SAM/AIM/3

**INTERNATIONAL CIVIL AVIATION ORGANIZATION**
**South American Regional Office**

# THIRD MULTILATERAL MEETING OF THE SAM REGION FOR THE TRANSITION OF AIS TO AIM (SAM/AIM/3)

# FINAL REPORT

**Lima, Peru, 12 to 16 March 2012**

# INDEX

# HISTORY OF THE MEETING

## ii-1 PLACE AND DURATION OF THE MEETING

The Third Multilateral Meeting of the SAM Region for the Transition of AIS to AIM (SAM/AIM/3) was held at the ICAO SAM Regional Office, Lima, Peru, from 12 to 16 March 2012.

## ii-2 OPENING CEREMONY AND OTHER MATTERS

Mr. Franklin Hoyer, Regional Director of the ICAO South American Office, greeted the participants, and highlighted the importance of the objectives of the meeting, as regards consolidation of Phase 1 of the Roadmap for the Transition from AIS to AIM, and the beginning of AIM Projects for the provision of Electronic Terrain and Obstacle Data (e-TOD), aeronautical information/data management and the preparation of quality specifications applicable to the digital AIM environment.

The importance of Quality Assurance Management System (QAS) as a requirement of ICAO Annex 15 was highlighted and the effort of Chile in the re-certification of ISO 9001:2008 Standard was recognised, as well as the certification of this Standard in Brazil, Ecuador and Paraguay as regards AIP and MAP information.

The ICAO Regional Director also highlighted the importance of the assistance of experts and the important contribution of the same, recalling that the working methodology approved by GREPECAS is based on the States' support to Projects to carry out tasks for the transition from AIS to AIM.

The meeting had the opportunity to count with the presence of Eng. David Díaz, who made a presentation on the quality self-assessment of States and their progress in the implementation of the quality systems in AIM.

Also, the Regional Officer, CNS, Mr. Onofrio Smarrelli, made a presentation to the meeting on the new initiative of ICAO in the Aviation System Block Upgrade (ASBU).

## ii-3 SCHEDULE, ORGANIZATION, WORKING METHODS, OFFICERS AND SECRETARIAT

The Meeting agreed to hold its sessions from 0830 to 1530 hours, with appropriate breaks. The work was done with the Meeting as a Single Committee, contemplating the creation of Ad-Hoc Groups to deal with some items of the agenda, if deemed appropriate.

Mr. Oscar Dioses, from the Delegation of Peru, acted as President of the Meeting. Mr. Sergio García, delegate from Chile was elected as Vice-Chairman of the Meeting.

Mr. Roberto Arca Jaurena, RO/ATM/SAR/AIM from the Lima Regional Office, acted as Secretary.

ii-4 **WORKING LANGUAGES**

The working languages of the Meeting were Spanish and English, and its relevant documentation was presented in both languages. There was simultaneous interpretation during the sessions.

ii-5 **AGENDA**

The following agenda was adopted:

**Agenda Item 1: Transition Planning from AIS to AIM**

1.1 Status of implementation of the WGS-84 geodetic global plan, taking into consideration the new data products.
1.2 Status of implementation of a Quality Management System.
1.3 Status of effective compliance of the AIRAC System.
1.4 Status of provision of Electronic Terrain and Obstacle Data (e-TOD).
1.5 Implementation of Geographical Information Systems (GIS).
1.6 Progress in the Integrated Aeronautical Information Documentation (IAIP).
1.7 Electronic presentation of the aeronautical information publication (e-AIP).

**Agenda Item 2: Revision of AIM Projects in the SAM Region**

2.1 Tasks proposed for the execution of SAM Region AIM Projects G1, G2 and G3 will be updated.

**Agenda Item 3: NOTAM Contingency Plan**

3.1 Revision of the status of application of the letters of agreement for the utilisation of the NOTAM Contingency Plan

**Agenda Item 4: Other business**

ii-6 **ATTENDANCE**

The meeting was attended by 24 participants from 8 States of the SAM Region, Argentina, Bolivia, Brazil, Chile, Colombia, Peru, Suriname and Venezuela, and Jeppesen and NGA. The list of participants is shown in page iii-1.

**LIST OF PARTICIPANTS / LISTA DE PARTICIPANTES**

**ARGENTINA**

1. María de los Angeles Santuccione
2. Patricia Beatriz Dau
3. Sergio Fabian Mendilaharzu

**BOLIVIA**

4. Mery Frontanilla Vásquez

**BRASIL**

5. Airton Silva de Salles
6. Leonardo Coelho de Almeida

**CHILE**

7. Sergio García

**COLOMBIA**

8. Gladys Roa de la Cruz

**PERÚ**

9. Roger Soca Gómez
10. Héctor Chalán Vargas
11. Alfredo Harvey Palomino
12. Juan Carranza Polo
13. Mirian González Guerra
14. Evelyn Canches Iparraguirre
15. Sergio Rojas Hidalgo
16. Mirtha Ángeles Reque
17. Oscar Dioses García
18. Sara Siles La Rosa

**SURINAME**

19. Edam Lunette
20. Bienvenida Doorson

**VENEZUELA**

21. José Ramón Pacheco
22. Zumila Colmenares

**JEPPESEN**

23. Blanca Lara

**NGA**

24. Fred Calfior

**OACI**

25. Roberto Arca

**Agenda Item 1: Transition Planning from AIS to AIM**

1.1 Status of implementation of the WGS-84 geodetic global plan, taking into consideration the new data products.
1.2 Status of implementation of a Quality Management System.
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1.4 Status of provision of Electronic Terrain and Obstacle Data (e-TOD).
1.5 Implementation of Geographical Information Systems (GIS).
1.6 Progress in the Integrated Aeronautical Information Documentation (IAIP).
1.7 Electronic presentation of the aeronautical information publication (e-AIP).

1.1 The Meeting recognised the importance of quickly eliminating AIS deficiencies in the Region, especially those directly affecting compliance with the SARPs contained in ICAO Annexes 4 and 15.

1.2 In this regard, the Meeting highlighted the importance of full implementation of WGS-84 and the quality assurance system; effective compliance with the AIRAC system; the provision of electronic terrain and obstacle data (e-TOD); the implementation of geographical information systems (GIS); and the need for an Integrated Aeronautical Information Package (IAIP).

1.3 Accordingly, the level of resolution of the deficiencies in the States of the Region should be measured in order to identify those areas in which States must make greater efforts, so that their deficiencies will not have a negative impact on performance-based navigation (PBN) at regional level.

1.4 Regarding electronic presentation of aeronautical information (e-AIP), the Meeting felt that this task should be assigned to Project G2 – Aeronautical information/data.

1.5 The Meeting updated the information concerning status of implementation in the AIS-AIM Transition Roadmap, as shown in **Appendices A, B, C, D, E, and F**, to this part of the report. Likewise, the Secretariat was requested to send a note asking those States that had not updated the information required to do so in the aforementioned appendices, so as not to delay the migration to the AIM. The information corresponding to **Appendix E** will be sent to the coordinator of Project G1 in order to complete the information concerning the status of implementation of GIS in the Region.

## APÉNDICE / APPENDIX A

## SEGUIMIENTO DE LA IMPLANTACIÓN WGS/84 EN LA REGIÓN SAM / FOLLOW UP WGS/84 IMPLEMENTATION – SAM REGION

| ESTADOS /STATES | ARG | BOL | BRA | CHI | COL | ECU | GUY | FGU | PAN | PAR | PER | SUR | URU | VEN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Parte I – Información General / Part I – General Information** | | | | | | | | | | | | | | |
| 1. ¿Actualmente su administración dispone de una base de datos nacional que incluya información de coordenadas WGS-84? / Does your administration currently have a national database including information on WGS-84 coordinates? | N | N | Y* | * | Y | * | S/R | S/R | * | Y | Y* | N | Y | **N** |
| 2. ¿El método de levantamiento topográfico utilizado para calcular las coordenadas geográficas WGS-84 que garantice la precisión e integridad requerida se realizó con por lo menos tres estaciones de control para determinar los parámetros de referencia entre el marco de referencia local y el WGS-84? / Was the topographic method used to estimate WGS-84 coordinates to ensure accurateness and integrity required, made with at least three control stations to determine referential parameters in the local referential framework and the WGS-84? | Y | Y | * | Y* | Y | Y | S/R | S/R | Y | Y* | Y* | Y | Y* | Y |
| **Parte II – Coordenadas WGS84 de interés para la navegación aérea / Part II – WGS-84 coordinates of interest for air navigation** | | | | | | | | | | | | | | |
| **Coordenadas de zonas/en ruta / Area coordinates/en-route** | | | | | | | | | | | | | | |
| 1. Puntos en ruta ATS/RNAV / ATS/RNAV en-route fix | Y | Y | Y* | Y | Y | Y | S/R | S/R | Y | Y | Y | Y | Y | Y |
| 2. Puntos de referencia en ruta, /en-route reference fix | Y | Y | Y* | Y | Y | Y | S/R | S/R | Y | Y | Y | Y | Y | Y |
| Punto de espera; y / Holding pattern Fixed; and | Y | Y | Y* | Y | Y | Y | S/R | S/R | Y | N/A | Y | Y | Y | Y |
| puntos STAR/SID / STAR/SID fixed | Y | P | Y* | Y | Y | Y | S/R | S/R | Y | P | Y | N/A | Y | |
| 3. Radioayuda para la navegación en ruta/ en-route radio navigation aids | Y | Y | Y* | Y | Y | Y | S/R | S/R | Y | Y | Y | Y | Y | *Y |
| 4. Zonas restringidas/prohibidas/peligrosas Restricted/Prohibited/Dangerous areas | Y | N | Y* | Y | Y | Y | S/R | S/R | Y | N | Y | Y | Y | Y |

| ESTADOS /STATES | ARG | BOL | BRA | CHI | COL | ECU | GUY | FGU | PAN | PAR | PER | SUR | URU | VEN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5. Obstáculos en ruta/En-route obstacles | Y | Y | Y* | Y | Y | Y | S/R | S/R | Y | N/A | N | N | Y | **Y** |
| 6. Límites de la FIR / FIR boundaries | Y | Y | Y* | Y | Y | Y | S/R | S/R | Y | Y | Y | Y | Y | Y |
| 7. Límites de CTZ/CTA / CTZ/CTA boundaries | Y | Y | Y* | Y | Y | Y | S/R | S/R | Y | Y | Y | Y | Y | Y |
| 8.Otros puntos significativos que tengan relación con zonas / en ruta / Other significant points having relationship with en-route areas | Y | N | Y* | Y | Y | Y | S/R | S/R | Y | Y | Y | Y | N | Y |
| **Coordenadas de aeródromos/helipuerto / Aerodromes-heliport coordinates** | | | | | | | | | | | | | | |
| 1. Puntos de referencia de aeródromo/ helipuerto / Aerodrome-heliport reference point | Y | Y | Y* | Y | Y | Y | S/R | S/R | ** | Y ** | Y | Y | Y | Y |
| 2. Umbrales de pista / Runway thresholds | Y | Y | Y* | Y | Y | Y | S/R | S/R | Y | Y | Y | Y | Y | Y |
| 3. Extremo de pista (punto de alineación de la trayectoria de vuelo)/ Runway end (flight trajectory alignment fix | Y | Y | Y* | Y | Y | Y | S/R | S/R | Y | Y | Y | Y | Y | Y |
| 4. Área de aproximación final y de despegue (FATO) / Approach and departure final area (FATO) | Y | N | Y* | N/A | Y | Y## | S/R | S/R | **** | N | Y | Y | N/A | N/A |
| Umbrales de la FATO / FATO thresholds | Y | N | Y* | N/A | Y | Y## | S/R | S/R | **** * | N | Y | N | N/A | N/A |
| 5. Radioayuda para la navegación en el área terminal/ radio navigation aids in terminal areas | Y | Y | Y* | Y | Y | Y | S/R | S/R | Y | Y | Y | Y | Y | Y |
| 6. Radioayuda situada en el aeródromo/helipuerto/ Radio navigation aids located in the aerodrome/heliport | Y | Y | Y* | Y | Y | Y | S/R | S/R | Y | Y | Y | Y | Y | Y |
| 7. Puntos FAF; /Fixed FAF | Y | Y | Y* | Y | Y | Y | S/R | S/R | ** | Y *** | Y | Y | Y | Y |
| FAP; y/FAP and | Y | Y | Y* | Y | Y | Y | S/R | S/R | ** | Y *** | Y | Y | Y | Y |
| otros IAP esenciales/Other Essential IAP | Y | Y | Y* | Y | Y | Y | S/R | S/R | ** | Y *** | Y | Y | Y | Y |
| 8. Puntos en el eje de pista/ Runway centreline points | Y | N | Y* | Y | Y | Y | S/R | S/R | N | N | Y | N | Y | Y |
| 9. Puntos de eje de calle de rodaje/taxiway centreline points | **N** | N | Y* | Y | Y | N | S/R | S/R | Y | N | Y | N | Y | **N** |
| 10. Puntos de rodaje aéreo / air taxiing | **N** | N | Y* | N/A | Y | N | S/R | S/R | N | N | Y | N/A | N | **N** |
| 11. Puntos de vías de transito/air traffic points | **N** | N | Y* | N/A | Y | N | S/R | S/R | N | N/A | N | N/A | Y | Y |
| 12. Puestos de estacionamiento de aeronaves/Aircraft parking position | Y | P | Y* | Y | Y | Y | S/R | S/R | Y | Y **** | Y | N | Y | ***Y** |
| 13. Punto de verificación INS /INS checking fix | Y | N | Y* | Y | Y | N | S/R | S/R | N | N | N | Y | N | **N** |

| ESTADOS /STATES | ARG | BOL | BRA | CHI | COL | ECU | GUY | FGU | PAN | PAR | PER | SUR | URU | VEN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14. Obstáculos en el área de circuito y en el aeródromo/helipuerto/ Obstacles in the circuit area and in the aerodrome-heliport | Y | P | Y* | Y | Y | Y | S/R | S/R | *** | Y* | Y | Y | Y | Y |
| 15. Puntos de referencia y otros puntos esenciales para la aproximación final comprendido el procedimiento de aproximación por instrumentos/ Reference points and other Essentials fixes for final approach including instrument approach procedure | Y | Y | Y* | Y | Y | Y | S/R | S/R | ** | Y | Y | Y | Y | Y |

Y = Yes/SI
* = Ver comentarios / See comments
N = No
P = Parcialmente / Partially
N/A = Not applicable / No aplicable
S/R = without answer / sin respuesta

## COMENTARIOS DE LOS ESTADOS / COMMENTS BY STATES

| ESTADOS / STATES | COMENTARIOS / COMMENTS |
|---|---|
| ARGENTINA | *La información de coordenadas WGS-84 si bien se encuentra en formato digital, no está disponible en una base de datos nacional.<br>9, 10 y 11: Estos datos no están aun incorporados a las publicaciones.<br>The information of WGS-84 coordinates, while being in digital format; it is not available in a national data base.<br>9, 10 and 11: This data are not incorporated yet into the publications. |
| BOLIVIA | La información está en WGS-84; aún no existe una base de datos consolidada y está en proceso./ The information is in WGS-84; but it doesn't exist a consolidated data base yet and it is in process. |
| BRAZIL | *** Parte I Número 2/Part I Number 2** – El sector responsable de la encuesta de operaciones topográficas utiliza una estación única de control para determinar los criterios de referencia entre ARP y WGS-84. Encuesta sobre geodésica topográfica con rastreador (doble frecuencia), sobre la cuenta N° 5 IBGE resolución de 1993.03.31. Esta resolución asegura la precisión de las coordenadas, de acuerdo con los SARPS de OACI. / The sector responsible for the topographic survey operations uses a single control station to determine the reference standards between the ARP and WGS-84. Topographic geodetic survey with tracker (Double frequency), on account Nº 5 IBGE resolution of 1993.03.31. This resolution assures the accuracy of the coordinates, in accordance with ICAO SARPS.<br>***Parte II Número 1 al 15/Part II Number 1 to 15** – La resolución es más protectora de lo recomendado. Nosotros ponemos atención a la precisión requerida en todos los puntos que hayan sido aplicados o en la gran mayoría de puntos que nosotros presentamos con precisión mayor a la prescrita por OACI en el Anexo 4 (Apn.6, tablas 1 al 5). / The resolution is more protective than recommended. We attend the required accuracy in all applied items or on the great majority of the items we present accuracy greater than the prescribed by ICAO Annex 4 (Appendix 6, tables 1 to 5). |
| CHILE | 1. La información se encuentra en WGS-84, pero aún no existe una base de datos nacional consolidada/Information is in WGS-84 but there is not a consolidated national database yet.<br>2. Los levantamientos se han realizado en base a puntos pertenecientes a la red geodésica nacional del Instituto Geográfico Militar de Chile/Collection of information has been made based on points belonging to geodetically network from the Military Geographical Institute of Chile.<br>4, 10, 11 No se aplica, pero de ser necesario se pueden obtener en WGS-84 / 4, 10, 11, Not applicable but if necessary, they may be obtained in WGS-84. |
| COLOMBIA | Sin comentarios / No comment |
| ECUADOR | *Tenemos la información del levantamiento topográfico en WGS-84 de aeródromos, radio-ayudas, obstáculos, rutas, etc. Los mismos que se encuentran almacenados en un archivo digital e impreso/We have the information of the topographical rising in WGS-84de aerodromes, radio-navaids, obstacles, routes, etc. The same ones that is stored in a digital file and form.<br>*Los helipuertos nacionales la información que se publica en el AIP, no ha sido verificada su levantamiento en WGS-84/ The national heliports, the information that is published in the AIP, their rising has not been verified in WGS-84 |
| GUYANA | S/R |
| FRENCH GUYANA | S/R |

| ESTADOS / STATES | COMENTARIOS / COMMENTS |
|---|---|
| PANAMA | 1. Tenemos la información de los levantamientos, no tenemos base de datos electrónica con la información. de los aeródromos./ We have the information on the collection, we do not have electronic database with the information on aerodromes<br>2. puntos transformados en mesa, Programa GEOTRANS v2.2.5./points converted in GEOTRANS v2.2.5 programme<br>3. son objeto de levantamiento los obstáculos dentro del aeropuerto/obstacles in the airport are subject to collection.<br>4. los helipuertos nacionales el usuario proporciona las coordenadas WGS-84 y no podemos asegurar la integridad y precisión/national heliports. the user provides wgs-84 coordinates and we may not ensure integrity and accurateness. |
| PARAGUAY | 1. Levantamiento topográfico realizado por la DISERGEMIL./Topographic study made by DISERGEMIL<br>2. las coordenadas se obtuvieron con GPS diferencial./Coordinates were obtained with differential GPS<br><br>1. DISERGEMIL: DIRECCION DEL SERVICIO GEOGRAFICO MILITAR<br>2. PUNTOS OBTENIDOS MEDIANTE PROGRAMA IOPA 83 / OBTAINED WITH IOPA 83 PROGRAMME<br>3. ESTACIONAMIENTO EN MANGA SOLAMENTE / PARKING ON FINGER ONLY |
| PERU | 1. No se dispone de una base de datos estructurada a nivel nacional que incluya coordenadas en WGS-84, sin embargo se cuenta con información topográfica de las áreas correspondientes a los principales aeródromos / There is no structured data base at a national level which includes coordinates in WGS-84; however, there is topographical information in the areas corresponding to the main aerodromes.<br>2. El levantamiento se hace en función a una red geodésica nacional de Orden 0 en WGS-84 /Survey made in function of national geodetic in “zero” basis WGS-84 |
| SURINAME | We do not have national database yet. Aún no hay una base de datos nacional. |
| URUGUAY | Por los ajustes en la red Sudamericana SIRGAS se entiende conveniente actualizar los datos para la verificación<br>In view of adjustments in SIRGAS South American network it is pertinent to update data for verification. |
| VENEZUELA | Radioayudas para la navegación en rutas: las radioayudas dentro de los aeródromos han sido levantadas a excepción de las que están fuera de los mismos. Puestos de estacionamiento de aeronaves: de los diez aeropuertos INTL de la Republica Bolivariana de Venezuela solo se han publicado dos de estos.(Maiquetía – SVMI y Valencia Arturo Michelena – SVVA)<br>En-route Radio navigation aids within aerodromes have been removed with exception of those which are outside. Aircraft parking positions of 10 airports in República Bolivariana de Venezuela have been published in only two of these (Maiquetía – SVMI and Valencia Arturo Michelena – SVVA). |
| **Updated/ Fecha de Actualización:** | **16/03/2012** |

## APÉNDICE / APPENDIX B

## ESTADO DE IMPLANTACIÓN DEL QMS EN LA REGIÓN SAM / STATUS OF QMS IMPLEMENTATION IN THE SAM REGION

| ESTADO STATE | EN PROCESO IN PROCESS | IMPLANTADO IMPLEMENTED | AUDITADO AUDITED | CERTIFICADO CERTIFIED | % DE EJECUCIÓN % OF EXECUTION | FECHA FINAL FINAL DATE | OBSERVACIONES REMARKS |
|---|---|---|---|---|---|---|---|
| **Argentina** | X | | | | 30 | JUL 2013 | Se están identificando y describiendo procesos.<br>Processes are being identified and described. |
| **Bolivia** | X | | | | 30 | DIC/DEC 2012 | |
| **Brasil/ Brazil** | X | X | X | X | 70 | DIC/DEC 2012 | AIP Y MAP certificado/certified<br>NOTAM y ARO en proceso in process |
| **Colombia** | X | X | | | 70 | DIC 2012<br>DEC 2012 | Actualmente se efectúan auditorías internas de control de la implantación y se ajustan los procedimientos y registros inherentes al proceso AIM/<br>Currently internal control audits are carried out to control implementation and registrations inherent to AIM are adjusted. |
| **Chile** | | X | X | X | 100 | ---------- | ISO 9001:2008 |
| **Ecuador** | | X | X | X | 100 | | ISO 9001:2008 |
| **Guyana** | | | | | | | Sin información<br>No information |
| **Guayana Francesa French Guyana** | | | | | | | Sin información<br>No information |
| **Paraguay** | | X | X | X | 100 | ---------- | ISO 9001:2008 |

| ESTADO STATE | EN PROCESO IN PROCESS | IMPLANTADO IMPLEMENTED | AUDITADO AUDITED | CERTIFICADO CERTIFIED | % DE EJECUCIÓN % OF EXECUTION | FECHA FINAL FINAL DATE | OBSERVACIONES REMARKS |
|---|---|---|---|---|---|---|---|
| **Panamá** | X | | | | 70 | JUN 2012 | |
| **Perú** | X | | | | 40 | DIC/DEC 2012 | |
| **Suriname** | X | | | | 30 | DIC/DEC 2013 | |
| **Uruguay** | X | | | | 90 | AGO/AUG 2012 | |
| **Venezuela** | X | | | | 50 | DIC/DEC 2012 | Información por correo electrónico/ Information through e-mail |
| **Fecha de actualización / Date updated:** | | **16/03/2012** | | | | | |

## APÉNDICE / APPENDIX C

### Estado de cumplimiento de la Reglamentación y Control de la Información Aeronáutica (AIRAC) en la Región SAM
### Status of compliance of Standards and Control of Aeronautical Information (AIRAC) in the SAM Region

| Requisito / Requirement | Argentina | Bolivia | Brazil | Chile | Colombia | Ecuador | F. Guyana | Guyana | Panamá | Paraguay | Perú | Suriname | Uruguay | Venezuela | COMENTARIOS COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Dispone de un programa de publicaciones / Do you have a publication programme | SÍ | SÍ | SÍ | SÍ | SI | SÍ | S/D | S/D | SÍ | SI | SÍ | SI | SÍ | SÍ | |
| 2. Publica una vez al año una AIC que incluya las fechas AIRAC de entrada en vigor del paquete de documentación integrada de información aeronáutica, las fechas de publicación y las fechas límite que los textos han de llegar al AIS/ Publishes an AIC once a year with the AIRAC dates of effectiveness of the integrated aeronautical information package, the dates of publication and the deadline in which the texts must reach the AIS | SI | SÍ | SÍ | SÍ | SI | SÍ | | | SÍ | SÍ | SÍ | SI | SÍ | SÍ | **BOL**: La AIC se publica en noviembre. / AIC is published in November<br>**CHI:** Se publican las fechas/ Dates are provided |
| 3. La información AIRAC, ¿se distribuye por lo menos con 42 días de antelación respecto a la fecha de entrada en vigor?/ Is the AIRAC information distributed at least 42 days before the effective date? | SÍ | SÍ | SÍ | SÍ | NO | SÍ | | | SÍ | SÍ | SÍ | SI | SÍ | SÍ | **VEN:** se publica con 56 días de antelación. / Published 56 days in advance. |
| 4. Las fechas de entrada en vigor AIRAC se basan en un intervalo de 28 días? / Are AIRAC effective dates based on a 28-day interval? | SÍ | SÍ | SÍ | SÍ | SI | SÍ | | | SÍ | SÍ | SÍ | SI | SÍ | SÍ | |

| Requisito / Requirement | Argentina | Bolivia | Brazil | Chile | Colombia | Ecuador | F. Guyana | Guyana | Panamá | Paraguay | Perú | Suriname | Uruguay | Venezuela | COMENTARIOS COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5. ¿Está establecido que no debe haber modificación de la información AIRAC por lo menos hasta 28 días después de la fecha indicada de entrada en vigor, a no ser que las circunstancias notificadas sean de carácter temporal y no subsistan por todo el período?/ Has it been established that AIRAC information shall not be modified within the 28 days following the indicated effective date, unless the circumstances reported are temporary and do not persist for the whole period? | **SÍ** | **SÍ** | **SÍ** | **SÍ** | **NO** | **SÍ** | | | **SÍ** | **SÍ** | **SÍ** | **SI** | **SÍ** | **SÍ** | **COL**: no está establecido por directiva/reglamentación, pero estas fechas se cumplen./not established through regulations but dates are complied |
| 6. ¿Se cumple con no utilizar fechas de aplicación distintas a la fecha de entrada en vigor AIRAC, respecto a modificaciones planeadas, importantes para las operaciones que exijan trabajos cartográficos, o para actualizar las bases de datos de navegación?/ Do they comply with using only the AIRAC effective dates for planned modifications that are of significance for operations that require mapping jobs, or for updating navigation databases? | **SÍ** | **SÍ** | **SI** | **SÍ** | **SI** | **SÍ** | **S/D** | **S/D** | **SÍ** | **SÍ** | **SÍ** | **SI** | **SÍ** | **SÍ** | |
| 7. ¿Se utiliza el Tiempo Universal Coordinado (UTC) para indicar la hora que entrará en vigor la información AIRAC?/ Is the Coordinated Universal Time (UTC) used for indicating the effective time of AIRAC information? | **SÍ** | **SÍ** | **SI** | **SÍ** | **SI** | **SÍ** | | | **NO** | **SÍ** | **SÍ** | **SI** | **SÍ** | **SÍ** | |

| Requisito / Requirement | Argentina | Bolivia | Brazil | Chile | Colombia | Ecuador | F. Guyana | Guyana | Panamá | Paraguay | Perú | Suriname | Uruguay | Venezuela | COMENTARIOS COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8. ¿Se utiliza el Calendario de fechas de entrada en vigor AIRAC?/ Is the calendar of AIRAC effective dates used? | SÍ | SÍ | SI | SÍ | SI | SÍ | | | SÍ | SÍ | SÍ | SI | SÍ | SÍ | |
| 9. ¿Se ha coordinado con las distintas fuentes originadoras de la información las fechas límites para la información que originen?/ Have deadlines for information originating at the various information sources been coordinated with them? | SÍ | SÍ | SI | SÍ | SI | SÍ | | | SÍ | SÍ | SÍ | SI | SÍ | SÍ | |
| ¿Se utiliza el formato de aviso de promulgación de información aeronáutica tal como se propone en el Manual para los servicios de información aeronáutica (Doc.8126) o similar?/ Is the aeronautical information publication notice form used as proposed in the Aeronautical Information Services Manual (Doc 8126) or similar? | SÍ | SÍ | SI | SÍ | SI | SÍ | | | SÍ | SÍ | SÍ | SI | SÍ | SÍ | |
| 10. ¿Se contempla que las fechas del ciclo AIRAC, que ocurran dentro del periodo de 28 días desde el 21 de diciembre al 17 de enero inclusive no se utilicen para la entrada en vigor de cambios operacionales de importancia?/ Has it been contemplated that AIRAC dates that fall within the 28-day period between 21 December and 17 January inclusive shall not be used for the entry into effect of significant operational changes? | SÍ | SÍ | SI | SÍ | SI | SÍ | | | SÍ | SÍ | SÍ | SI | SÍ | SÍ | |

| Requisito / Requirement | Argentina | Bolivia | Brazil | Chile | Colombia | Ecuador | F. Guyana | Guyana | Panamá | Paraguay | Perú | Suriname | Uruguay | Venezuela | COMENTARIOS COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11. Se suministra a los usuarios la información AIRAC en forma electronica?/ Is the AIRAC information provided to users *via* electronic means? | **SÍ** | **NO** | **SI** | **SÍ** | **NO** | **SÍ** | | | **NO** | **SI** | **SI** | **NO** | **SÍ** | **SÍ** | |
| 12. Si la respuesta a la pregunta anterior es SI, ¿Se continúa proporcionando dicha información en forma impresa también?/ If the answer to the previous question is YES, is said information still provided in hard copy too? | **SÍ** | **N/A** | **SI** | **SÍ** | **SI** | **SI** | | | **N/A** | **SI** | **SI** | **N/A** | **SI** | **SÍ** | **PAN**: Se mantiene la información en forma impresa./ printed information is available.<br>**VEN**: A quien la solicita. / Upon request. |
| 13. Si las respuestas a las preguntas 2 a 5 anteriores son **NO**. ¿Existen planes para cumplirlo?/ If the answer to questions 2 to 5 is **NO**, are there any plans to comply? | **N/A** | **N/A** | **NA** | **N/A** | **NO** | **N/A** | | | **N/A** | **N/A** | **N/A** | **N/A** | **N/A** | **N/A** | |
| **FECHA DE ACTUALIZACIÓN: UPDATED:** | **16/03/2012** | | | | | | | | | | | | | | |

# APÉNDICE / APPENDIX D

## E-TOD

**LA INFORMACIÓN CORRESPONDIENTE A LOS ESTADOS QUE RESPONDIERON EL CUESTIONARIO DE E-TOD, APARECE EN EL APÉNDICE A AL INFORME SOBRE LA CUESTIÓN 2**
**THE INFORMATION CORRESPONDING TO THOSE STATES WHO REPLIED THE E-TOD QUESTIONNAIRE IS SHOWN IN APPENDIX A TO AGENDA ITEM 2**

# APÉNDICE / APPENDIX E

## GIS

## LA INFORMACIÓN SERÁ ENVIADA AL COORDINADOR DEL PROYECTO G1
## THE INFORMATION WILL BE FORWARDED TO THE COORDINATOR OF PROJECT G1

## APÉNDICE / APPENDIX F

**SUMINISTRO DE LA DOCUMENTACIÓN INTEGRADA DE INFORMACIÓN AERONÁUTICA (IAIP) EN LA REGION SAM**
**INTEGRATED AERONAUTICAL INFORMATION PROVISION DOCUMENTATION IN THE SAM REGION**

| Estado / State | Documentos disponibles / Available documents | Medios electrónicos / Electronic Means | | Idiomas / Languages | | | | Observaciones / Remarks |
|---|---|---|---|---|---|---|---|---|
| | | Internet | CD/DVD | Español / Spanish | Inglés / English | Portugués | Francés | |
| Argentina | AIP & AIP AMDT | Y | N | Y | Y(1) | | | (1) eAIP en implementación, uso de carácter experimental/e-AIP in experimental implementation process, |
| | SUPP | Y | N | Y | Y | | | |
| | AIC | Y | N | Y | Y | | | |
| | NOTAM/PIB | Y | - | Y | Y | | | |
| Bolivia | AIP & AIP AMDT | N | N | Y | N | | | Se utiliza producción en papel<br>Sólo NOTAM de distribución internacional en inglés/ Paper production. Only international NOTAM dissemination in English language. |
| | SUPP | N | N | Y | N | | | |
| | AIC | N | N | Y | N | | | |
| | NOTAM/PIB | Y | - | Y | Y | | | |
| Brasil / Brazil | AIP & AIP AMDT | Y | N | N | Y | Y | | Se utiliza producción en papel/printed production<br>La disponibilidad de CD/DVD a los clientes está en proceso de implementación. / Availability of CD/DVD to customers in implementation process. |
| | SUPP | Y | N | N | Y | Y | | |
| | AIC | Y | N | N | Y | Y | | |
| | NOTAM/PIB | Y | N | N | Y | Y | | |
| Chile | AIP & AIP AMDT | Y | N | Y | Y(1) | | | (1) Algunas partes en inglés<br>Solo NOTAM de distribución internacional en inglés<br>Some parts available in English. Only international NOTAM dissemination in English language |
| | SUPP | Y | N | Y | Y | | | |
| | AIC | Y | N | Y | Y | | | |
| | NOTAM/PIB | Y | - | Y | Y | | | |
| Colombia | AIP & AIP AMDT | Y | N | Y | N | | | Inconvenientes temporarios para suministrar la iAIP en medio impreso / Temporary inconveniences to provide i-AIP in printed format. |
| | SUPP | Y | N | Y | Y | | | |
| | AIC | Y | N | Y | Y | | | |
| | NOTAM/PIB | Y | - | Y | Y | | | |
| Ecuador | AIP & AIP AMDT | Y | N | Y | N(1) | | | (1) AIP en inglés estimado para fines 2011/English AIP estimated by the end of 2011 |
| | SUPP | Y | N | Y | N | | | |
| | AIC | Y | N | Y | N | | | |
| | NOTAM/PIB | | - | Y | Y | | | |
| Guyana | AIP & AIP AMDT | | | | | | | |
| | SUPP | | | | | | | |
| | AIC | | | | | | | |
| | NOTAM/PIB | | | | | | | |
| Guyana Francesa / French Guyana | AIP & AIP AMDT | | Y | | Y | | Y | |
| | SUPP | | Y | | Y | | Y | |
| | AIC | | Y | | Y | | Y | |
| | NOTAM/PIB | | - | | Y | | Y | |

| SUMINISTRO DE LA DOCUMENTACIÓN INTEGRADA DE INFORMACIÓN AERONÁUTICA (IAIP) EN LA REGION SAM<br>INTEGRATED AERONAUTICAL INFORMATION PROVISION DOCUMENTATION IN THE SAM REGION | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Estado / State** | **Documentos disponibles / Available documents** | **Medios electrónicos / Electronic Means** | | **Idiomas / Languages** | | | | **Observaciones / Remarks** |
| | | **Internet** | **CD/DVD** | **Español / Spanish** | **Inglés / English** | **Portugués** | **Francés** | |
| Panamá | AIP & AIP AMDT | N | N | Y | Y | | | Se utiliza producción en papel/Printed production |
| | SUPP | N | N | Y | Y | | | |
| | AIC | N | N | Y | Y | | | |
| | NOTAM/PIB | N | - | Y | Y | | | |
| Paraguay | AIP & AIP AMDT | Y | Y | Y | N | | | |
| | SUPP | Y | Y | Y | N | | | |
| | AIC | N | Y | Y | N | | | |
| | NOTAM/PIB | N | - | Y | Y | | | |
| Perú | AIP & AIP AMDT | N(1) | N | Y | N(3) | | | (1)En internet en 2012/In internet 2012<br>(2) Para usuarios registrados/for users only<br>(3) Parte en inglés en 2012/partially in English<br>(4) En inglés en 2012/English 2012 |
| | SUPP | N(1) | N | Y | Y | | | |
| | AIC | N(1) | N | Y | N(4) | | | |
| | NOTAM/PIB | Y(2) | - | Y | Y | | | |
| Suriname | AIP & AIP AMDT | N(1) | N | N | Y | | | (1) En internet en 2012/Internet 2012<br>Producción en papel/Printed production. |
| | SUPP | N(1) | N | N | Y | | | |
| | AIC | N(1) | N | N | Y | | | |
| | NOTAM/PIB | N(1) | - | N | Y | | | |
| Uruguay | AIP & AIP AMDT | N(1) | N(1) | Y | N(2) | | | (1) En Internet/CD en 2012/internet/CD in 2012<br>(2) En inglés en 2012/English language 2012 |
| | SUPP | N(1) | N(1) | Y | N(2) | | | |
| | AIC | N(1) | N(1) | Y | N(2) | | | |
| | NOTAM/PIB | N(1) | - | Y | N(2) | | | |
| **Venezuela** | AIP & AIP AMDT | N(1) | N(1) | Y | Y | | | (1)INTERNET/CD 2012<br>Actualmente los suplementos, AIC y resumen NOTAM son enviados a usuarios vía e-mail / Currently AIC and NOTAM Summary are currently sent via e-mail. |
| | SUPP | N(1) | N | Y | Y | | | |
| | AIC | N(1) | N | Y | Y | | | |
| | NOTAM/PIB | N(1) | N | Y | Y | | | |
| **FECHA DE ACTUALIZACIÓN/ UPDATED:** | | **16/03/2012** | | | | | | |

**Agenda Item 2: Revision of AIM Projects in the SAM Region**

**Project G1: Tasks for the provision of electronic terrain and obstacle data (e-TOD)**

2.1 The Meeting recalled that the SAM/AIM/2 meeting had taken note of the new organisation and work methodology adopted by GREPECAS/16, based on programmes and projects, whereby Regional Officers would act as programme coordinators, and officials designated by the States would act as project coordinators, applying a project management approach.

2.2 The Meeting regretted the absence of the delegate of Uruguay, Mr. Juan González, coordinator of the project G1 - "Tasks for the provision of electronic terrain and obstacle data (e-TOD)", since it felt that this affected all States in the Region. The Secretariat informed that utmost efforts had been made before the Uruguayan authorities but unfortunately, for budgetary reasons, the Uruguayan delegation had not been able to attend the meeting.

2.3 Likewise, the Secretariat highlighted the work done by the coordinator, Mr. Juan González, through electronic means, and that in view of this situation Mr. González himself had presented his resignation to the Meeting.

2.4 In this regard, the Secretariat asked the Meeting to wait until the Project Management Course was held to make a decision regarding a new nomination, since a new nomination would delay the work anyway and the coordinator had performed some of the project tasks.

2.5 Regarding these project tasks, the Secretariat noted that the South American Regional Office had sent the States of the Region the survey prepared by the coordinator with a view to defining the project baseline and adjusting project planning and action plan implementation tasks.

2.6 Of 14 States in the Region, only Bolivia, Brazil, Chile, Colombia, Ecuador, French Guiana, Paraguay, and Uruguay had completed and returned the e-TOD questionnaires.

2.7 The Meeting requested the States of Argentina, Guyana, Panama, Peru, Suriname, and Venezuela that had not yet responded to the survey to do so at the Meeting and asked the Secretariat to forward the supplementary data to the coordinator for evaluation and reporting.

2.8 The updated survey is shown in **Appendix A** to this part of the Report.

**Project G2: Aeronautical information/data management (SAM)**

2.9 The Meeting recalled that, in its previous meeting, the group had discussed AIXM applicability, in view of the lack of relevant ICAO SARPs, despite which many countries were currently using it.

2.10 Furthermore, the Meeting highlighted the importance of advancing the aeronautical data/information project for the purpose of applying the aeronautical information/data exchange model, the model letter of agreement, and the validation guides.

2.11 The Meeting regretted the absence of the coordinator of Project G2: "Aeronautical information/data management (SAM)" who, nevertheless, had offered to electronically review and update the project description for drafting the action plan to be followed by States for applying the aeronautical information/data exchange model, the letter of agreement model, the validation guides and the corresponding GANT. Following the explanation given by Argentina regarding the absence of Mr. Pablo Collazo, coordinator of Project G2, the Meeting considered that the Secretariat, in coordination with the air navigation authorities of that administration, should ensure the permanence of the coordinator and secure the support of the State in accordance with the commitments assumed.

2.12 The Secretariat took note and informed that it would coordinate as required with the Director of Air Navigation of Argentina.

**Project G3: Development of quality specifications applicable to the AIM digital environment (SAM)**

2.13 The Meeting took note that to date, three States of the Region (Chile, Ecuador and Paraguay) had attained the ISO 9001:2008 certification for AIM processes. Brazil has partially certified aeronautical information and mapping processes. Some processes were pending certification, and it was expected that such certification would be obtained in 2012.

2.14 Likewise, it was also recognized that some States were quite advanced in the certification process, while others were lagging behind, a process that should definitely be completed by December 2012.

2.15 The Meeting took note that the coordinator of Project G3: "Development of quality specifications applicable to the AIM digital environment (SAM)", Mrs. Lidia Caceres, of Paraguay, had not been able to attend the meeting due to budgetary constraints within the Paraguayan Administration.

2.16 In this regard, and taking into account that the implementation of quality systems was due shortly, the Meeting deemed it necessary to rapidly find a new project coordinator.

2.17 Taking into account travelling difficulties and the short time left for completing the project, the Meeting agreed that Mr. Oscar Dioses, of Peru, should take over the coordination of Project G3, and requested the Secretariat to coordinate with the authorities of CORPAC to secure his participation, and to thank Mrs. Lidia Caceres for the efforts made in the fulfillment of the commitments undertaken.

2.18 A presentation on self-assessment of quality systems was given, free of charge, by a consultant, Mr. David Díaz. The Meeting thanked Mr. Díaz for his contribution, which gave experts a real picture of the status of implementation of quality in their respective administration.

**APÉNDICE / APPENDIX A**

**SEGUIMIENTO NIVEL DE IMPLANTACIÓN DE LA NORMA PARA LA PROVISIÓN DE DATOS ELECTRÓNICOS SOBRE EL TERRENO (E-TOD) PARA EL ÁREA 1 (Ref.: Anexo 15, 10.1.3)**

***FOLLOW UP LEVEL OF IMPLEMENTATION OF THE STANDARD FOR THE PROVISION OF ELECTRONIC TERRAIN OBSTACLE DATA (E-TOD) FOR THE AREA 1 (REF.: ANNEX 15, 10.1.3)***

| ESTADOS /STATES | ARG | BOL | BRA | CHI | COL | ECU | GUY | FGU | PAN | PAR | PER | SUR | URU | VEN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Modelo digital – DIGITAL MODEL | | | | | | | | | | | | | | |
| **¿Dispone la Oficina de un Modelo Digital del terreno (MDT) o de un Modelo digital de elevación (MDE) u otro? (Especifique)** Does the Office have a model digital terrain (MDT) or a Model for Digital Elevation (MDT) or other? (Specify) | N | N[1] | Y[1] | N | Y[1] | N | | Y[1] | | N | N[1] | N | N | Y |
| **¿De dónde los obtuvo? (De la propia organización, de organización externa –cuál)?** Where did you obtain it (from your organisation, an external organization – which? | - | Y[2] | Y[2] | N | Y[2] | N | | Y[2] | | N | N | N | N | *1 |
| **¿Qué precisión tiene dicho modelo?** Which accurateness does this model have? | - | Y[3] | Y[3] | N | Y[3] | N | | Y[3] | | N | N | N | N | *[2] |
| **¿Cumple con Tabla A8-1. Requisitos numéricos de los datos sobre el terreno para el Área 1 del Anexo 15?** Does it comply with Table A8-1? data numeric requirements for Annex 15 Area 1? | - | N/A | N[4] | N | N | N | | Y[4] | | N | N | N | N | Y |
| **¿Dicho modelo cumple con la serie de Normas ISO 19110? (Sí, No)** Does such model comply with the series of ISO Standard 19110? (yes, no) | - | N[4] | N[5] | N | Y[4] | N | | Y[5] | | N | N | - | N | Y |
| **¿Qué precisión tiene dicho modelo?** Which is the accurateness of such model? | - | | | | | | | | | - | N | - | | *[3] |

| ESTADOS /STATES | ARG | BOL | BRA | CHI | COL | ECU | GUY | FGU | PAN | PAR | PER | SUR | URU | VEN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Obstáculos – OBSTACLES | | | | | | | | | | | | | | |
| **¿Dispone de una base de datos de obstáculos que abarque todo el territorio de su país? (Sí, No)** Is there an obstacle data base covering all territory in your country? (yes, no) | Y[1] | N | Y[6] | N | Y[5] | N | | Y[6] | | N | N[2] | N | N[1] | N[4] |
| **¿Cómo los obtuvo? (De la propia organización, de organización externa –¿cuál?)** How did you get them (from your organization? From an external organization? – which? | Y[2] | N | Y[7] | N | Y[6] | N | | Y[7] | | N | Y[3] | - | N[2] | *[5] |
| **¿Dichos datos cumplen con la serie de Normas ISO 19110? (Sí, No)** Does the data comply with the series of ISO Standard 19110? (yes, no) | Y[3] | N | N[8] | N | N | N | | N[8] | | N | N | - | N[3] | N |
| ¿Cumple con Tabla A8-2. Requisitos numéricos de los datos sobre obstáculos para el Área 1 del Anexo 15? Does it comply with Table A8-1 data numerical requirements on terrain for Annex 15 Area 1? | - | N | N[9] | N | N | N | | N[9] | | N | N | N | Y | Y |
| Planificación – PLANNING | | | | | | | | | | | | | | |
| **¿Ha establecido la Oficina un plan detallado con las tareas, plazos, análisis de riesgos, aspectos económicos y demás para la ejecución del proyecto de implantación del e-TOD para el Área 1? (Si, No) (Si la respuesta es Si, indicar plan y fechas de cumplimiento)** Has your office established a detailed plan with tasks, risk analysis, economical aspects, etc, for the execution of the e-TOD implementation project for Area 1 (yes, no) (if answer is yes, indicate plan and dates of compliance). | Y[4] | N | N[10] | Y[1] | N | Y[1] | | Y[10] | | N | N | N | Y[4] | N |

| ESTADOS /STATES | ARG | BOL | BRA | CHI | COL | ECU | GUY | FGU | PAN | PAR | PER | SUR | URU | VEN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **¿Ha definido la Oficina un manual de especificaciones técnicas para dicha implantación? (Sí, No) (Consultar si se puede acceder al mismo)**<br>Has the office defined a manual with technical specifications for such implementation? (yes, no). (ask if there is easy access to the same) | Y[5] | N | N | Y | Y | N | | Y[11] | | N | N | N | Y[5] | N |
| **¿Ha definido y firmado Acuerdos de Nivel de Servicio (SLA) con los proveedores de datos? (Sí, No) (Consultar si se puede obtener una copia modelo de los mismos)**<br>Has your office defined and signed service level agreements (SLA) with data providers? (yes, no) (ask if there is an available copy of the same) | Y[6] | N | N | N | N | N | | N[12] | | N | N | N | Y[6] | N |
| **¿Dispone de un programa de capacitación para aquellas personas que tengan que operar con los datos del e-TOD en la dependencia AIS? (Sí, No) (Consultar si se puede acceder al mismo)**<br>Is there a training programme for those persons that have to operate with E-TOD data in AIS unit? (yes, no) (ask if the same may be accessed) | N | N | N[11] | N | Y | Y[2] | | Y[13] | | N | N | N | N | N |
| **¿Se han tenido en cuenta los conceptos operacionales en este proyecto? (Sí, No) (Comentar el plan)**<br>Have operational concepts been taken into account? (yes, no) (comments on the plan) | N | N | N | N | Y | Y[3] | | N[14] | | N | N | N | N | - |
| **¿La Oficina dispone de equipamiento y programas para la gestión de la información referida a e-TOD? (Sí, No) (En caso de respuesta Sí, indicar característica de los equipos y programas)**<br>Does the office have equipment and programmes for information management referred to e-TOD (yes, no) (In case answer is YES, indicate the characteristic of equipment and programmes). | N | N | Y[12] | N | Y[7] | Y[4] | | N[15] | | N | Y[4] | N | Y[7] | N |

| ESTADOS /STATES | ARG | BOL | BRA | CHI | COL | ECU | GUY | FGU | PAN | PAR | PER | SUR | URU | VEN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **¿Se han definido cronogramas y especificaciones para la carga y verificación de los datos referidos al e-TOD? (Sí, No) (En caso de respuesta Sí, indicar tiempos y formas de la verificación)** Have schedules and specifications been defined for the load and data verification referred to e-TOD? (yes, no) (in case answer is YES, indicate times and ways to check) | N[7] | N | Y[13] | N | N | Y[5] | | N[16] | | N | N | N | Y[8] | N |

Y = Yes/SI
[1, 2, ....] = Ver comentarios / See comments
N = No
P = Parcialmente / Partially
N/A = Not applicable / No aplicable
S/R = without answer / sin respuesta

**COMENTARIOS DE LOS ESTADOS / COMMENTS BY STATES**

| ESTADOS/ STATES | COMENTARIOS / COMMENTS |
|---|---|
| ARG | [1] Se dispone de datos de obstáculos que se están incorporando a una base de datos./ Obstacle data available, data incorporated in a data base.<br>[2] El proveedor es el departamento de aeródromos. / Aerodrome Department is the provider<br>[3] Se está evaluando /Under assessment.<br>[4] Está en proceso de elaboración / In process of preparation.<br>[5] Está en proceso de elaboración. / In process of preparation.<br>[6] Está en proceso de elaboración. / In process of preparation.<br>[7] En proceso de realización con el proveedor. / under process of implementation by the provider. |
| BOL | [1] Las elevaciones de los obstáculos están en base a las elevaciones proporcionadas por Estado Plurinacional de Bolivia. / Obstacles are in base to elevations provided by Bolivia.<br>[2] Del Instituto Geográfico Militar/IGM / From the IGM<br>[3] Las elevaciones del IGM tiene una precisión de $1 \times 10^{-4}$ / IGM elevations have a precision of $1 \times 10^{-4}$<br>[4] No se tiene implantado el Sistema de Gestión de la Calidad/ Quality assurance system is not implemented. |
| BRA | [1] Brasil tiene un modelo digital para terreno para el área e-TOD 1 (todo el territorio nacional) / Brazil as a model digital terrain for the e-TOD area 1 (all national territory).<br>[2] El modelo digital de terreno para el área 1 e-TOD comprende líneas de contorno y puntos ploteados en 3D obtenidos de las cartas aeronáuticas con una escala de 1:250,000 y cartas topográficas con escalas de 1:100,000 and 1:50,000. / The model digital terrain for the e-TOD area 1 comprises contour lines and points plotted in 3D obtained from the aeronautical charts with a scale of 1:250,000 and topographical charts with scales of 1:100,000 and 1:50,000.<br>Las Cartas Aeronáuticas se producen por el ICA y las cartas topográficas se producen por agencias Aeronautical charts are produced in the Air Force Institute of Cartography (ICA) and topographical charts are produced by federal agencies that have the allocation of mapping the national territory.<br>For areas of national territory where the mentioned products do not exist, it is used the model digital terrain derived from the shuttle radar topography mission (SRTM) and available free of charge by the U.S. Government.<br>[3] La precisión del modelo digital de terrena para un área particular geográfica dependerá de la información utilizada, de acuerdo a los valores mencionados abajo: / The accurateness of the model digital terrain for a particular geographic area will depend on the input used, according to the values below:<br>aeronautical charts at scale of 1:250,000 = altimetry (±50 m to 70 m) and planimetry (±125m to 250 m)<br>topographical charts at scale of 1:100,000 = altimetry (±-25 m to 37.5 m) and planimetry (±50m to 100 m)<br>topographical charts at scale of 1:50.000 = altimetry (±10 m to 15 m) and planimetry (± 25m to 50 m);<br>SRTM =±20m in altimetry, but there are discrepancies in areas that present altitude values.<br>[4] La Tabla A-81 tiene los siguientes requisitps: espacio para puestos, precisión vertical, resolución vertical, resolución vertical, precisión horizontal, precisión horizontal, nivel de confianza, nivel de integridad y período de mantenimiento / Table A8-1 has the following requirements: post spacing, ertical accuracy, vertical resolution, horizontal accuracy, confidence level, level integrity and maintenance period.<br>Todos los items cumplen con los requerimientos, con la excepción de la precisión vertical y precisión horizontal, cuando el modelo digital de terreno se |

| ESTADOS/ STATES | COMENTARIOS / COMMENTS |
|---|---|
| | obtiene por la carta a escala 1:250,000, carta a escala 1:100,000 y por SRTM debido a que dichos datos comprenden valores menos exactos que aquellos definidos en la Tabla A8-1. / All items comply with the requirements with the exception of vertical accuracy and horizontal accuracy, when the model digital terrain is obtained by aeronautical chart at scale of 1:250,000, topographical chart at scale of 1:100,000 and by SRTM because such data comprises values less accurate than those defined in Table A8-1.<br>[5] Las series de la norma ISO 19110 todavía serán estudiadas e implantadas. / The series of ISO Standard 19110 will still be studied and implemented.<br>[6] Hay una base de datos nacional, no se asegura que el 100% de obstáculos de más de 1200 metros sean registrados en la base de datos, tal como se requiere en el Anexo 15 para el área 1 e-TOD, debido a regulaciones recientes que son efectivas desde el 2011 (Orden No.256/GM5 / There is a national database, it is not assured that 100% of obstacles of more than 100 meters are registered in the database, as required by annex 15 for the e-TOD area 1, due to the recent regulations that are effective as of 2011 (order N.256/GM5).<br>[7] Los obstáculos se obtienen a través de estudios topográficos llevado a cabo por el ICA. También se obtienen datos disponibles de las siguientes organizaciones:<br>Obstacles are obtained through topographic survey conducted by the air force institute of cartography (ICA). data available from the following external organizations is also used:<br>Agencia Nacional de Aviación Civil (ANAC), Comando Aéreo Regional (COMAR); Servicio de Protección al Vuelo, Regional Sao Paulo (SRPV-SP) y Centro Integrado para la Defensa del Control de Tránsito Aéreo (CINDACTA).<br>National Civil Aviation Agency (ANAC), Regional Air Command (COMAR), São Paulo, Regional Flight Protection Service (SRPV-SP) and integrated center for air defense and air traffic control (CINDACTA).<br>[8] Las series ISO 19110 aún serán estudiadas e implantadas. / The series of ISO standard 19110 will still be studied and implemented.<br>[9] Los datos obtenidos por el ICA cumplen con la Tabla A8-2 pero no se assume que los datos de Fuentes externas está de acuerdo con los requerimientos de la tabla. / Data obtained by the air force institute of cartography (ICA) complies with table A8-2 but it is not assured that external sources data is in compliance with the requirements of the table.<br>[10] La Oficina no ha establecido un plan. / The office as not established a plan.<br>[11] Este entrenamiento sera parte de la implantación de DECEA AIM-BR / This training will be part of the DECEA AIM-BR implementation.<br>[12] Los programas y equipamiento se utilizarán en el proyecto AIM-BR / Equipment and programmes will be used in the project AIM-BR.<br>[13] Hay una planificación que se espera se inicie en 2013 que forma parte del proyecto AIM-BR. / There is a planning expected to begin in 2013 that makes part of the project AIM-BR. |
| CHI | [1] Hay establecido un grupo de trabajo que ha definido un Proyecto de Plan con tareas, plazos, análisis de riesgos y aspectos económicos para la implantación de la áreas 1, 2, 3 y 4. El citado Proyecto de Plan está en una etapa de evaluación, por lo cual aún no se ha definido un calendario de ejecución. / There is a work group which has defined a Plan Project with tasks, deadlines, risk analysis and economical aspects for the implementation of áreas 1, 2, 3 and 4. The mentioned Plan Project is under assessment, and for this reason an implementation clanedar has not been defined yet. |
| COL | [1] Se dispone de un DTM / There is a DTM<br>[2] Instituto Geográfico Agustín Codazzi. IGAC.<br>[3] 30 metros / 30 mts.<br>[4] Es producido con estándares IPGH / Produced with IPGH standards<br>[5] Base de datos Programa FEAMAN, GFEAMAN, ARGIS, MICROESTATION / Data Base Programme FEAMAN, GFEAMAN, ARGIS, |

| ESTADOS/ STATES | COMENTARIOS / COMMENTS |
|---|---|
| | MICROESTATION.<br>[6] Diversas fuentes externas / Different external sources<br>[7] Programas FEAMAN, GFEAMAN, ARGIS, MICROESTATION / Programmes FEAMAN, GFEAMAN, ARGIS, MICROESTATION. |
| ECU | [1] El Plan de implementación ETOD – SIG se lo realizará desde el segundo semestre del 2012. / e-TOD – SIG plan implementation plan will be carried out starting the second half of 2012.<br>[2] Dentro del proyecto de implantación del SIG y ETOD, se contempla la capacitación del personal AIM responsable del mismo. /<br>Training of AIM personnel responsible for the SIG and e-TOD Project is contemplated within its implementation.<br>[3] El plan contempla los nuevos requisitos que emanan del concepto operacional de ATM mundial, los servicios de información aeronáutica deben integrarse en un concepto más amplio de gestión de la Información aeronáutica centrada en los datos y también se tiene en cuenta lo establecido en la hoja de ruta de transición del AIS al AIM de Ecuador. / The plan contemplates new requirements which emanate from the global ATM operational concept, the aeronautical information services must be integrated within an ample concept of aeronautical information management centered in data and also what is established in the roadmap for transition from AIS to AIM of Ecuador.<br>[4] Personal AIS/MAP con experiencia y conocimientos básicos de GIS. / AIS/MAP personnel with experience and basic knowledge of GIS.<br>Equipos Intel Core 2 Duo 3 GHZ, Memoria RAM 4 GB. / Intel Core 2 Duo 3 GHZ, Equipment RAM 4 GB Memory.<br>Software Microstation 95, ArcGIS 9 (En proceso de compra de licencias) / Microstation 95, ArcGIS 9 software (under process of licenses acquisition).<br>[5] El cronograma estará basado en tiempo establecido para el desarrollo del proyecto, seguimiento a través de Indicadores de cumplimiento de cada etapa./<br>The Schedule is based in time established for the development of the project, follow-up through indicators of compliance in each stage. |
| GUY | |
| FGU | [1] Digital Terrain Model (DTM) / Modelo Terreno Digital (DTM).<br>[2] External organization: Institut Geographique National (the French National Geodetic and Mapping Agency) – see AIC A 2008_31 (https://www.sia.aviation---civile.gouv.fr/dossier%5Caicfrancea%5CAIC_A_2008_31_EN.pdf) /<br>Organización externa: Institut Geographique National (the French National Geodetic and Mapping Agency) – see AIC A 2008_31 (https://www.sia.aviation---civile.gouv.fr/dossier%5Caicfrancea%5CAIC_A_2008_31_EN.pdf).<br>The conditions relating to acquisition of these datasets (licensing) are provided in the IGN catalogue<br>[3] IGN BD ALTI® product is a terrain reference description of French territory. DTM (Digital Terrain Models) and contours describing the terrain at different scales (from 1:50 000 to 1:1 000 000) are derived from the BD ALTI ®. The BD ALTI® consists of structured vector files from scanning all the contours of French terrain. The contour interval can range from 5 to 40 m. Data is entered on IGN maps at 1:25 000 at 1:50 000 and from additional aerial photographs at 1:20 000; 1:30.000 and 1:60 000.<br>El product IGN BD ALTI® es una descripción de referencia terrestre del territorio Francés. Los Modelos DTM (Modelos Terrestres Digital) y contornos descibiendo el terreno a diferentes escalas (de 1:50 000 a 1:1 000 000) se derivan del BD ALTI ®. El BD ALTI® consiste en archivos de vector estructurados de el escaneo de contronos del terreno francés. El intervalo de contorno puede variar de 5 a 40 m. Los datos se ingresan en mapas IGN a 1:25 000 a 1:50 000 y de fotografías adicionales a 1:20 000; 1:30.000 y 1:60 000.<br>[4] Except in very steep areas where IGN-F is collecting additional data to improve accuracy. |

| ESTADOS/ STATES | COMENTARIOS / COMMENTS |
|---|---|
| | Excepto en áreas escarpadas donde el IGN-F recolecta datos adicionales para mejorar la precisión.<br>[5] Metadata is provided free on IGN-F website, in French. / Los metadatos se pueden obtener gratuitamente en el website de IGN-F, en francés.<br>[6] But gathering and assessments of existing data are on going. New surveys are scheduled every year (e.g. in French Guiana in 2011 and the Caribbean in 2012). / La recolección y evaluación de los datos existentes está en proceso. Nuevos estudios se realizan cada año (por ejemplo en Guyana Francesa en 2011 y en el Caribe en 2012).<br>ARTIFICIAL ISOLATED OBSTRUCTIONS are listed in French AIP / Obstructiones aisladas artificiales aparecen en el AIP francés. (see/ver: https://www.sia.aviation-civile.gouv.fr/aip/enligne/uk/..%5CPDF_AIPparSSection%5CAIP%20FRANCE%5CENR%5C5%5C1201_ENR---5.4.pdf)<br>[7] From our organization with IGN-F support. / De nuestra organización con apoyo de IGN-F.<br>[8] On going with IGN-F support. / En proceso, con apoyo de IGN-F.<br>[9] Assessments of existing data are on going with IGN-F support. New data will be compliant according to service level agreements (SLA) with data providers. / La evaluación de datos existentes está en proceso, con apoyo de IGN-F. Los datos nuevos serán compatibles de conformidad con los acuerdos de nivel servicios (SLA) con los proveedores de datos.<br>[10] On going with IGN-F support. / En proceso, con apoyo de IGN-F.<br>[11] EUROCONTROL (European organisation for the safety of air navigation) is writing a “Terrain and Obstacle Data Manual”, a guidance material on the provision of Terrain and Obstacle Data (TOD) in accordance with ICAO Annex 15. / Eurocontrol está escribiendo un Manual de Datos de Obstáculos del Terreno, un material de guía de datos de obstáculo en en terreno<br>First release of “Terrain and Obstacle Data Manual” has been evaluated through a Swiss-French Pilot Study in view of putting eTOD into practice. / La primera edición del Manual de Datos de Obstáculos de Terreno ha sido evaluado por un Estudio de Pilotos Suizo-Francés para poner el e-TOD en práctica.<br>[12] On going / En proceso.<br>[13] The training is global on all the geodetic and charting issues / El entrenamiento en todas las ediciones geodéticas y de cartas.<br>[14] On going / En proceso.<br>[15] Various Geographic Information Systems (GIS) such as ESRI ArcGIS. /Varios Sistemas de Información Geográfica (GIS) como ESRI ArcGIS.<br>[16] On going / En proceso |
| PAN | |
| PAR | |
| PER | [1] Solo se cuenta con hojas topográficas a escala 1:100 000 en formato analógico (papel) que fue adquirido al Instituto Geográfico Nacional.<br>Only available topographic sheets scale 1:100 000 in analogic format (paper) acquired to the IGN.<br>[2] Sólo se dispone de información gráfica aislada de obstáculos de algunos aeródromos y que aparecen en algunas cartas aeronáuticas, no se encuentra en una base de datos. / Only isolated obstacle graphical information available of some aerodromes and shown in some aeronautical charts, not found in a data base.<br>[3] de levantamientos topográficos realizados por la propia organización. / Topographical surveying.<br>[4] se cuenta con equipos de medición GPS R8 diferencial y estación total TOPOCON 7500, 02 workstations HP Z800, software de diseño CAD. / GPS |

| ESTADOS/ STATES | COMENTARIOS / COMMENTS |
|---|---|
| | R8 differential measuring equipment available and total station TOPOCON 7500, 02 estaciones de trabajo HP Z800, software de diseño CAD. |
| SUR | |
| URU | [1] En proceso / Ongoing<br>[2] En proceso. De la propia Organización y externa. IGM – Instituto Geográfico Militar. / Ongoing. From the organisation and outised source. IGM<br>[3] En proceso / Ongoing<br>[4] 2011 - 2015<br>[5] En proceso / Ongoing<br>[6] En proceso / Ongoing<br>[7] Sistema de Información Geográfica ARC-GIS ESRI /Geographical Information System ARC-GIS ESRI.<br>[8] 2011 – 2015 |
| VEN | *[1] de organización externa / outside sources<br>Souttle radar topography mission-national geospatial inteligence agency (NGA) y national aeronautics and space administration (NASA)<br>*[2] 90 metros / 90 mts.<br>*[3] 90 metros / 90 mts<br>*[4] Se tiene archivos de trabajos geodésicos para los Ap Intl de VEN, donde hay OBST en el alrededor y aprox del Ap. / There are geodetic work files for International Airports in Venezuela, where there are obsctacles around and approx to the airport.<br>[5] los archivos mencionados anteriormente se obtuvieron por trabajos de la propia organización.<br>The files previously mentioned were obtained by Works of the same organisation. |

## Agenda Item 3: NOTAM Contingency Plan

### Update of the NOTAM Contingency Plan

3.1 The Meeting recalled that GREPECAS/12 had adopted Conclusion 12/99 – Agreement on NOTAM contingency plans, whereby States had been requested to develop their NOTAM contingency plans for flight information regions (FIRs), and, to the extent possible, to enter into bilateral and/or multilateral arrangements with those States/Territories and International Organisations responsible for neighbouring airspaces. Thus, they were expected to be part of a regional NOTAM contingency plan to be applied whenever necessary.

3.2 The Meeting updated the regional catalogue of SAM NOTAM contingency plans to March 2012, as shown in **Appendix A** to this part of the report.

3.3 PBN and autonomous navigation system implementation requirements introduced the need for new AIS requirements to ensure the quality and timely distribution of information in order to reduce or eliminate the impact that labour conflicts and natural disasters might have on the continuous provision of the NOTAM service, establishing the technical and administrative measures and coordination and operational procedures required before, during and after any contingency phase.

3.4 Some SAM States already had their respective NOTAM contingency plan, while others were in the process of preparing it, as shown in **Appendix B** to this part of the report, which illustrates the status of implementation to March 2012.

3.5 The NOTAM contingency plan is subject to periodic reviews and any modifications that may be warranted are to be made following coordination between the parties. It has been agreed that any modifications made will be effective 30 days after the date of their approval.

3.6 The Meeting urged those States that had not yet coordinated their NOTAM contingency plans to do so as soon as possible, using the model for the Region.

3.7 In this regard, the Meeting took note that States requiring the model could request it directly from the Secretariat.

## APÉNDICE / APPENDIX A

**Catálogo de los Planes de contingencia NOTAM de la Región SAM** **Fecha: 16 de marzo 2012**
**Catalogue of NOTAM Contingency Plans in the SAM Region** **Date: 16 March 2012**

| Estado/ State | Estado de respaldo/ Backup State | Situación / Status | | Punto de Contacto/ Contact Point | Descripción general de facilidades y servicios que garantizan la continuidad / General description of facilities and services available which ensure continuity | Observaciones / Remarks |
|---|---|---|---|---|---|---|
| | | Borrador Draft | Final | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| **Argentina** | Uruguay | | X | NOF Ezeiza<br>Tel 54114480 2294<br>Fax 54114480 2260<br>Email notamezeiza@yahoo.com.ar<br><br>NOF Montevideo<br>Tel 59826040067<br>Email ais@adinet.com.uy | AFS, Tel/Fax, REDIG, Internet | |
| **Bolivia** | | | | NOF La Paz<br>Tel 59122316686<br>Email ais@aasana.gob.bo | | Fecha estimativa de Implantación: año 2012/ Estimated implementation date: 2012. |
| **Brazil** | | | | NOF Brasil<br>Tel/Fax 556133648353<br>Email<br>nofbrazil@cindacta1.aer.mil.br | | Fecha estimativa de Implantación: año 2013/ Estimated implementation date: 2013. |

| Estado/ State | Estado de respaldo/ Backup State | Situación / Status | | Punto de Contacto/ Contact Point | Descripción general de facilidades y servicios que garantizan la continuidad / General description of facilities and services available which ensure continuity | Observaciones / Remarks |
|---|---|---|---|---|---|---|
| | | Borrador Draft | Final | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| **Chile** | Ecuador | | X | NOF Chile<br>Tel 5628364033<br>Email nofchile@dgac.cl<br><br>NOF Guayaquil<br>Tel 59342285661 – 59342282017<br>Email nof_ecuador@dgac.gov.ec | AFS, Tel/Fax, REDIG, Internet | |
| **Colombia** | | | | NOF Bogotá<br>Tel 5712962552<br>Email ais@aerocivil.gov.co<br>solicitudes.notam@aerocivil.gov.co | | Fecha estimativa de Implantación: año 2012/ Estimated implementation date: 2012. |
| **Ecuador** | Chile | | X | NOF Guayaquil<br>Tel 59342285661 – 59342282017<br>Email nof_ecuador@dgac.gov.ec<br><br>NOF Chile<br>Tel 5628364033<br>Email nofchile@dgac.cl | AFS, Tel/Fax, REDIG, Internet | |
| **Guyana** | | | | | | Información no disponible/Information not available. |
| **Guyana Francesa/ French Guiana** | | | | | | Información no disponible/Information not available. |

| Estado/ State | Estado de respaldo/ Backup State | Situación / Status | | Punto de Contacto/ Contact Point | Descripción general de facilidades y servicios que garantizan la continuidad / General description of facilities and services available which ensure continuity | Observaciones / Remarks |
|---|---|---|---|---|---|---|
| | | Borrador Draft | Final | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| **Panamá** | Honduras | X | | NOF Panamá<br>Tel 23826152616<br>Email nof@aeronautica.gob.pa | AFS, Tel/Fax, REDIG, Internet | Falta última prueba para la firma. Implantación Estimada Julio 2010/ Last trial is pending for signature, estimated July 2010. |
| **Paraguay** | | | | NOF Asunción<br>Tel 59521645952 | | Implantación estimada Agosto 2010/ Implementation estimated August 2010. |
| **Perú** | | | | NOF Lima<br>Tel 5116301288 – 6301172<br>Email fvasquez@corpac.gob.pe<br>mangeles@corpac.gob.pe<br>jcarranza@corpac.gob.pe | | Fecha estimativa de Implantación: año 2012/ Estimated implementation date: 2012. |
| **Suriname** | Guyana | X | | NOF JAP | AFS/TEL/FAX/Internet | Fecha estimada de implantación Agosto 2012. / Estimated implementation Aug 2012. |
| **Uruguay** | **Argentina** | | X | NOF Montevideo<br>Tel 59826040067<br>Email ais@adinet.com.uy<br><br>NOF Ezeiza<br>Tel 5411 4480 2294<br>Fax 5411 4480 2260<br>Email notamezeiza@yahoo.com.ar | AFS, Tel/Fax, REDIG, Internet | |

| Estado/ State | Estado de respaldo/ Backup State | Situación / Status | | Punto de Contacto/ Contact Point | Descripción general de facilidades y servicios que garantizan la continuidad / General description of facilities and services available which ensure continuity | Observaciones / Remarks |
|---|---|---|---|---|---|---|
| | | Borrador Draft | Final | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| **Venezuela** | | | | NOF Maiquetía<br>Tel +58-212-3551325<br>FAX +58-212-3551680<br>e-mail notam.maiquetia@inac.gob.ve | AFS, Tel/FAX, REDIG, Internet | Pendiente por coordinar y elaborar carta acuerdo, fecha estimada de cumplimiento julio 2012/. Coordination pending to prepare a letter of agrement, with date of compliance July 2012. |

**Nota/Note:**

Columna 1: Indicar Estado, Territorio u Organismo Internacional / Indicate State, Territory or International Organization

Columna 2: Indicar Estado, Territorio u Organismo Internacional con quien debe coordinarse el Plan de Contingencia del Estado citado en la Columna 1/ Indicate State, Territory or International Organization with whom the contingency plan of the State mentioned in column 1 should be coordinated

Columna 3: Marcar con **X** en el caso que el Plan de contingencia se encuentre en proceso para su armonización con el Estado en cuestión / Mark with an X in case the contingency plan is in process for its harmonization with the referred State.

Columna 4: Marcar con **X** en el caso que el Plan de contingencia se encuentre armonizado con el Estado en cuestión / Mark with an X in case the contingency plan is in process for its harmonization with the referred State.

Columna 5: Indicar Cargo del Punto de Contacto y medio de comunicación a utilizar en caso de ser necesario / Indicate position of the point of contact and communications means to be used, if necessary.

Columna 6: Indicar cuáles son, en general, las facilidades y los servicios disponibles mientras el Plan de Contingencia se encuentra activado / Indicate which are, in general, the facilities, available services while the contingency plan is activated.

Columna 7: Comentarios adicionales, si los hubiera / Additional comments, if any.

**APÉNDICE / APPENDIX B**

| ESTADO DE IMPLANTACIÓN DE PLANES DE CONTINGENCIA NOTAM EN LA REGIÓN SAM<br>STATUS OF IMPLEMENTATION OF CONTINGENCY NOTAM PLANS IN THE SAM REGION | | | |
|---|---|---|---|
| **PLANES EN GESTIÓN<br>ONGOING PLANS** | **PLANES VIGENTES<br>VALID PLANS** | **ESTADOS NO INICIADOS<br>STATES WHICH HAVE NOT INITIATED** | **BANCO NOTAM<br>NOTAM BANK** |
| | ARGENTINA/URUGUAY | | AMHS |
| | | BRAZIL | SISNOTAM |
| PERU | | | AMHS |
| | | COLOMBIA | ACTUAL BANCO WEB<br>CURRENT WEB BANK<br>AMHS Sep/2010 |
| | CHILE/ECUADOR | | IAT-WIN |
| | ECUADOR/CHILE | | SYSECA |
| | | PARAGUAY | AMHS |
| PANAMÁ | | | AMHS |
| | | BOLIVIA | AMHS. |
| | URUGUAY/ARGENTINA | | SISNOTAM |
| VENEZUELA | | | BDNOF SAAIA3000 |
| SURINAME | | | AMHS |

Fecha de actualización / Updating date: **16/03/2012**

**Agenda Item 4: Other business**

4.1 The Meeting recalled that Annex 15 to the Convention of the International Civil Aviation Organization (ICAO) specifies that each Contracting State shall provide "aeronautical information services." Annex 15 also specifies that "Each Contracting State shall take all necessary measures to ensure that the aeronautical information/data it provides relating to its own territory, as well as areas in which the State is responsible for air traffic services outside its territory, is adequate, of the required quality and timely".

4.2 Annex 15 and the Aeronautical Information Services Manual (Doc 8126) further cite the need for each State to establish a quality system and put in place a quality management system. Quality management should be applicable to the entire aeronautical data chain from origination to its distribution to the next intended user. "Within the context of the established quality management system, the skills and knowledge required for each function shall be identified, and personnel assigned to perform such functions shall be properly trained. States shall ensure that personnel possess the skills and competencies required to perform specific assigned functions, and appropriate records substantiating personnel qualifications shall be kept".

4.3 In response to a number of requests by member States to address the need for training from the perspective of Aeronautical Information Services (AIS) and Aeronautical Information Management (AIM), the ICAO AIS to AIM Study Group formed an ad-hoc group to study how best to provide an ICAO response to these training requests.

4.4 The Secretariat informed that the ad-hoc group had been tasked with providing a universal approach to training; therefore, this manual was designed so as to provide training guidance in lieu of a formal training program that might not be universally applicable.

4.5 The Meeting took note that a competency-based approach to training allows an organization to identify gaps in the knowledge, skills, and abilities of the staff performing AIS/AIM functions, and to meet performance expectations.

4.6 The Meeting recognised that this provides maximum flexibility, given the complex and diverse nature of AIS and AIM services worldwide, and allows for targeted and highly efficient training programs. It further allows a State organization to fine-tune the job description, performance expectations, training plans, and career progression of each individual.

4.7 The Secretariat informed the Meeting that in creating this training guidance manual, the following assumptions had been made:

4.8 The AIS/AIM organization:

a) has specific job descriptions/profiles for staff performing AIS/AIM functions (regardless of whether the individuals are employees, contractors, or other named providers);
b) can clearly define who (person or organization) provides each of the required services, and whether these are provided inside or outside the AIS/AIM organization;
c) has access to the appropriate physical training facilities (including the appropriate technology support) needed to deliver training;
d) has implemented a quality management system that includes standard operating procedures (and/or documented work instructions);
e) will develop (or has available) a training program that includes, for example, specific training courses, evaluations, and associated records;
f) provides competency-based course developers and competent instructors access to services; and
g) will provide on-the-job training following a training course to allow trainees to apply and/or reinforce training objectives.

4.9 The meeting recognised that the competency framework is aligned with AIS general principles and the ICAO AIS to AIM Transition Roadmap, and it was expected that it would be updated accordingly.

4.10 Competency-based training assumes that trainees will have a basic understanding of aviation fundamentals addressed in this manual.

4.11 The key competencies required from Aeronautical Information Services (AIS) and Aeronautical Information Management (AIM) personnel and which are to be included in this Manual are shown in **Appendix A** to this part of the report, and will be applied in AIM units, as required.

**Guidance Material for ICAO Aeronautical Charts – 1: 500 000**

4.12 The Meeting took note of the Guidance Material for ICAO Aeronautical Charts 1:500.000 developed by the ICAO Chart Harmonization Focus Group, made up by experts of Belgium, Czech Republic, Finland, France, Germany, Italy, Latvia, Netherlands, Poland, Serbia and Montenegro, Slovak Republic, Slovenia, Switzerland, United Kingdom, and Eurocontrol and Jeppesen.

4.13 This guidance material for the production of aeronautical charts 1:500.000 was analysed by the Meeting. In order to avoid confusion amongst the administrations concerning the forthcoming amendment to ICAO Annex 4, the Secretariat considered that this guidance material should not be part of the report, and that the mapping experts of each State should thoroughly review the Appendix to WP/08 so as to be prepared when the corresponding proposal of amendment is circulated.

**Technological requirements**

4.14 Based on ATM requirements, AIM needs to provide new aeronautical services that go beyond traditional AIS safety information. These new AIM services include information services that contribute to the efficiency, capacity, and environment performance of aeronautical systems.

4.15 As occurs in other industries, the Air Traffic Management (ATM) business is being challenged to evolve in face of increased globalization and competition, which increase aviation demand and environmental awareness. ANSPs have responded to these pressures by increasing the use of technology and increasingly relying on information to derive ATM benefits.

4.16 Furthermore, the Meeting recognised that the increased use of information is leading to a paradigm shift in the way ATM views the role of aeronautical information. ANSPs and aircraft operators must have a real-time common operating picture of aeronautical information, and must be capable of exchanging and sharing this information to ensure an efficient use of the aviation system.

4.17 AIM must handle aeronautical, meteorological, flight planning, airspace configuration, and ATM/CNS system (planned and real time) status data in a structured way. The full benefits of the AIM system can only be realized when the correct information, in the correct format, is made available to all system users at the right time. To achieve this, the processing of aeronautical information must be managed and coordinated throughout the entire process, applying strict control procedures to ensure quality from origination to publication.

4.18 Accordingly, the Meeting felt the need to provide States with guidance on the minimum technological support required for AIS to AIM transition.

4.19 Based on the foregoing, the Meeting developed a list of the minimun technological support required to meet the new AIM implementation management requirements, as well as a table describing the minimum technological requirements of each participating State, as shown in Appendix B to this part of the report.

**IFAIMA Global AIM Conference**

4.20 The Meeting recalled that the Global AIM Consortium organized a series of Global AIM Congresses, starting in 2006, in Madrid, and ending in 2010, in Beijing.

4.21 The Secretariat informed that IFAIMA (International Federation of Aeronautical Information Management Associations) had decided to take the lead in the organization of these important AIM events, recognising their importance and their impact on the aeronautical community.

4.22 The Meeting took note that, in collaboration with CPAAAAA (AIM Association of Argentina), IFAIMA had decided to organize the 2012 event in Buenos Aires, Argentina, with the theme “AIM Implementation Opportunities”.

4.23 The Secretariat noted that the major international organizations, including ICAO, would participate in the event, and that 200 participants from all over the AIM world were expected to attend. An exhibition area would also be available for participants to get in contact with industry representatives industry and appreciate their state-of-art AIM products.

4.24 The President of the Executive Board of IFAIMA had sent a letter of invitation to ICAO, encouraging States to attend the “Global AIM Conference” in Buenos Aires, Argentina, on 28-30 May 2012 at the Panamericano Hotel.

4.25 The Secretariat noted that additional information on IFAIMA and IFAIM’s Conference could be found on **http://www.ifaima.org**.

**Forthcoming SAM/AIM/4 Meeting**

4.26 Taking into consideration the activities and tasks of the different projects of AIM within the framework of the new GREPECAS methodology, the meeting requested the Secretariat to change the dates of the forthcoming SAM/AIM74 Meeting, to be held from 15 to 19 October 2012. The Secretariat took note and shall communicate the decision according to the ICAO SAM Office's meeting planning for 2012.

**APPENDIX A**

**AIS/AIM COMPETENCY FRAMEWORK**

| **X** | **COMPETENCY UNIT** | | |
|---|---|---|---|
| **X.X** | **COMPETENCY ELEMENT** | | |
| | **X.X.X** | **Terminal Objective (Performance Criteria)** | **Standard[6]** |
| | | | |
| **1** | **DATA AND INFORMATION MANAGEMENT** | | |
| **1.1** | **PRE-PROCESS DATA** | | |
| | 1.1.1 | Receive and record raw data (internal and/or external) | Local procedures |
| | 1.1.2 | Evaluate whether the raw data is from an authorized source | ICAO Annex 15, Chap. 7 and Appendix 1; Doc 8126; Local procedures |
| | 1.1.3 | Evaluate whether the data meets protection requirements | Local procedures |
| | 1.1.5 | Identify if there is a need for translation and/or coding of the raw data | ICAO Doc 9713, Doc 8400 |
| | 1.1.6 | Analyse the appropriateness of the data | ICAO Annex 15; Local procedures |
| | 1.1.7 | Verify the quality of the raw data | ICAO Annex 15, Chap. 3; Local procedures |
| | 1.1.8 | Analyse the data for completeness, coherence, abbreviation and ambiguity | ICAO Doc 8400; Local procedures |
| | 1.1.9 | Identify any discrepancies, duplication and misinterpretations of the data | ICAO Annex 15, Chap. 4 through 7 |
| | 1.1.10 | Coordinate with data source | Local procedures |
| | 1.1.11 | Execute corrective action | Local procedures |
| **1.2** | **PROCESS DATA** | | |
| | 1.2.1 | Perform storage of raw data | Local procedures |
| | 1.2.2 | Assess the impact of the data on existing publications, the significance and complexity of the data, and its temporality. | Local procedures |
| | 1.2.3 | Coordinate with other relevant parties | Local procedures |
| | 1.2.4 | Select the means of publication | Local procedures |
| | 1.2.5 | Schedule the publication process, taking into consideration the main milestones, proposed publication/effective date and the AIRAC cycle | ICAO Annex 15 and Local procedures, Doc 8126 |

[6] The standards listed in this guidance are to be considered as representative and not exhaustive

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|---|---|---|---|
| **X** | **COMPETENCY UNIT** | | |
| **X.X** | **COMPETENCY ELEMENT** | | |
| | **X.X.X** | **Terminal Objective (Performance Criteria)** | **Standard[6]** |
| | 1.2.6 | Perform calculations e.g., data conversions | Local procedures |
| | 1.2.7 | Apply appropriate data formatting rules | Local procedures |
| | 1.2.8 | Enter data into application | Local procedures |
| | 1.2.9 | Assemble statistical data | Local procedures |
| | 1.2.10 | Make data available | Local procedures |
| **1.3** | **OPERATE DATABASE(S)** | | |
| | 1.3.1 | Apply database maintenance operations | Local procedures |
| | 1.3.2 | Identify faults in the operation of the database and apply fault reporting procedures | Local procedures |
| | 1.3.3 | Operate application(s) | Local procedures |
| **1.4** | **PRODUCE DATA SETS/FILES** | | |
| | 1.4.1 | Select the required data | Local procedures |
| | 1.4.2 | Compile data sets/files (e.g., terrain and obstacle, PIB, List of Valid NOTAM, etc.) | ICAO Documents and/or Local procedures |
| | 1.4.3 | Coordinate with other authorities as necessary | Local procedures |
| | 1.4.4 | Verify data sets/files | Local procedures |
| | 1.4.5 | Obtain approval | Local procedures |
| | 1.4.6 | Make data sets/files available | Local procedures |
| **1.5** | **MAINTAIN DATA/INFORMATION AND LIBRARY (INTERNAL AND EXTERNAL)** | | |
| | 1.5.1 | Maintain publications (e.g. AIP) | Annex 15 and Local procedures |
| | 1.5.2 | Maintain data (static and/or dynamic) | Local procedures |
| | 1.5.3 | Maintain records | Local procedures |
| **2** | **STATIC DATA** | | |
| **2.1** | **GENERATE AIP/AIP AMENDMENT** | | |
| | 2.1.1 | Prepare content (text, tables, charts, and other elements) | ICAO Annex 15, Annex 4, Doc 8126, Doc 8400, Doc 8697, Local |
| | 2.1.2 | Coordinate with other relevant parties | Local procedures |
| | 2.1.3 | Translate text into appropriate language | Local procedures |

| | | | |
|---|---|---|---|
| **X** | **COMPETENCY UNIT** | | |
| **X.X** | **COMPETENCY ELEMENT** | | |
| | **X.X.X** | **Terminal Objective (Performance Criteria)** | **Standard[6]** |
| | 2.1.4 | Verify content | Local procedures |
| | 2.1.5 | Obtain approval of content | Local procedures |
| | 2.1.6 | Compile product | Local procedures |
| | 2.1.7 | Obtain approval of compiled product | Local procedures |
| | 2.1.8 | Make AIP/AIP Amendment available (paper and/or electronic form) | Annex 15 Section 3.3, ICAO 9855 (use of internet) and Local procedures |
| **2.2** | **GENERATE AIP SUPPLEMENT** | | |
| | 2.2.1 | Prepare content (text, tables, charts, and other elements) | Local procedures |
| | 2.2.2 | Coordinate with other relevant parties | Local procedures |
| | 2.2.3 | Translate text into appropriate language | Local procedures |
| | 2.2.4 | Verify content | Local procedures |
| | 2.2.5 | Obtain approval of content | Local procedures |
| | 2.2.6 | Compile and verify content | Local procedures |
| | 2.2.7 | Obtain approval of compiled product | Local procedures |
| | 2.2.8 | Make AIP Supplement available (paper and/or electronic form) | Annex 15 Section 3.3, ICAO Doc. 9855 and Local procedures |
| **2.3** | **GENERATE AERONAUTICAL INFORMATION CIRCULAR (AIC)** | | |
| | 2.3.1 | Prepare content (text, tables, charts, and other elements) | Local procedures |
| | 2.3.2 | Coordinate with other relevant parties | Local procedures |
| | 2.3.3 | Translate text into appropriate language | Local procedures |
| | 2.3.4 | Verify content | Local procedures |
| | 2.3.5 | Obtain approval of text | Local procedures |
| | 2.3.6 | Compile and verify content | Local procedures |
| | 2.3.7 | Obtain approval of compiled product | Local procedures |
| | 2.3.8 | Make AIC available (paper and/or electronic form) | Annex 15 Section 3.3, ICAO Doc 9855 and Local procedures |
| **2.4** | **PRODUCE CHARTS** | | |
| | 2.4.1 | Prepare charts | ICAO Annex 4, Doc |

| X | COMPETENCY UNIT | | |
|---|---|---|---|
| X.X | COMPETENCY ELEMENT | | |
| | X.X.X | Terminal Objective (Performance Criteria) | Standard[6] |
| | | | 8697; Doc 9674; Local procedures |
| | 2.4.2 | Coordinate with other relevant parties | Local procedures |
| | 2.4.3 | Translate elements into appropriate language | Local procedures |
| | 2.4.4 | Verify content | Local procedures |
| | 2.4.5 | Obtain approval of chart | Local procedures |
| | 2.4.6 | Make charts available (paper and/or electronic form) | Annex 15 Section 3.3; ICAO Doc 9855 and Local procedures |
| 3 | DYNAMIC DATA | | |
| 3.1 | GENERATE NOTAM | | |
| | 3.1.1 | Prepare content (series, number, Q line, E field, etc.) | ICAO Annex 15 Chap.5, ICAO Doc 8126 |
| | 3.1.2 | Coordinate with other relevant parties | Local procedures |
| | 3.1.3 | Translate text into appropriate language | Local procedures |
| | 3.1.4 | Verify content | Local procedures |
| | 3.1.5 | Make NOTAM available | ICAO Annex 15 Chap. 5.3, Annex 10 Vol 2, Chap 4 ; Doc 8126; Doc 7910; Doc 8400; Local procedures |
| 3.2 | GENERATE CHECKLIST OF VALID NOTAM | | |
| | 3.2.1 | Prepare Checklist of Valid NOTAM | Local procedures |
| | 3.2.2 | Coordinate with other relevant parties | Local procedures |
| | 3.2.3 | Verify content | Local procedures |
| | 3.2.4 | Make Checklist of Valid NOTAM available | ICAO Annex 15 Chap. 5.3, Annex 10 Vol 2 Chap 4 ; Doc 8126; Doc 7910; Doc 8400; Local procedures |
| 3.3 | GENERATE SNOWTAM | | |
| | 3.3.1 | Prepare SNOWTAM | ICAO Annex 15 Chap.5, ICAO Doc 8126 |
| | 3.3.2 | Coordinate with other relevant parties | Local procedures |
| | 3.3.3 | Verify content | Local procedures |
| | 3.3.4 | Make SNOWTAM available | ICAO Annex 15 Chap. |

| X | COMPETENCY UNIT | | |
|---|---|---|---|
| X.X | COMPETENCY ELEMENT | | |
| | X.X.X | Terminal Objective (Performance Criteria) | Standard[6] |
| | | | 5.3, Annex 10 Vol 2 Chap 4 ; Doc 8126; Doc 7910; Doc 8400; Local procedures |
| 3.4 | GENERATE ASHTAM | | |
| | 3.4.1 | Prepare ASHTAM | Annex 15 Chap. 5, ICAO Doc 8126 |
| | 3.4.2 | Coordinate with other relevant parties | Local procedures |
| | 3.4.3 | Verify content | Local procedures |
| | 3.4.4 | Make ASHTAM available | ICAO Annex 15 Chap. 5.3, Annex 10 Vol 2 Chap 4 ; Doc 8126; Doc 7910; Doc 8400; Local procedures |
| 4 | ADDITIONAL PRODUCTS & SERVICES | | |
| 4.1 | GENERATE ADDITIONAL PRODUCTS & SERVICES | | |
| | 4.1.1 | Prepare additional products − data sets/files − (e.g. business products and services, VFR guide)And other customized products for stakeholders | Local procedures |
| | 4.1.2 | Coordinate with other relevant parties | Local procedures |
| | 4.1.3 | Verify content | Local procedures |
| | 4.1.4 | Obtain approval | Local procedures |
| | 4.1.5 | Make additional products available | Local procedures |
| 5 | PRE- AND POST-FLIGHT INFORMATION | | |
| 5.1 | PRE-FLIGHT INFORMATION | | |
| | 5.1.1 | Provide or make available pre-flight information e.g., AIP, PIB, etc. | ICAO Annex 15, Doc 8126, Doc 9855; Annex 10 Vol 2 Chap 4 and local procedures |
| | 5.1.2 | Assist stakeholders in the pre-flight phase | Local procedures |
| 5.2 | POST-FLIGHT INFORMATION | | |
| | 5.2.1 | Receive post-flight data/information | ICAO Annex 15, Doc 8126 and local procedures |
| | 5.2.2 | Assist stakeholders in the post-flight phase | Local procedures |
| | 5.2.3 | Process post-flight data/information | Local procedures |
| | 5.2.4 | Distribute post-flight data/information to the relevant party(ies) | local procedures |

| X | COMPETENCY UNIT | | |
|---|---|---|---|
| X.X | COMPETENCY ELEMENT | | |
| | X.X.X | Terminal Objective (Performance Criteria) | Standard[6] |
| 6 | ARO | | |
| 6.1 | PROCESS FPL | | |
| | 6.1.1 | Receive the FPL proposal | ICAO Doc 4444; Local procedures |
| | 6.1.2 | Process the FPL (Verify FPL for compliance with format and data conventions, and for completeness and accuracy) | Local procedure |
| | 6.1.3 | Receive, create and process associated /supplementary messages | Local procedures |
| | 6.1.4 | Execute corrective action | Local procedures |
| | 6.1.5 | Transmit FPL | ICAO Annex 10 Vol 2 Chap 4., Doc 4444; Local procedures |
| 6.2 | COORDINATION ACTIVITIES | | |
| | 6.2.1 | Assist stakeholders in the pre-flight and post-flight phase | Local procedures |
| | 6.2.2 | Coordinate with ATS | Local procedures |
| | 6.2.3 | Coordination with Search and Rescue Coordination Center | Local procedures |
| | 6.2.4 | Coordinate with other relevant parties | Local procedures |
| 7 | BUSINESS CONTINUITY | | |
| 7.1 | KNOWLEDGE REGARDING LOCAL CONTINGENCY PROCEDURES | | |
| | 7.1.1 | Data and Information Management | Local procedures |
| | 7.1.2 | Static Data Information | Local procedures |
| | 7.1.3 | Dynamic Data Information | Local procedures |
| | 7.1.4 | Pre- Post-Flight Information | Local procedures |
| | 7.1.5 | Additional Products & Services | Local procedures |
| | 7.1.6 | ARO | Local procedures |
| 7.2 | EXECUTE LOCAL CONTINGENCY PROCEDURES | | |
| | 7.2.1 | Data and Information Management | Local procedures |
| | 7.2.2 | Static Data Information | Local procedures |
| | 7.2.3 | Dynamic Data Information | Local procedures |
| | 7.2.4 | Pre- Post-Flight Information | Local procedures |
| | 7.2.5 | Additional Products & Services | Local procedures |
| | 7.2.6 | ARO | Local procedures |

## APÉNDICE / APPENDIX B

## NECESIDADES TECNOLOGICAS / TECHNOLOGICAL NEEDS

| Requisito / Requirement | Argentina | Bolivia | Brazil | Chile | Colombia | Ecuador | F. Guyana | Guyana | Panamá | Paraguay | Perú | Suriname | Uruguay | Venezuela | COMENTARIOS COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Sistema de Información GIS<br>GIS Information System | N | **Y** | **N** | **Y** | **N** | | | | | | **N** | **Y** | **N** | **Y** | |
| 2. Equipo para relevamiento WGS84 con GPS<br>Equipment for WGS84 with GPS | N | **Y** | **N** | **N** | **N** | - | - | - | - | - | **N** | **N** | **N** | **N** | |
| 3. Soporte lógico para base de datos e-TOD<br>Sofwtare for e-TOD data base | Y | **Y** | **Y** | **Y** | **N** | | | | | | **N** | **Y** | **N** | **Y** | |
| 4. AIXM | Y | **Y** | **N** | **Y** | **Y** | | | | | | **Y** | **Y** | **Y** | **Y** | |
| 5. Sistema modular integrado de información aeronáutica<br>Integrated Aeronautical Information modular System | Y | **Y** | **N** | **Y** | **N** | | | | | | **N** | **Y** | **Y** | **Y** | **Brasil y Colombia** necesitan mod. Banco NOTAM<br>Brazil and Colombia require NOTAM data bank mod. |
| **FECHA DE ACTUALIZACIÓN: UPDATED:** | **16/03/2012** | | | | | | | | | | | | | | |

N = No necesita/Does not need
Y = Necesita /Requires

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