



SAM/IG/2
WP/03
10/07/08

**International Civil Aviation Organization
South American Regional Office**

**SECOND WORKSHOP/MEETING OF THE SAM IMPLEMENTATION GROUP (SAM/IG/2)
REGIONAL PROJECT RLA/06/901**

Lima, Peru, 3 to 7 November 2008

**Agenda Item 1: Optimization of the ATS routes structure
a) Routes**

IMPLEMENTATION OF RNAV ROUTES

(Presented by the Secretariat)

Summary

This working paper presents information on the status of implementation of RNAV routes received by Ad-hoc groups integrated by delegations of IATA and the FIRs involved, created at the SAM/IG/01 Meeting and at the Multilateral meetings Brazil/Colombia/Venezuela, Bolivia/Brazil/Peru and Bolivia/Chile/Peru.

References:

- First Workshop/Meeting of the SAM Implementation Group (SAM/IG/1) Report, Lima, Peru, 21 to 25 April 2008
- Report of the SAM 02/08-ATM Informal Meeting (Bogota, Colombia, 06 to 10 October 2008)
- Report of the SAM 01/08-ATM Informal Meeting (Lima, Perú, 20 to 24 October 2008)

ICAO Strategic objectives

Strategic Objective A *Safety*
Strategic Objective C *Environmental Protection*
Strategic Objective D *Efficiency*

1 **Background**

1.1 The optimization of the ATS routes structure in the terminal airspace (SID/STAR and RNAV) and en-route (RNAV), as well as the implementation of RNP approaches are associated to **Result 1.1 of Immediate Objective N° 1 of Project RLA/06/901**, Implementation of performance based navigation (PBN), and if such were the case, those conventional routes that are not used by airspace users will be eliminated and will be replaced by RNAV routes.

1.2 During SAM/IG/01 Meeting, the need was recognised that States review their respective national RNAV implementation programmes to be compatible with the SAM Region RNAV implementation programme, where real implementation needs are determined, the impact that implementation would have in airspace implementation, fleet crew, as well as the air traffic services provision, and pertinent coordinations be established to enable integrated, harmonious and timely implementation of more direct RNAV routes.

2 **Discussion**

2.1 To this end, several ad-hoc groups were created at the SAM/IG/01 meeting, and composed by delegations of IATA and the FIRs involved, to analyse the feasibility of its implementation, agreeing that ad-hoc groups created to carry out such works, would have a 30 days deadline upon the finalisation of such meeting, in order to review within the environment of their respective administrations, and propose the changes deemed pertinent.

2.2 It was also agreed that the communications channels to be used for this coordination would be the use of tele-conferences previously agreed by e-mail. The results of such coordinations should be informed to the Secretariat, in order to enable the preparation of the corresponding proposal for amendment to CAR/SAM ANP Table ATS.

2.3 Also, States involved in multilateral Meetings SAM 01/08-ATM (Lima, Perú, 20 to 24 October 2008) and SAM 02/08-ATM Informal Meeting (Bogota, Colombia, 06 to 10 October 2008) have worked in realigning routes already contemplated in the CAR/SAM ANP and re-established flights in other routes in which there is no good communications coverage, through the adoption of contingency measures, which enable operations that meet safety and the users' needs.

2.4 In this connection, the Secretariat has made coordinations with States/International Organizations and the information received to the date of the preparation of this working paper, is shown in **Appendix A** .

3 **Suggested action**

3.1 The meeting is invited to take note and review the information provided in **Appendix A** to this working paper, and the ad-hoc groups that have not done so yet, to deliver to the ICAO Secretariat the result of their respective works, as soon as possible.

APPENDIX A

Puente Aéreo Montevideo-Buenos Aires

- No information

Route RNAV VOR CRR/VOR FNO

- No information

RNAV UL 797

| ESPACIO AÉREO SUPERIOR / UPPER AIRSPACE UL-797 | | |
|---|-----------------------------|-------------------------------|
| Designador Designator | Latitud Latitude | LONGITUD Longitude |
| Iquique | 20° 34' 16'' S | 070° 11' 00'' W |
| ILPEM | 20° 57' 42'' S | 068° 23' 06'' W |
| SUCRE | 19° 00' 41'' S | 065° 17' 31'' W |
| VIRU VIRU | 17° 37' 42 s | 063° 09' 00 W |

UM530 in the segment VOR BRS up to VOR RBC

Bolivia and Brazil have agreed the date 12 March 2009 for its entry in force, including the updating of the letter of operational agreement between La Paz and Amazônico ACCs for the referred route.

| ESPACIO AÉREO SUPERIOR / UPPER AIRSPACE UM 530 | | |
|---|-----------------------------|-------------------------------|
| Designador Designator | Latitud Latitude | Longitud Longitude |
| Brasilia VOR | S15°52'26'' | W048° 01'17'' |
| PAPES | S14°29'29'' | W049°56'56'' |
| DADRI | S14°02'24'' | W050°34'07'' |
| DIMUB | S13°33'34'' | W052°11'56'' |
| BUBOM | S12°54'37'' | W055°58'55'' |
| PARDO | N12° 16'18'' | W059°05'04'' |
| BUVKI | N10°34'35'' | W065°24'46'' |
| DADED | N10°08'58'' | W066°55'35'' |
| Branco VOR | N09°52'19'' | W067°53'44'' |

Guayaquil – Madrid

| ESPACIO AÉREO SUPERIOR / UPPER AIRSPACE GUAYAQUIL – MADRID UM 662 | | |
|---|-----------------------------------|-------------------------------------|
| Designador Designator | Latitud Latitude | LONGITUD Longitude |
| Guayaquil VOR | S02° 07' 42'' | W079° 52'01'' |
| ASAPO | N01° 08' 57'' | W079° 13' 54'' |
| UMGEB | N00° 21'47.18'' | W077° 24'21.48'' |
| KADED | N06° 37'01.3'' | W069° 48'12.9'' |
| CABO CODERA VOR | N10°34'24.8'' | W066°03'00.2'' |
| ONGAL | N12° 51'15'' | W063° 38'46'' |
| Fort De France VOR | N14° 35'24'' | W061° 01'24'' |

Lima – Madrid

| ESPACIO AÉREO SUPERIOR / UPPER AIRSPACE Lima – Madrid UM 527 | | |
|--|-----------------------------------|-------------------------------------|
| Designador Designator | Latitud Latitude | Longitud Longitude |
| Lima VOR | S12°00'30' | W077 07'22'' |
| SIGOB | S08°28'16'' | W073°20'18'' |
| AKTOR | S04°00'34'' | W068°44'13'' |
| MULIP | S02°29'53'' | W067°12'10'' |
| AKNOV | S00°50'33'' | W065°20'47'' |
| DOBDA | N04 43'56'' | W059°55'40'' |
| TIM VOR | N06°29'53'' | W058°15'46'' |
| UMREM | N07°56'06.73'' | W057°00'03.66'' |
| TRAPP | N09°05'06'' | W055°59'30'' |

Santiago – Miami

- - No information

Suspension UL 793 and UM 656

Brazil and Venezuela have held a bilateral meeting in order to discuss, among others, issues related with the suspension or utilisation of routes UL 793 and UM 656. To this end, both administrations have informed the following:

- It was agreed to include in addition to the proposed levels, two levels above RVSM, these levels are: FL430 for UM656 (One way) and FL450 for UL793 from SVZM to SBAZ.
- For air traffic from SBAZ to SVZM, aircraft should be levelled as follows: UL793 in position AKNOV, UM656 in position ESPIM. No change of levels will be cleared in these route segments by any of the FIRs.
- For air traffic from SVZM to SBAZ, aircraft should be levelled as follows: UL793 in position SIMUR.
- Aircraft separation for aircraft following routes UK793 and UM656, crossing common boundaries from SVZM and SBAZ, maintaining the same route and same flight level, should be separated at least 15 minutes before reaching segments subject to a contingency situation.
- A NOTAM will be prepared indicating opening of routes and in the same, the levels available for each route should be specified, flight direction and conditions of being levelled, as explained above.
- The conditions for opening routes will be disseminated on 20 November 2008, through the issuance of a NOTAM for operators, with effective date 18/12/2008 at 00:01 UTC.
- The duration of the NOTAM will be 3 months renewable until the conditions of communications failures are mitigated.

| RUTA ROUTE | SENTIDO DE VUELO FLIGHT DIRECTION | FL | CONDICIONES DE TRANSFERENCIA TRANSFERENCE CONDITIONS |
|-----------------------|--|-------------------------------|---|
| UL 793 | FIR SBAZ ⇨ FIR SVZM | FL280 – FL320 – FL360 – FL400 | NIVELADO EN EL |
| | | FL250 – FL270 – FL290 – FL310 | FIJO UGAGA |
| | FIR SVZM ⇨ FIR SBAZ | FL330 – FL350 – FL390 – FL410 | LEVELLED IN FIXED |
| | | FL450 | UGAGA |
| UM 656 | SENTIDO UNICO: | FL260 – FL300 – FL340 – FL3 | NIVELADO EN EL |
| | FIR SBAZ ⇨ FIR SVZM | FL430 | FIJO BUVKA |
| | | | LEVELLED IN FIXED |
| | | | BUVKA |