International Civil Aviation Organization
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INFORMATION PAPER

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Ninth Eastern Caribbean Civil Aviation Technical Group (E/CAR/CATG/9) Meeting
Miami, United States, 28 to 31 July 2025

Agenda Item 4: Update of the E/CAR/CATG Work Programme and Activities

SAN JUAN COMBINED CONTROL FACILITY (TJZS) AIRSPACE SAFETY AND EFFICIENCY INITIATIVES

(Presented by United States)

EXECUTIVE SUMMARY	
San Juan Combined Control Facility (TJZS) briefing on initiatives to enhance safety and improve efficiency with foreign ANSPs.	
Strategic Objectives:	• Safety • Air Navigation Capacity and Efficiency
References:	• TAPA/TTZP/TJZS/TNCM Quadrilateral MOU dated May 4, 2015

1. Introduction

1.1 San Juan Combined Control Facility (TJZS) is continuously working on the development and implementation of initiatives that enhance safety and improve internal and cross-boundary challenges associated with outdated bilateral agreements, technological challenges, and emerging technologies.

1.2 TJZS is eager to collaborate with other ANSPs to improve safety and efficiency in the Eastern Caribbean.

2. Quadrilateral Memorandum of Understanding (MOU), dated May 4, 2015, between V.C. Bird International Airport (TAPA), Piarco Area Control Center (ACC) (TTZP), TJZS and Princess Juliana International Airport (TNCM).

2.1 The parties to this MOU have expressed an interest in updating the MOU with the goal to enhance safety and efficiency within affected airspaces.

2.2 The FAA concurs with enhancing the MOU, especially if/when cross-boundary automation interface, and/or airspace boundary changes are implemented which would change procedures therein.

3. TJZS and TTZP Automated Interface

3.1 Automated Data Exchange (ADE) is an ongoing project at both TJZS and TTZP. To date, ADE testing has shown that data exchanges are feasible and will be beneficial to TJZS and TTZP.

3.2 TTZP is waiting on a vendor to expedite the system development by concentrating on Current Flight Plan (CPL)/Logical Acknowledgement (LAM)/Logical Rejection (LRM) and Modification (MOD) messages. This would allow both facilities to exchange messages IAW North American (NAM) Common Coordination Interface Control Document (ICD), Area Control Center (ACC) to ACC.

3.2 Once complete, this effort will advance safety and efficiency while air traffic controller workload will be reduced.

4. Commercial Space Operations Affecting TJZS and Stakeholders

4..1 Recent SpaceX Starship Rocket launches have created airspace challenges at TJZS that have cascaded to the airspace managed by neighbouring ANSPs.

4.2 Due to the magnitude of the Debris Response Area (DRA) and the ratio of success to failure, TJZS has had to implement tactical protocols to mitigate the results of an active DRA.

4.3 TJZS is collaborating with the Air Traffic Organization's Space Operations Group to improve the handling of traffic through the TJZS FIR and the DRAs. In turn, this will alleviate some of the impacts of hazard areas in the TJZS airspace.

5 TNCM & TJZS Airspace and Technology Enhancement Proposals

5.1 TJZS and TNCM had initial discussions in May of 2024 regarding the possibility of implementing ADE. Because of air traffic system challenges and limitations identified, and potential airspace boundary change being considered by TNCM, it was determined that ADE implementation was not yet plausible and/or practicable.

5.2 Currently, the William J. Hughes Technical Center for Advanced Aerospace is analysing methods in which to successfully implement cross-boundary TJZS—TNCM ADE and will collaborate with TNCM when challenges and limitations have been mitigated.

5.3 During the May 2024 meeting, TNCM presented a proposal to expand its airspace laterally to the north and to the west. TJZS reviewed it and concluded that TNCM must expand the airspace to the south and vertically for the plan to be effective. Therefore, TJZS proposed that TNCM consider raising the vertical limit of its airspace to FL240 and expanding the airspace to the south to include G633 and GABAR.

5.4 The two images below depict the existing TNCM boundary (Figure 5.2.1.) in contrast to the proposed lateral airspace revision (Figure 5.2.2.) that TJZS presented to TNCM.

Figure 5.2.1.

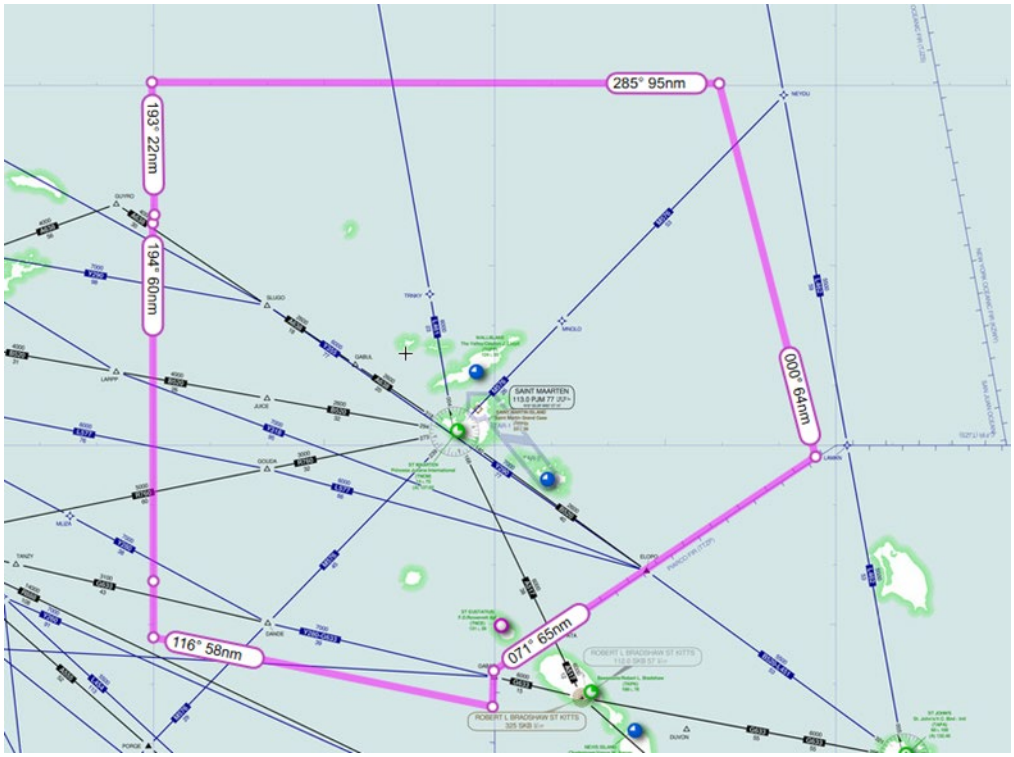

Figure 5.2.2.

6. TNCM RCAG Site

6.1 With a FAA Program Management Office directive and funding, [FAA] Engineering Services, assisted by Spectrum Engineering, is establishing a new Remote Communications Air to Ground (RCAG) site on Sint Maarten (SXM). This effort will include construction of a brand new RCAG facility, moving existing ZSU frequencies from El Yunque and Pico Del Este (to SXM), as well as establishing new SXM frequencies (at the RCAG) to maximize Caribbean communications coverage. Construction is projected to start in August 2025, with anticipated commissioning in July 2026.

6.2 The successful implementation of the TNCM RCAG site may also result in collateral benefit cross-boundary with TTZP. Improving the communication at the common TJZS-TTZP boundary facilitates the implementation of reduced longitudinal separation using GNSS/DME (20NM). This is considerable reduction in separation when compared to the currently used time-based separation of ten minutes (approximately 80NM).

7. The meeting is invited to note the contents of this Information Paper.

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