

REPORT OF SEACG SMALL WORKING GROUP - COMMUNICATIONS

1. INTRODUCTION

SWG - Communications Report

1.1 The SEACG/19 Small Working Group – AIDC (SWG–AIDC) was led by Mr. Gildas Fung Yut-chiu of Hong Kong, China and supported by the ICAO Regional Office Secretariat. The SWG was established to examine the AIDC communications capabilities and of SEACG participant States.

1.2 The parallel SWG–Comms at the subsequent meeting of the South Asia – Indian Ocean Coordination Group (SAIOCG) had the broader objective of examining other communications systems to determine current CNS/ATM System communications capability and gaps, implementation plans and impediments to successful implementation, and to make recommendations for improvement, in the following communications fields:

- a) VHF Air-Ground
- b) HF-Air Ground
- c) CPDLC
- d) AIDC
- e) AFTN/ATN
- f) Ground – ground coordination facilities

1.3 Subsequently, the Secretariat took steps to include consideration of the broader range of communications fields by the SEACG SWG. This brief report summarizes the information provided so far, which is recorded in the spreadsheet at Appendix 4B to SAIOCG/3 and SEACG/20 Working Paper 03. The spreadsheet has been expanded to include all the above communications systems, in addition to AIDC.

1.4 The SWG - AIDC consisted of representatives from 7 of the 10 States present at SEACG/19.

1.5 To include the broader range of communications fields under consideration the spreadsheet at Appendix 4B was developed by the Secretariat, to standardize with that used to record SAIOCG SWG-Comms information.

1.6 Several States are participants in both SAIOCG and SEACG, and therefore feature in the reports of both SWGs.

2. DISCUSSION

2.1 At SEACG/19 the SWG-AIDC participants provided information that was known or available to them, limited to AIDC. Some further information on AIDC and other communications systems was later provided via electronic communications, but more detail is needed to develop full information on the current status, planning for enhancement and barriers to implementation. This will permit SWG–Comms participants to make more sound recommendations for solutions to support SEACG implementation of seamless ATM.

VHF Air-Ground

2.2 Limited information was provided by SEACG SWG-Comms on VHF capability. However, the information on VHF coverage supporting radar and ADS-B Surveillance gathered by the SWG – Surveillance provides some detail.

2.3 Recommendation:

That, recommendations for enhancement of VHF coverage, reliability and availability are determined by the requirement to provide direct controller – pilot voice communications to support of current and proposed Radar and ADS-B surveillance coverage, as proposed by SWG – Surveillance.

HF Air-Ground

2.4 Little information was gained on whether HF was in use, or on any limitations, reliability or coverage issues.

2.5 Recommendation:

That, SEACG participants provide updated information on HF communications capability, including network identification (MWARA or RDARA), any frequency or equipment limitations, and reliability or coverage issues, including any limitations on HF availability to support application of ATC separation standards.

CPDLC

2.6 Several States indicated having CPDLC capability, but only one has indicated whether that capability is integrated with the ATM Automation System air situation display, thus providing direct controller – pilot communications (DCPC) between the aircraft and the controller responsible for its separation. Without DCPC improved RNP separations outside radar or ADS-B surveillance and/or direct voice communications coverage cannot be achieved.

2.7 Recommendation:

That,

- i) SEACG participants provide information the current status of CPDL and its integration in ATM Automation Systems; and*
- ii) SEACG States ensure that CPDLC systems are integrated with ATM Systems to provide DCPC at the ATC workstation controlling the aircraft concerned.*

AIDC

2.8 Only very limited operational implementation of AIDC has occurred among SEACG States. While AIDC messaging exists internally between several FIRs and ACCs in one State, only three FIRs from two States have operational AIDC messaging in place, and this is limited to only one message-type exchange (TOC/AOC). One State had suspended its AIDC trial with a neighbouring non-SEACG State due to AFTN equipment problems. Technical limiting factors reported include ATM automation system capability and configuration, AIDC version compatibility (interoperability)¹, heavy reliance on ATM system vendors for implementation support, and AFTN/ATN reliability.

2.9 A number of SEACG administrations were either not planning to use ATS Inter-facility Data-link Communications (AIDC) or did not have this capability planned in the near future. This was in spite of the previous APANPIRG Conclusion urging States to implement AIDC due to its effectiveness in reducing human transfer errors.

2.10 Recommendation:

That,

- i) States without AIDC-capable ATM systems continue or resume their efforts to replace and upgrade their ATM Systems accordingly;*
- ii) All AIDC capable States engage as soon as possible in AIDC trials to develop knowledge, and to identify and address any related ATM or Communications System issues; plan inter-State operational AIDC messaging as a matter of priority in support of improved safety and seamless ATM; and*
- iii) SEACG, in cooperation with SAIOCG, formulates a minimum list of AIDC message types to be included in ATM plans.*

AFTN/ATN

2.11 Three States indicated AMHS systems implementation, one of them under trial. Further information is needed on current fixed communications status and plans to determine States' capability to support safety and capacity improvements, particularly by AIDC messaging.

Ground – Ground Communications

2.12 The four SEACG participants States also participating in SAIOCG reported having direct speech communications links with all neighbouring FIRs, in most cases supported by telephone facilities as a back-up. Further information from other SEACG States is needed.

2.13 Recommendation:

That, SEACG participants provide information on the current status of ground-ground communications systems.

¹ The first meeting of a EUR – Asia/PAC pan-Regional AIDC ICD Task Force was held in Paris in January 2013. The second meeting will be held in Bangkok in November 2013. The expected output of this Task Force is a standardized AIDC ICD for global use.

Barriers to Implementation

2.14 There was some discussion of barriers to AIDC implementation at the SWG-AIDC meeting conducted during SEACG/19. General discussion was centered on ATM system capability, budgetary constraints, limited project management resources, lack of exposure to modern ATM and CNS systems, and the difficulty involved in communicating to organizational management and executives at policy-making levels the urgency of the need for commitment to system improvement.

2.15 Other barriers identified included compatibility issues between neighbouring ATM/CNS systems, particularly in the version control of AIDC messaging, which is often implemented by ATM replacement or upgrade projects without consideration of version standardization between the systems of neighbouring States. One State with current AIDC messaging in operational use advised that further implementation was dependent on completion of current projects consolidating ACCs in several FIRs.

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