



**Twenty Fifth Meeting of the
Informal South Pacific ATS Co-ordinating Group (ISPACG/25)**

**Eighteenth Meeting of the
FANS Interoperability Team (FIT/18)**

Honolulu, Hawaii, USA, 22-23 March 2011

Agenda Item 7: INMARSAT, Iridium

Inter-Regional SATCOM Voice Guidance Material

Presented by the Federal Aviation Administration (FAA)

SUMMARY

This paper provides an update on Inter-Regional Satellite Communications (SATCOM) Voice Task Force, and invites the ISPACG to participate in completing globally applicable guidance material for using SATCOM voice for air traffic services communication (SVGM) targeted for December 2011.

1 INTRODUCTION

- 1.1 In June and September 2010, the North Atlantic Systems Planning Group (NAT SPG) and Asia-Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG), respectively, concluded on terms of reference for an Inter-Regional Satellite Communications Voice Task Force (SATCOM Voice TF).
- 1.2 The SATCOM Voice TF was mandated to produce globally applicable guidance material for using SATCOM voice for air traffic services (ATS) communications (SVGM) targeted for December 2011.

2 DISCUSSION

- 2.1 The SATCOM Voice TF held its first meeting, 25-27 January 2011, in Paris, France.
 - a) 32 members from 11 States, 3 international organizations and industry, including an airline, aircraft manufacturers, communication service providers and satellite companies participated.

- b) The SATCOM Voice TF reviewed its terms of reference, status of implementation and available documentation and developed a work plan.
 - c) There were 6 working papers, 3 information papers and 1 presentation.
 - d) SVGM v0.2 working draft was available at end of meeting and is provided at Appendix A.
- 2.2 A draft of the foreword is provided at Appendix B. Open comments are provided at Appendix C.
- 2.3 The SVGM will be developed within a global ICAO required communications performance (RCP) framework to provide States flexibility to apply different standards for different uses without implication to seamless operations.
- 2.4 The guidance material will be applicable to aeronautical mobile satellite (route) service (AMS(R)S)-compliant systems, including Inmarsat, MTSAT and Iridium.
- 2.5 The guidance material will take account of NAT SATCOM voice trial guidance material, Performance-based operations Aviation Rulemaking Committee's Communications Working Group (PARC CWG) SATCOM voice project, and airworthiness certification and operational approval guidance by the FAA and the European Aviation Safety Agency (EASA).
- 2.6 The SATCOM Voice TF/1 discussed a number of scenarios to be considered by the terms of reference, including:
- a) ATS communications, including urgent communications;
 - b) Use of SATCOM voice for ATS communications via radio operator or direct to controller;
 - c) Minimum Equipment List (MEL) relief, e.g., no relief, 1 HF + 1 SATCOM, No HF radio at all; and
 - d) SATCOM phones installed or portable.
- 2.7 The SATCOM Voice TF/1 agreed that the SVGM First Edition will:
- a) Remain neutral on the scenarios;
 - b) Include RCP specifications within global ICAO framework;
 - c) Provide a basis for determining acceptability of any implementation;
 - d) Indicate that in-flight use of portable SATCOM phones is not allowed, according to many existing State operating regulations, and will not address any special applications on their use;

- e) Facilitate civil aviation authorities (CAAs) and regional safety oversight organizations (RSOOs) in establishing MEL policies; however, the SVGM will not address the use of SATCOM voice alone (i.e., without any HF voice capability); and
 - f) Be consistent with a long term vision of SATCOM and related safety oversight.
- 2.8 The SATCOM Voice TF/1 accepted SVGM working draft, dated 13 July 2010, as a starting point. This draft was produced by the PARC CWG and includes material from the North Atlantic SATCOM voice operational trials.
- 2.9 The draft SVGM is structured similar to the Global Operational Data Link Document (GOLD), which both NAT SPG and APANPIRG have adopted as a regional document for global application, and will contain the following:
- a) Foreword – History, purpose and scope, etc.
 - b) Chapter 1 – Definitions
 - c) Chapter 2 – SATCOM voice overview - informative
 - d) Chapter 3 – Provisions for SATCOM voice operations
 - e) Chapter 4 – Controller/radio operator procedures
 - f) Chapter 5 – Flight crew procedures
 - g) Apx A – RCP specifications
 - h) Apx [n] – one or more, as necessary, for Regional/State and airframe specifics, safety objectives, long term plans
- 2.10 To develop the SVGM, the SATCOM Voice TF will use processes similar to those used to develop the GOLD:
- a) A “coordinator,” under the auspices of the SATCOM Voice TF, will manage the draft guidance material and use a “master comment matrix” to track changes;
 - b) The controlled version of the guidance material and the matrix will facilitate coordination and comment via email and a web site to keep travel costs at a minimum;
 - c) Teleconferences/Web Ex sessions and meetings will be arranged, as needed; and
- 2.11 As an ad hoc group, the SATCOM Voice TF intends to draw from a diverse set of expertise to contribute and coordinate the SVGM. The expertise will include representatives from civil aviation authorities (CAAs), regional safety oversight organizations (RSOOs), air traffic and communication service providers, satellite

operators, aircraft operators, and aircraft/equipment manufacturers via the PARC CWG, ISPACG, Informal Pacific Air Traffic Control Coordinating Group (IPACG), North Atlantic Communications, Navigation and Surveillance Group (NAT CNSG), Air Traffic Management Group (NAT ATMG), etc.

- 2.12 It is intended to maintain the SVGM as a regional, but global document to facilitate timely completion via cross-regional coordination with the ICAO HQ (Montreal), EUR-NAT (Paris), and Asia-Pacific (Bangkok) offices.
- 2.13 Operational Data Link Panel (OPLINKP) work program includes amendments to ICAO Annexes/Procedures for Air Navigation (PANS) and Guidance material related to use of SATCOM voice for ATS communications. OPLINKP is monitoring regional activity to assess ICAO material needed for approval at the 12th Air Navigation Conference in November 2012. SATCOM Voice TF will provide recommendations, as necessary, to OPLINKP by February 2012

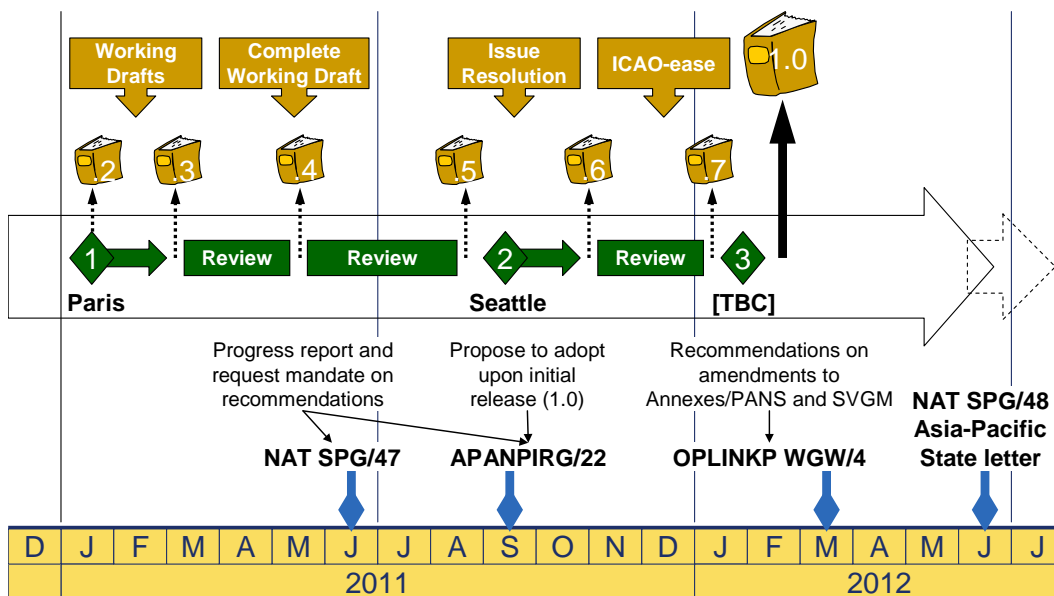


Figure 1. Satellite Voice Guidance Material (SVGSM) schedule

- 2.14 IR SATCOM Voice TF – future events
 - a) IR SATCOM Voice TF/2, 12-16 September 2011, Seattle WA USA, Hosted by Boeing
 - b) IR SATCOM Voice TF/3, Propose Jan/Feb 2012, venue to be confirmed (TBC),



- c) Boeing will host teleconference/web ex as and when required

3 ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) Note the information in this paper;
- b) Participate in the development of working draft SVGGM, v0.2, provided at Appendix A;

Appendix A. Working Draft Satellite Voice Guidance Material (SVGGM, v0.2)

[Provided in a separate file.]

**Appendix B. Working Draft Satellite Voice Guidance Material, Foreword (SVG
v0.3)**

[Provided in a separate file.]

Appendix C. SVGM Master Comment Matrix

[Provided in a separate file.]

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