The Global Voice of Pilots
IFALPA

POSITION PAPER

26POS12
2 February 2026

The Use of Satellite Voice Communications (SATVOICE) for Air Traffic Control Operations

NOTE

This paper supersedes 20POS07, of the same name.

INTRODUCTION

The discussion of expanding Satellite Voice Communications (SATVOICE) into the realm of Direct Controller - Pilot Communications (DCPC) and as a sole source of Long Range Communications Systems (LRCS) is evolving. Many shortcomings have been identified, and specifications for new system development need to resolve these shortcomings before SATVOICE can be approved as a substitute means of communication.

The limitations of current systems must be accounted for and the risks mitigated. The areas include Human Machine Interface (HMI), DCPC, ATC Vectoring, Call priorities, Satellite limitations, avionics limitations, flight plans, and Short Code implementation.

1. Satellite Voice Communications (SATVOICE) should not be supported as a primary means of communication between the pilot and controller until its Actual Communications Performance meets the equivalence with current DCPC VHF Voice Communications.
    - SATVOICE does not satisfy the performance requirement of current VHF communications.
    - The technology needed is still being developed, and CSP/SSP (Communication Service Providers/Satellite Service Providers) need to improve processes. SATVOICE should remain a part of the Long-Range Communications Systems (LRCS), along with HF radio, as it currently is.
    - Operators may use it to help Minimum Equipment List (MEL) dispatch in remote areas, i.e. able to dispatch with one HF radio operating if SATVOICE is operational, 2HF with no SATVOICE, allowing relief of equipage requirements in remote areas to safely operate the aircraft.

2. IFALPA supports the system human-machine interface (HMI) development to ensure transparency of the means of communications to the flight crews and controllers.
    - IFALPA should be an integral part of that process of working with the ANSPs, controllers, regulators, operators, and manufacturers to develop a safe and useful future SATVOICE interface.
    - This research requires future development of the SATVOICE communications HMI in order to be able to replace or augment the current DCPC.

3. VECTORING in procedural airspace is required to be conducted using VHF voice. SATVOICE is not suitable for this purpose until it meets the equivalent performance of DCPC VHF voice.
    - Vectoring can only be safely accomplished if DCPC-VHF communications are used where vectoring instructions are broadcast on the frequency. This may be counter to the current use of the CPDLC application of vectors and lateral instructions. The use of VHF communications adds situational awareness in the airspace.
    - In the event of avoidance of severe weather without prior ATC clearance, ATC mitigates risks of reduced separation by vectoring traffic by VHF to avoid conflicts. Unless the reliability and performance requirements are met for SATVOICE communications, IFALPA opposes the use of SATVOICE to vector traffic.

4. Air-to-Ground SATVOICE calls need to be a priority. SATVOICE calls from Air-to-Ground should not be overridden by ATC calls.
    - The SATVOICE system includes call priority, where ATC is normally the high priority and therefore prioritized over other communications when the SATVOICE line is busy.
    - In emergency/urgency cases such as onboard system failure or medical diversion, company communication and coordination should not be overridden by ATC calls.
    - The balance between ATC communication and company communication is important; therefore, it is necessary that the priority is clarified and evaluated from a system perspective.

5. Flight Deck Human Machine Interfacing (HMI) and human factor concerns must be addressed and incorporated in all SATVOICE aircraft systems. These concerns include, but are not limited to:
    - **Aural Alerts** – in some airframes, the SATVOICE aural alert is the same sound as other functions on the flight deck and it only sounds one time; it is not a constant alarm that grabs flight crew attention. This can include company calls, ACARS

messages, Flight Attendant calls, SELCAL, and ATC CPDLC uplink, etc. When common aural alerts are used, a visual annunciation indicates to the crew which function the aural alert is associated with. However, a visual annunciation might be difficult to locate due to the variation of equipage.

- **Aircrew Proficiency in usage** – The flight crew seldom uses SATVOICE. As a result, regular flight crew training is required to ensure familiarity with best practices and standards.
- **SATVOICE controls and indications** – the process to make and or receive a call can be cumbersome in some airframes.
    - The control panel may not show "SATVOICE" as part of the original flight deck design, and aircraft manuals may not address SATVOICE.
- **Emergency communications** - Ideally, aircraft communication systems should be able to be operated in the same manner as current VHF Communications. The system should be configured in such a manner that when the pilot depresses the Transmit key, the microphone is live, and a transmission is immediately active.
- **Switching between Satellite Communication providers** - On airframes which support various Satellite Communication providers, flight crews are required to manually switch from one system to the other to ensure SATVOICE continues to be available when transiting different SSP network coverage areas. This is significant for operations in the polar regions where one SSP has coverage and the other does not. An automated switching process may provide a more robust overall SATVOICE system to assist with ATC planning.
- **Unambiguous short code identification** on the flight deck. Flight crews are not always able to identify the distinction between ATCs if they share the name, as shown below:

The outcome of this ambiguity and inconsistency is the following, but not limited to:

- Flight crews may inadvertently contact the wrong address or not be able to find the appropriate contact easily.
- Flight crews may be reluctant to use SATVOICE since additional steps may be required to verify which short code to use.
- The time required to make SATVOICE calls may increase.

6. Satellite Service Provider System Requirements/Limitations:

- **Onboard SATCOM receivers must have global coverage**. Currently, not all SATCOM receivers have full polar coverage.
- **System limitations on SATVOICE calls need to be addressed. SATVOICE should achieve an operational availability equivalent to VHF.**
- **Flight plans should include all the information required for SATVOICE operations.**
    - The appropriate SATVOICE equipage should be included in the flight plan along with an airframe's ICAO code (CODE/ followed by the aircraft address, expressed in the hexadecimal format)
    - Interoperability issues between ANSPs should be addressed, particularly when transferring flight plan information.
    - Operator education on the correct filing of flight plans is needed.
- **IFALPA supports amending Short Codes as avionics phone books are not necessarily programmed with published short codes for Air-to-Ground calls.**
    - Ambiguity on Short Codes can cause the call to circumvent the ground routing infrastructure instead of routing the call to the ATC responsible for the aircraft.
    - Furthermore, by not using short codes, the avionics phone books would require reprogramming if the PSTN (Public Switched Telephone Network) number (long code) associated with the short code were to change. Efforts should be made to ensure the short code remains the same to avoid the need for avionics to be reprogrammed.

- **Aircraft should not be limited to a single SSP SATVOICE system.**
  Currently, airframes may have systems that are specific to one SSP or both. Depending on the flight routes, coverage may be limited to a single provider.

- **System and network availability.**
  SATVOICE should be considered to have similar reliability constraints as HF until the technology achieves the same level of confidence as VHF. The vulnerability of SATVOICE due to Space Weather and/or Radio Frequency Interferences should also be considered.