



ICAO

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INFORMATION PAPER

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**Seventh Eastern Caribbean Civil Aviation Technical Group (E/CAR/CATG/7) Meeting**  
Miami, United States, 26-28 July 2023

**Agenda Item 3: Air Navigation Matters**

**CONTINGENCY PLANNING - PROVISION OF NOTAM, FLIGHT PLANNING AND PIB DATA FOR THE  
PIARCO FIR (TTZP)**

(Presented by Trinidad and Tobago)

**EXECUTIVE SUMMARY**

In support of ATM Contingency Plans and the furtherance of SWIM's need for continuous availability of data, the TTCAA is in the process of implementing the Aeronautical Data Contingency Plan - Aeronautical Data Sharing and Failover/Disaster Recovery for specific AIM data/service.

*Strategic Objectives:*

- Safety
- Air Navigation Capacity and Efficiency
- Economic Development of Air Transport
- Environmental Protection

*References:*

- ICAO Annex 10 Vol II
- ICAO Annex 11

**1. Introduction**

1.1 GREPECAS Conclusion 12/99 sets forth the need for States/Territories/Organization to develop Contingency Plans for their FIRs, and to establish bilateral and/or multilateral arrangements with adjacent FIRs. The air navigation system should be resilient to planned and unplanned disruptive events and have 'capacity' so that disruptive events do not significantly affect service performance.

1.2 Interruptions, delays, and errors in the data distribution cycle often lead to serious operational and safety issues within the Caribbean airspace. As traffic levels continue to grow, the regional ANSPs are under increased pressure to ensure the provision of these essential services to their airspace users without any delay.

1.3 The Trinidad and Tobago Civil Aviation Authority (TTCAA) has developed a 24x7x365 contingency plan with the Dutch Caribbean Air Navigation Service Provider N.V. (DC-ANSP) which ensures failover and backup operations of the CRONOS Dynamic AIM System; NOTAM and Flight Planning and PIB service.

1.4 The Aeronautical Data Sharing and Failover/Disaster Recovery Contingency Plan is currently in the testing phase.

## 2. Actions taken by the Trinidad and Tobago Civil Aviation Authority (TTCAA)

2.1 The TTCAA has partnered with DC-ANSP located in Willemstad, Curacao to provide a contingency service.

2.2 The TTCAA and the DC-ANSP have both agreed that ensuring a higher level of service reliability is essential to their roles as ANSPs and are jointly implementing a solution that provides sustainability of service in the event of a breakdown at either party's site.

2.3 The two organizations have formalised an agreement with the NOTAM equipment/software provider 'IDS AirNav' to provide a contingency system.

2.4 The two organizations have liaised with related agencies/service providers including the Federal Aviation Administration (FAA) USA and Frequentis Comsoft GmbH.

2.5 To date, equipment was installed at both organizations and the software versions were aligned.

## 3. The Aeronautical Data Sharing Contingency System

3.1 The IDS AirNav AIM System: CRONOS, is a software system for managing/processing aeronautical data in TTCAA and the DC-ANSP.

3.2 For the Contingency System, there is a second, geographically remote, CRONOS System that can act as a backup. The backup system may be activated to provide services to system operators with minimal interruptions in case the primary system becomes unavailable.

3.3 Figure 1: AIM Contingency Configuration, illustrates the AIM Contingency Systems in Trinidad and Tobago and Curacao.

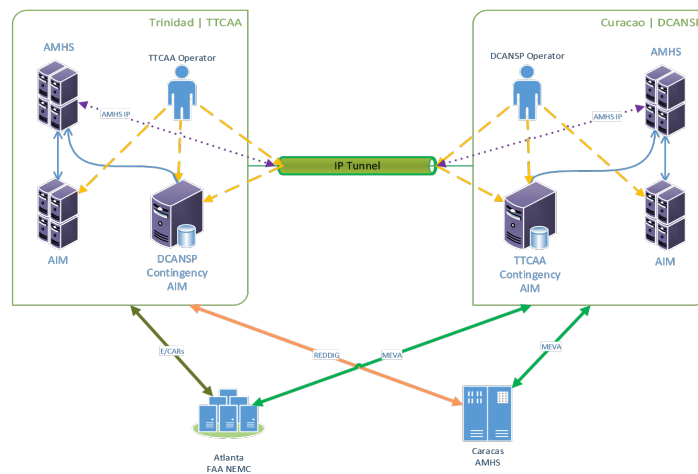


Figure 1: AIM Contingency Configuration (IDSNA ref. AIR-1601-003)

*An Internet Protocol (IP) tunnel will provide an independent connection between the two sites and ensure that data can be transmitted, received, stored, and accessed by either site when addressing any of the scenarios.*

3.4 Operationally, the Contingency Plan has three (3) phases: Notification/Activation, Recovery and Reconstitution and it can be activated for planned Contingency Scenarios occurring either in Trinidad and Tobago or at Curacao.

3.5 The following are examples of the Contingency Scenarios:

1. Main and alternate AMHS communications channel failure,
2. AHMS equipment failure,
3. CRONOS equipment failure,
4. Site Disaster with Internet connection available,
5. Site Disaster with Internet connection not available.

#### **4. Conclusion**

4.1 The Meeting is invited to take note of the information submitted on the actions taken to continuously provide essential aeronautical data.