



WORKING PAPER

**FIRST UNASSIGNED HIGH SEAS AIRSPACE SPECIAL
COORDINATION MEETING (SCM/1)**

Lima, Peru, 22 to 24 July 2019

Agenda Item 3: Determination of services and facilities

3b: Potential solutions

**EXPERIENCE OF TAHITI ACC IN THE PROVISION OF OCEANIC
AIR TRAFFIC SERVICES**

(Presented by France)

SUMMARY

This paper summarizes the longstanding experience of Tahiti ACC in the provision of oceanic air traffic services, based in particular on the CPDLC and ADS-C technologies.

This paper confirms the availability of France to work on the best ways to implement safe, seamless and cost efficient services in the unassigned airspace located next to the eastern boundary of Tahiti FIR, in particular by making best use of already available capabilities.

Action by the meeting is in paragraph 5.

1. Introduction

1.1 State letter LT2/5.50 – SA095 of 14 March 2019 of the ICAO South American Office requests that States provide information about their current CNS/ATM capabilities and/or future plans for the provision of services in the unassigned airspace. This paper presents the experience as well as the available CNS/ATM capabilities of Tahiti area control centre (NTTT) for the management of oceanic air traffic.

2. Discussion

2.1 Pursuant to Article 28 of the Chicago Convention, and of Annex 11 thereto, France has accepted the responsibility of providing air traffic services (flight information, control and alert services) in Tahiti FIR (NTTT). The ACC providing the services is located on Tahiti Island in French Polynesia.

2.2 French Polynesia is part of the French Republic, and Tahiti centre is regulated, inspected and operated by the French Civil Aviation Authority (DGAC France) in accordance with the principle of functional separation between regulation and service provision.

2.3 The Tahiti centre is certified by the French CAA. The oversight is executed by Paris-based French CAA inspectors, with support from the French civil aviation authority (CAA) regional Office based in Papeete, French Polynesia, and is conducted in accordance with European Commission regulation EC Reg 1034/2011. The Tahiti centre is regularly audited (every 24 months), and its latest audit took place in December 2018. Tahiti centre is also certified as an air traffic controller (ATCO) training centre. It was ISO 9001-2015 certified in 2017. In compliance with Annex 11 Standard 2.9 on safety management, significant changes to the ATS services provided by Tahiti are subject to the appropriate safety assessment, usually performed by the French CAA in Paris.

2.4 As a general rule, Tahiti air traffic control personnel have had past professional experience in other units of the French CAA, and may be assigned to other French CAA units in the future. Their ab-initio training took place at the French CAA Academy (ENAC), and they return to ENAC for regular refresher training.

2.5 The services provided by Tahiti centre are designed to meet the objectives of the ICAO Asia and Pacific Regions, and in particular the APAC Air Navigation Plan and PAC regional supplementary procedures.

2.6 The main characteristics of Tahiti centre services can be summarized as follows:

- Tahiti airspace is, for the most part, Class A oceanic airspace between FL 195 and FL 660. Within NTTTT FIR, aircraft may choose to fly ATS routes or UPR (User Preferred Routes), with the associated fuel savings and environmental benefits.
- The Tahiti centre maintains a pro-active approach to risk management, just culture and human factors. In this context, a specific focus is placed on personnel training: the centre operates its own simulator, which is used for air traffic control training and as a test bench to trial major systems.
- A 20 million euro investment programme launched in 2010, has enabled the deployment, in Tahiti, of a new ATS system, a radar, an ADS-B network, and the modernization of communication systems.
- Tahiti centre has a long-standing experience in the provision of oceanic services over the Pacific:
 - Operational use, since respectively 1996 and 1999, of CPDLC and ADS-C technologies.
 - Processing by the ATM system of local SSR and ADS-B data for enhanced air traffic control.
 - Participation since 1991 in the Informal South Pacific Air Traffic Services Coordinating Group (ISPACG), which has supported the deployment and harmonization of ATM and CNS systems in the South Pacific.
 - Adoption in 2015 of a plan for the deployment of PBN in French Polynesia. Its implementation roadmap is coordinated among the ISPACG with ATS services providers for KZAK FIR (Oakland, United States) and NZZO FIR (Auckland, New Zealand).

- Seamless operations for airborne rerouted aircraft (DARP), handed off by NZZO and KZAK centres, and clearance of aircraft on block levels, enabling fuel savings and environmental benefits.
- Use of the PBCS concept : FANS1/A equipped aircraft, meeting RCP 240 and RSP 180 standards, being under an active ADS-C connection and direct pilot-controller radio and/or CPDLC communications, and meeting RNP 10 standards benefit from reduced 50 NM longitudinal and lateral separation standards. These reduced separations are particularly important to ensure seamless operations with KZAK and NZZO FIRs.
- Extensive use of communications by satellite (SATCOM) in the whole NTTT FIR.
- Conventional VOR, DME, NDB, HF and VHF remain available for back-up purposes. HF frequencies are part of the Major World Air Route Areas (MWARA) frequencies. Tahiti FIR operates a SELCAL system. Controllers optimize the operated HF frequency thanks to an ad-hoc specifically developed tool using data from the Australian Bureau of Meteorology which recommends the HF frequency to be used depending on the position of the aircraft, in real time and in the future.
- Inter-center communications (voice and data) with KZAK and NZZO FIRs have been gradually upgraded through the IP technology since 2014. They enable AIDC interfacility data communications.
- The current ATS contingency plan was updated in 2015 with Auckland Oceanic operated by New Zealand. It ensures service continuity for aircraft above FL245.

2.7 Aeronautical information at Tahiti Centre complies with European Standards, and an International NOTAM Office based in Tahiti enables, H24/7, the publication of relevant NOTAMs for the routes and aerodromes in NTTT FIR. A volume of the French AIP, including AIP supplements, is dedicated to NTTT FIR. This volume, as well as NTTT specific aeronautical information circulars are available free of charge, in particular through the French AIS website and the EAD (European AIS database).

2.8 Meteorological services for Tahiti FIR are provided by Météo-France. Météo France has an extensive experience in the provision of meteorological services to aviation, and SIGMETs are provided for the NTTT FIR, as well as more local/regional products for aerodrome services.

2.9 Search and Rescue Services for NTTT FIR have been provided since 2016 through a Joint Rescue Coordination Centre (JRCC). Regarding the provision of the alerting service, both ACC and JRCC are trained on coordination activities and crisis management. Regular refresher training sessions are provided in common sessions to both ACC and JRCC personnel. The JRCC has subscribed to the Aireon ALERT (Aircraft Locating and Emergency Response Tracking) service. ACC and JRCC also work in cooperation with other States such as Chili, New Zealand and the United States. This long-standing cooperation between Tahiti ACC, the JRCC and neighbouring RCCs will enable an effective implementation in NTTT FIR of the global aircraft distress and safety system (GADSS).

3. **Implementation of the Global air navigation plan (GANP)**

3.1 Implementation of ASBU modules for NTTT FIR is in line with regional plans for the Asia and Pacific Regions, and contributes to the realization of the Asia/Pacific Seamless ATM Plan. The following modules have been taken on board in Tahiti centre's modernization programme for 2015-2019:

- B0-FICE; Increased interoperability, efficiency capacity through ground-ground integration: Implement full AIDC messaging, or an alternate communication standard
- B0-DATM, service improved through digital AIM: ATM systems should be supported by complete implementation of AIM Phase 3 (using, at a minimum, AIXM 5.1)
- B0-AMET, meteorological information supporting enhanced safety and efficiency
- B0-FRTO, improved operation through enhanced En-Route trajectories: objective of all ATS routes being designated RNP 2
- B0-TBO, improved safety and efficiency through the initial application of en route data link and SATVOICE enroute

3.2 It is expected that Tahiti centre's strategic plan for 2019-2022 in the air navigation field take into account the following APAC ANP priorities:

- B1-SWIM, Common network services : All ANSPs serving high density FIR should connect to CRV (Common aeronautical Virtual private network).
- B1-DATM, service improved through digital AIM
- B1-AMET, meteorological information supporting enhanced safety and efficiency

3.3 The actions above are significant contributors to ATM systems and data interoperability at the global level. A new important step should be the introduction of the CRV (Common Regional Private Network) in the APAC region from 2020. This network will facilitate, notably in the context of SWIM, the implementation of advanced exchanges with present and future adjacent centres, and further enhance safety.

4. **Conclusion**

4.1 NTTT FIR is integrated into the Pacific ICAO Region. A State accepting the responsibility to provide services in the unassigned airspace will be expected to provide services interoperable with the PAC, SAM and CAR ICAO regions. France, has experience in providing services in all three regions.

4.2 France stands ready to work with ICAO in order to implement, in the short term, modern, seamless and cost efficient air traffic services in the unassigned airspace located next to the eastern boundary of Tahiti FIR, in keeping with Resolution A38-12 of the ICAO Assembly, and taking advantage of existing capabilities.

5. **Action by the meeting**

The meeting is invited to note the information in this paper, in the context of the implementation of ATS services in the unassigned airspace east of Tahiti FIR.

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