de Vigilancia* *- Surveillance Techniques Definition / Definición de Técnicas de Vigilancia*
10:30 – 11:00	*Coffee Break / Pausa para el Café*
11:00 – 12:30	• ***Module 2: Introduction to Surveillance (cont.)*** ***Módulo 2: Introducción a la Vigilancia (cont.)*** *- Surveillance Categories Definition / Definición de Categorias de Vigilancia* *- Knowledge of Surveillance Chain / Conocimiento de Cadena de Vigilancia* *- Background Information about mandates / Antecedentes de información sobre mandatos*
12:30 – 13:30	*Lunch Break / Pausa para el Almuerzo*
13:30 – 14:30	• ***Module 3: Introduction to ADS-B*** ***Módulo 3: Introducción a ADS-B*** **-** *ADS, ADS-B OUT, ADS-B IN and ADS-B Technology Definitions / Definiciones de ADS, ADS-B OUT, ADS-B IN y tecnologías ADS-B*
14:30 – 15:00	*Coffee Break / Pausa para el Café*
15:00 – 16:00	• ***Module 3: Introduction to ADS-B (cont.)*** ***Módulo 3: Introducción a ADS-B (cont.)*** *- ADS-B Applications / Aplicaciones ADS-B* *- Mandate Situation / Situación de Mandato*

DAY TWO / DÍA DOS *Tuesday 20 May 2014 / Martes 20 de mayo de2014*	

09:00 – 10:30	• ***Module 4: Introduction to Multilateration (MLAT)*** *Módulo 4: Introducción a Multilateración (MLAT)* **-** *Purpose of Wide-Area Multilateration(WAM) / Propósito de Multilateración de Área amplia (WAM)* - Purpose for Surface Movement / Propósito para movimiento de superficie - Multilateration Concept / Concepto de Multilateración
10:30 – 11:00	***Coffee Break / Pausa para el Café***
11:00 – 12:30	• ***Module 4: Introduction to Multilateration (MLAT) (cont.)*** *Módulo 4: Introducción a Multilateración (MLAT) (cont.)* **-** *Arrival Time Difference / Diferencia horaria de llegada* **-.***Target Detection and Tracking /Detección y seguimiento de objetivo* **-** *Conclusion / Conclusión*
12:30 – 13:30	***Lunch Break / Pausa para el Almuerzo***
13:30 – 16:00	• *Visit to SENEAM ADS-B facilities / Visita a instalaciones ADS-B de SENEAM*

DAY THREE / DÍA TRES *Wednesday 21 May 2014 / Miércoles 21 de mayo de2014*	

09:00 – 10:30	• ***Module 5: Avionics*** *Módulo 5: Aviónica* **-** *Avionics Defiition / Definición de Aviónica* - *Certification Process / Proceso de Certificación* - *On-board Surveillance Equipment / Equipo de vigilancia a bordo*
10:30 – 11:00	***Coffee Break / Pausa para el Café***
11:00 – 12:30	• ***Module 6: Safety Overview (P13)*** *Módulo 6: Visión general de Seguridad Operacional (P13)* **-** *Safety Definition / Definición de Seguridad Operacional* - *Safety Management System / Sistema de Gestión de Seguridad Operacional* - *Safety Risk Management / Gestión de Riesgos de la Seguridad Operacional*
12:30 – 13:30	***Lunch Break / Pausa para el Almuerzo***
13:30 – 14:30	• ***Module 7: SUR CHAIN Integration of ADS-B/MLAT*** *Módulo 7: CADENA SUR Integración de ADS-B/MLAT* **-** *Surveillance Chain Overview /Visión general de la cadena de Vigilancia* - *ASTERIX / ASTERIX*
14:30 – 15:00	***Coffee Break / Pausa para el Café***
15:00 – 16:00	• ***Module 7: SUR CHAIN Integration of ADS-B/MLAT (cont.)*** *Módulo 7: CADENA SUR Integración de ADS-B/MLAT (cont.)* **-** *Fusion / Fusión* - *Security / Seguridad* - *Conclusion / Conclusión*

ATTACHMENT/ADJUNTO A

DAY FOUR / DÍA CUATRO *Thursday May 22 2014 / Jueves 22 de mayo de2014*

09:00 – 10:30	• *Module 8: Implementation* *Módulo 8: Implementación* • *ICAO Presentation: Implementation Guidance for ADS-B and CAR/NAM Region Implementation* *Presentación OACI: Orientación de Implementación para ADS-B e Implementación en las Regiones CAR/NAM* • *Presentation: Example of ADS-B Implementation programme and WAM* *Presentación: Ejemplo de programa de implementación ADS-B y WAM* *-Phase 1 / Fase 1* *-Phase 2 / Fase 2* *-Phase 3 / Fase 3*
10:30 – 11:00	*Coffee Break / Pausa para el Café*
11:00 – 12:30	• *States / User Presentations* *Presentaciones de Estados / Usuarios*
12:30 – 13:30	*Lunch Break / Pausa para el Almuerzo*
13:30 – 14:30	• *States / User Presentations (cont.)* *Presentaciones de Estados / Usuarios (cont.)* • *Aircraft Manufacturers Presentation* *Presentaciónes de fabricantes de aeronaves*
14:30 – 15:00	*Coffee Break / Pausa para el Café*
15:00 – 16:00	• *Module 9: Wokshop Summary* *Módulo 9: Resumen del Taller* *Closing* *Clausura*

— END/FIN —

ADS-B TASK FORCE FOLLOW-UP MEETING

(ICAO NACC Regional Office, Mexico City, Mexico, 23 May 2014)

DRAFT AGENDA

Agenda Item 1   **Analyze making Task Force agreements based on the information received during the workshop**

        1.1   Identify the information needs that still may be necessary for implementation

        1.2   Review available technology, its performance and identify those that may be proposed for use as optimum ADS-B equipment

        1.3   Evaluate other technological requirements that may be required by member States for the implementation

        1.4   Assess necessary operational requirements for ADS-B implementation

        1.5   Discuss possibilities for Multilateration implementation by member States

        1.6   Analyze the possibility of ADS-B information exchange between neighboring States

Agenda Item 2   **Review the work programme and implementation timetable**

        1.1   Review dates for new deliverables

        2.2   Determine implementation dates

        2.3   Review the work programme contents and any updates to it

        2.4   Update the work programme implementation timetable

Agenda Item 3   **Other Business**

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