

**Twenty Eighth Meeting of the
Informal South Pacific ATS Co-ordinating Group
(ISPACG/28)**

**Papeete, Tahiti
5-7 March 2014**

Agenda Item 4: Open Action Items AI 27-1

Satellite Voice in the Auckland (NZZO) Oceanic FIR

Presented by Airways New Zealand

SUMMARY

This paper provides an update on Satellite Voice implementation in the Auckland (NZZO) Oceanic FIR. It discusses the early stages of implementation of the Iridium Safety Voice service and the availability of satellite voice services through Inmarsat and MTSAT.

1. INTRODUCTION

- 1.1 Airways have been providing satellite voice communication services to aircraft equipped with Inmarsat satellite voice using Astrium as the access provider and are in the early stages of testing the Iridium ATS (Air Traffic Service) Safety Voice Service. Airways do not provide satellite voice communication services to aircraft operating on MTSAT. At some stage since the introduction of the new Inmarsat I3 GES we have lost the ability to access Inmarsat equipped satellite voice aircraft via our Astrium access number.

2. DISCUSSION

Iridium

- 2.1 Airways New Zealand received their user ID and PIN to enable calling via the Iridium ATS Safety Voice Service in early February 2014. Access to SATVOICE services is described in Paragraph 2.6 of the Satellite Voice Guidance Material (SVGGM). The ATS Safety Voice Service requires the ATS caller to call an Iridium access number then enter a discrete User ID and PIN followed by required call priority and then the 8-digit octal ICAO number for the aircraft which is derived from the hex representation of the ICAO 24 bit code in the aircraft flight plan.

- 2.2 Unique ATS SIM cards are required on the aircraft to enable use of the ATS voice service. These ATS SIM cards are different from the Iridium SIM cards installed on many aircraft that take Iridium satellite voice calls without the caller identification and priority pre-emption available with the ATS Safety Voice Service.
- 2.3 Initial testing with an airline customer that is implementing Iridium satellite voice for ATS communications has identified that the aircraft were not issued with ATS SIM cards by their CSP and are not accessible through the ATS safety voice service. The operator was not aware of the need for specific ATS SIM cards to enable use of the Iridium ATS safety voice service. We are currently identifying if other aircraft operating in NZZO and filing M3 in the FPL are operating with the Iridium Safety Voice service. We have confirmed that at least one fleet is not.
- 2.4 The intention is to incorporate satellite voice access into the Oceanic Control System and the air ground operator workstations. It is planned that this automation will use the ICAO CODE/ to determine the 8-digit octal ICAO number used with the ATS Safety Voice Service. A FPL sample has shown some issues that will need to be addressed by automation assumptions, further guidance material, and in the New Zealand AIP. For example:
- Some aircraft operating in NZZO are equipped with both Inmarsat and Iridium Satellite Voice and automation will be required to allow controller selection and/or a default priority. One suggestion is that if Inmarsat CPDLC is indicated in FPL then we would default to Iridium for Satellite Voice. This will require coordination with operators as one operator has advised they only use Iridium in Polar Regions above 80N.
 - Some aircraft are filing both CODE/ and COM/ with a 12 digit Iridium access number. The 12 digit number identifies that they are not using the ATS Safety Voice Service. The use of COM/ to identify Iridium satellite voice access availability other than via the ATS Safety Voice Service is not covered in the SVGM Flight planning paragraph 3.4 and has implications in regard to MEL relief.
 - With the recent introduction of Iridium ATS Safety Voice Service in late 2013 automation will assume that aircraft filing CODE/ and M3 in Item 18 are using the ATS Safety Voice Service. One fleet that is filing CODE/ and M3 has advised they have not yet upgraded to the ATS safety voice service.
 - Some aircraft that are filing M3 for Iridium satellite voice in Item 10 of the FPL are not providing either CODE/ or COM/ in Item 18. This will be addressed with individual operators.

MTSAT

- 2.5 One airline fleet operating in NZZO is using MTSAT SATCOM for both CPDLC and satellite voice communications. SITA is the designated Communication Service Provider for MTSAT however they advised Airways New Zealand in 2013 that they do not provide access for satellite voice communications calls to aircraft via MTSAT.

Inmarsat

- 2.6 Controllers can call aircraft using Inmarsat satellite voice via an access terminal adjacent to their controller workstation. This terminal automates the dialing sequence to an access number in the United States provided by Astrium (previously known as the Vizada SAT Direct service). The controllers input the aircraft registration and a database look up determines the aircraft number and dials the Inmarsat access number, PIN, aircraft number, and call priority.
- 2.7 At some stage since the transition to the new Inmarsat I3 GES in July 2013 we have lost the ability to call Inmarsat equipped satellite voice aircraft. Inmarsat have taken direct control of the I3 GES operations back from the previous GES operators e.g. Astrium (Vizada) and now contract directly with SITA and ARINC for access to both FANS1/A ACARS and voice services. We have been advised that the internetworking between Inmarsat and Astrium was kept open after the transition to enable Astrium customers to transition to a new supplier. However, Airways was never advised nor did we pick up on the impact of the I3 change on our satellite voice access. We are working through this now but suspect we may need to change provider.
- 2.8 Our intention is to incorporate the satellite voice automation into the OCS controller and air ground operator work stations by 2016. Provision will be made to use the filed FPL CODE in Item 18 instead of a database to determine aircraft phone numbers.

3. ACTION BY THE MEETING

- 3.1 The meeting is invited to:
- a) Note the issues identified during implementation of the Iridium Safety Voice service in NZZO; and
 - b) Note the adventitious impact of the I3 upgrades on our Inmarsat satellite voice communications; and
 - b) Discuss if further guidance material is required.