



**THE FORTY-NINTH MEETING OF THE
INFORMAL PACIFIC ATC COORDINATING GROUP
(IPACG/49)**

Mita Kaigisho – Tokyo, Japan
December 5, 2024

Agenda Item 6: CNS Issues

SATVOICE OPERATIONAL TRIAL IN UNITED STATES DELEGATED OCEANIC AIRSPACE

(Presented by the United States)

SUMMARY

The United States is developing an operational trial in partnership with Rockwell-Collins to test performance of SATVOICE in its oceanic Flight Information Regions (FIRs).

1. Introduction

1.1. As part of the FAA Reauthorization Act, signed into law on May 16, 2024, the FAA was tasked with exploring the use of SATVOICE technology as a Long-Range Communication Source (LRCS) without changes to existing High Frequency (HF) radio equipage requirements.

1.2. This paper provides background information on a planned operational trial of SATVOICE communication at all three US oceanic facilities in partnership with Collins Aerospace, the Aeronautical Mobile Communication Service (AMCS) provider for FAA HF voice services.

2. Discussion

2.1. At present, the FAA restricts use of SATVOICE communications as a LRCS unless an aircraft first attempts communication via HF or Very High Frequency (VHF) communication and is unsuccessful.

2.2. Several US air carriers and registered operators (e.g., general aviation) have expressed interest in allowing SATVOICE as a LRCS in lieu of HF equipage. As a result, the FAA received tasking in the FAA Reauthorization Act to develop a safety case and implementation procedures for use of SATVOICE as a LRCS within FAA controlled oceanic and remote continental airspace without affecting current HF/VHF equipage requirements.

2.3. Per the tasking, the analysis and implementation procedures must include the following-

- Network and protocol testing and integration with satellite service providers.
- Operational testing with aircraft to identify and resolve performance issues.

- Collaboration with the International Civil Aviation Organization in defining SATCOM Standards and Recommended Practices (SARPs), which shall include an RCP-130 performance standard as well as SATVOICE standards.
- Training of radio operators on new operation procedures and protocols.
- A phased implementation plan for incorporating SATVOICE services into the AMCS program.
- The estimated cost of the implementation procedures for relevant stakeholders.

2.4. The FAA has been working to develop parameters for an operational trial within its oceanic FIRs with its three oceanic facilities and Collins Aerospace. Discussions regarding the trialed use of SATVOICE for delivery of ATC clearances and messages in lieu of Automatic Dependent Surveillance-Contract (ADS-C) and/or Controller-Pilot Data Link Communication (CPDLC) is being considered.

2.5. From an operational perspective, there would be concern about having aircraft receive conflicting messages, especially those related to lateral or vertical movement, should they be logged onto CPDLC and also requesting/receiving clearance via SATVOICE. Because of the safety and efficiency benefits associated with utilizing ADS-C and CPDLC, as well as meeting requirements for provision of Performance-Based Communications and Surveillance (PBCS), aircraft that are equipped with ADS-C and CPDLC would be expected to remain logged onto those systems and receive/request ATC clearances via CPDLC.

2.6. Given the high level of ADS-C and CPDLC equipage within FAA controlled oceanic airspace, finding aircraft that are equipped with HF and SATVOICE only may be a challenge. However, a path forward for ADS-C/CPDLC equipped operators that wish to participate in the trial may be to use SATVOICE for non-clearance related information (e.g., PIREPs, requests for information) and also use of scripted test messages between Collins and those operators.

2.7. Once the trial is started, it is expected to last for several months to allow for collection of enough data to validate suitability as a LRCS and meeting parameters set forth for expected Required Communication Performance (RCP).

2.8. If the trial data proves that SATVOICE is a suitable LRCS and once appropriate infrastructure is in place to support, the FAA may consider SATVOICE as a LRCS in combination with HF initially. What is unclear and will require further exploration is what are the plans for adjacent ANSPs to implement/support SATVOICE as a LRCS?

2.9. The FAA expects the SATVOICE Operational Trial to begin in early CY2025.

3. Conclusion

3.1 The meeting is invited to note the information provided.

