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International Civil Aviation Organization
PNUD/ICAO RLA/98/003 Regional Project
Transition to the CNS/ATM Systems in the CAR and SAM Regions

Second Meeting/Workshop of Air Traffic Management (ATM) Authorities and Planners.
(Lima, Perú, 14 to 18 May 2001)

Agenda Item 3: Analysis of pre-operational trials and demonstrations in new RNAV routes between Buenos Aires/Miami, Sao Paulo-Rio de Janeiro/New York and Sao Paulo-Rio de Janeiro/Los Angeles and evaluation of other paths.

(Presented by IATA)

Summary

This working paper presents information on the reduction of operational costs and the scheduled traffic on the selected routes. It also introduces two new routes, Caracas/Houston-Dallas and Buenos Aires/New York, to be considered as possible candidates for their test on this meeting or in the meetings near future.

1. Introduction

The IATA Regional Office studied and analyzed the routes proposed by the ICAO Offices from the NACC and SAM Regions. The SAM Regional Director in a letter of reference LT 11/3.19.6-SA0263 dated 29 March 2001 proposed these routes. At the same time an economical study was performed for each route attached to this working paper under Appendix 1.

IATA is pleased to present to the group in this working paper, details and general information regarding to the proposed routes. This information will help to develop the implementation of the routes.

2. Route Analysis

Buenos Aires-Miami

The deviation planned using PABON as an intermediate fix in order to avoid flying over Peruvian air space for a short period of time does not increase the length of the route, therefore the principle of

maintaining the minimum distance is not compromised. Prohibited, dangerous or restricted areas do not affect the route.

The traffic from Miami to Buenos Aires is approximately 54 flights per week operated by American Airlines, Aerolineas Argentinas and United Airlines. It is important to note that the route coincides with the orthodromic line from Chicago to Buenos Aires and this potentially adds 14 more flights weekly for United Airlines. Also the orthodromic route from ORD to EZE passes 39 NM east of ATL VOR, potentially adding 22 more weekly flights from Delta Airlines and LAPA Airlines.

The route also has the possibility of connecting Bogota-Miami, Bogota-Buenos Aires and Kingston-Miami.
The total distance saved is 42.6 nautical miles compared with the regular route. This reduction in distance will save the airlines US$ 2.8 million in operational costs.

It is important to note that this route will be operated by 42 B777 weekly flights. Since this aircraft is equipped with ADS and CPDLC, this fact may lead to developing a test program on the application of CNS/ATM elements.

Sao Paulo-Rio de Janeiro/New York.

The route will proceed over ANU VOR at V.C. Bird then direct to PRUIT under Bermuda control and then presumably direct to CHAMP. The over-fly of these fixes was a request from the FAA. This requirement will increase the length of the route by merely 4 nautical miles compared to the orthodromic.

The route has scheduled 93 weekly flights operated by American Airlines, Continental, Japan Airlines, United Airlines and VARIG. Out of those 93 flights, 18 are to/from Rio de Janeiro. The route is 56 nautical miles shorter than the regular route and will save approximately US$ 3.6 million per year.

The route crosses Brazilian airspace area SB (R) 601 located at 16 degrees south with unlimited ceiling.

The route has the potential to connect Antigua-New York, Barbados-New York and Georgetown-New York.

Sao Paulo/Rio de Janeiro to Los Angeles.

The deviation to PABON in order to avoid an over-fly of Peruvian airspace does not increase the distance. 27 VARIG flights and 8 B747-400 flights from Japan Airlines and Korean Airlines operate the route. Although the route is planned with a ramification from PABON to Rio de Janeiro, there are no scheduled flights from Rio de Janeiro to Los Angeles.

The route is shortened by 62 miles, providing yearly US$ 2.0 million in reduction of the operating cost. Areas do not affect the route.

A possible future advantage of the route is connecting Los Angeles with San Jose de Costa Rica, Managua and Tegucigalpa.

Buenos Aires - New York

This route as well as the following one are proposed as stand-by or reserve routes. These two routes could be implemented should the Group make the decision to do so or in the case that one of the above routes cannot be implemented for any reason.

The route is operated by American Airlines, Arolineas Argentinas and United Airlines. A total of 38 flights are scheduled weekly. The route is shortened by 52.2 nautical miles thereby reducing operational costs by US$ 1.2 million.

The route crosses area SV(R) 2533 over Venezuelan airspace with unlimited ceiling along 70 nautical miles. It also crosses area TJ (W) 371 with ceiling 31.000 feet at the San Juan FIR area.

This route has the potential of connecting New York area with Maiquetia.

Dallas –Houston/Caracas

Even though this route does not have a considerable amount of traffic, the distance saved is considerable. American Airlines and Continental Airlines, with 14 weekly flights each operate the route. The route also connects Houston with Aruba with 4 flights per week. The reduction in distance is estimated up to 100 nautical miles, and the savings may be as high as US$ 1.0 million.

The route skims area TN(R) 3 restricted by NOTAM, and areas W92 W147B and W59A at the proximity of Houston area.

Details of all these routes are attached to this working paper in Appendix 1.

3. Action Suggested

The Group is invited to take note of the information provided in this working paper, and to evaluate the Buenos Aires New-York route and the Caracas-Houston/Dallas route for implementation or for future implementation plans.