



International Civil Aviation Organization

NORTH AMERICAN, CENTRAL AMERICAN AND CARIBBEAN OFFICE

**Twenty-Seventh Eastern Caribbean Informal Working Group Meeting
(27TH E/CAR IWG)**

St. John's, Antigua and Barbuda, 21 to 25 July 2003

27TH E/CAR IWG-WP/14

24/06/03

**Agenda Item 3: Specific Air Navigation Activities and Developments
3.2 Aeronautical Information Services (AIS)**

STATUS OF WGS 84 AND GPS APPROACH PROCEDURES

(Presented by InterCaribbean Aeronautical Communications Limited (IACL))

SUMMARY
This Working Paper is presented to discuss the current status of the WGS 84 Data and GPS Approach Procedures in the E/CAR.
References: <ul style="list-style-type: none">• Conclusion 22/7 of the 22nd Meeting of the E/CAR IWG• Conclusion 1/1 of the 1st Meeting of the E/CAR AIS Committee

1. Background

1.1 The National Oceanic Atmospheric Administration (NOAA) of the USA in cooperation with ICAO and local survey authorities completed the Caribbean WGS 84 Surveys at the Airports in the following States:- Anguilla, Antigua and Barbuda, Barbados, Dominica, Grenada, St. Kitts and Nevis, St. Lucia, St. Vincent and Grenadines, Trinidad, and Tobago in May 1996. The criteria contained in ICAO WGS 84 Manual (Doc 9674 AN/946 and annexes) was used in the surveys. The surveys established Primary and Secondary Airport Control Stations (PACS and SACS), measured runway profiles and runway end points in support of ICAO - WGS 84 and FAA Area Navigation Approach (ANA) projects.

2. Purpose

2.1 The PACS and SACS provide local Geodetic Control to support high accuracy ANA Surveys of airport features and obstructions. Connections with existing geodetic network provide data for a more accurate adjustment to support mapping, charting, navigation, boundary determination, resource evaluation and scientific applications.

2.2 Obstacle and Aerodrome Charts were produced and GPS Approach and RNAV Departure Procedures were designed using the WGS 84 Data obtained at the Airports. The NavAids and En-route reporting points in the Piarco FIR were also converted to WGS 84 Data. All of the above are published in the relevant AIPs. The GPS Procedures Charts were subsequently produced and the FAA carried out Flight Checks in 2000 and the Procedures were approved. However the FAA has advised that these Procedures are required to be Flight Checked every eighteen (18) months. In May 2003 the FAA Flight checked and approved the Procedures in Trinidad & Tobago, Grenada and Canouan. The remaining Procedures would be Flight Checked during June/July 2003.

3. Discussion

3.1 With regards to WGS 84 Data, States should advise the Meeting whether there have been any additions, changes in RWYs, Nav aids, new obstacles, runway construction or if the PACS or SACS have been disturbed or any other features as required per the ICAO WGS-84 Manual (Doc 9674 AN/946 and Annexes). If any of the above has taken place then the WGS 84 Data would have to be evaluated.

3.2 In the event that the WGS Data must be revalidated, then the GPS Procedures will have be amended as they were designed using the WGS 84 Data.

3.3 Instructions to gain access to the Caribbean WGS 84 Data are contained in the **Appendix** to this Working Paper.

4. Conclusion

4.1 States should advise the Meeting whether there is need to revalidate the WGS 84 Data at their Airports as a result of any changes mentioned in 3.1.

4.2 States should also advise how soon after the Procedures have been Flight Checked and approved and their Air Traffic Controllers trained in GNSS would they be in a position to have the Procedures published in the AIP's for use by the Airlines.

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APPENDIX

INSTRUCTIONS TO GAIN ACCESS TO THE CARIBBEAN WGS 84 DATA

- (1) Web Site www.ngs.noaa.gov
- (2) Select “data sheets - Find/Update a point”.
- (3) Select “ DATA SHEETS”.
- (4) Select “COUNTY”.
- (5) Under “Pick a State” Select the State in which you are interested then click on “Get County List”.
- (6) The screen will return the County name as “Undetermined” click on “Undetermined”.
- (7) Under “Data type Desired” Select “GPS Sites Only”.
- (8) Under “Stability Desired” Select “ Any Stability” then click on “Get Marks”.
- (9) Click on “ Re-Sort-By” , Click on “Select All” then Click on “Get Data Sheets' the Data Sheets for the State selected will show up.

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