



International Civil Aviation Organization

**THE NINETEENTH MEETING OF THE COMMUNICATIONS /
NAVIGATION AND SURVEILLANCE SUB-GROUP (CNS SG/19) OF
APANPIRG**

Bangkok, Thailand, 20 -24 July 2015

Agenda Item 3: Aeronautical Fixed Service

PROGRESS OF AIDC IMPLEMENTATION IN SINGAPORE

(Presented by Singapore)

SUMMARY

This paper presents the progress of AIDC implementation in Singapore as well as urges Asia/Pacific States to implement AIDC early.

1. INTRODUCTION

1.1 Recognizing the benefits of AIDC, Singapore has plans to implement AIDC with ATS units of its adjacent States.

1.2 The development of Singapore's AIDC implementation roadmap has taken into account the volume of air traffic (which implied the volume of ATC co-ordination required to be undertaken), the development of ATM systems in adjacent States and ATS units as well as their readiness for AIDC implementation.

2. SINGAPORE'S IMPLEMENTION PLAN

Singapore ATM system

2.1 Singapore's new ATM system, known as LORADS III, with AIDC feature was put into operations in October 2013. Initially, the planned version of AIDC for LORADS III was version 3.0. However considering that the AIDC versions of neighboring ATS Units were of earlier versions, Singapore elected to install earlier versions so as to ease, implementation of AIDC by ensuring compatibility. It was also envisaged that only some basic AIDC messages could be introduced at start of any AIDC implementation.

Vietnam (Ho Chi Minh FIR)

2.2 Singapore commenced Phase 1 AIDC trials with Viet Nam (Ho Chi Minh FIR) in December 2013, with AIDC messages such as EST, ACP, LAM and LRM. Phase 1 AIDC implementation with Vietnam became operational on 24 July 2014 for ATS routes L625, L642, L644, M753, M768, M771 and N892. These routes contribute about 21% of the traffic in the Singapore FIR.

2.3 AIDC messages ABI, TOC and AOC will be introduced for Phase 2 AIDC implementation with Vietnam. Phase 2 trials had commenced on 15 June 2015.

Malaysia (Kota Kinabalu, Kuching and Kuala Lumpur FIRs)

2.4 Singapore conducted AIDC technical tests with Kota Kinabalu, Kuching and Kuala Lumpur ATS units from December 2014 till April 2015.

2.5 AIDC implementation had been planned to start with Kota Kinabalu ATCC in December 2015 as 3 ATS routes (namely M78, M768 and L517) to Kota Kinabalu make up close to 13% of the traffic movements in the Singapore FIR. AIDC operations with Kuching and Kuala Lumpur ATCCs will be progressively introduced by February 2016.

Philippines (Manila FIR)

2.6 Singapore conducted an initial test with Manila FIR on its interim ATM system in December 2014. Further tests are planned with Manila ACC to assess readiness of AIDC implementation.

Indonesia (Jakarta FIR)

2.7 Singapore plans to commence trials with Jakarta FIR as soon as practicable after AIDC capability becomes available in Jakarta FIR by September 2015. This is because the traffic movements between Jakarta and Singapore FIRs constitute approximately 30% of the total traffic movements in the Singapore FIR.

2.8 The timelines for the various activities are summarized in **Annex A**.

3. BENEFITS OF AIDC IMPLEMENTATION

3.1 Currently, only a small AIDC message set is used between Ho Chi Minh FIR and Singapore. The controllers have already seen a great reduction in voice co-ordination. This in turn reduces controllers' workload and human errors as well as enhances work processes.

3.2 In view of the benefits that AIDC can bring, States are urged to implement AIDC early with their adjacent FIRs.

4. ACTION BY THE MEETING

4.1 The meeting is invited to:

- a) Note the progress of AIDC implementation in Singapore;
- b) Urge early implementation of AIDC in view of its benefits.

Annex A

Implementation Activities

State/ATC unit	Technical test commencement	Implementation date	AIDC messages	Remarks
Vietnam/Ho Chi Minh ACC	December 2013	24 July 2014	Phase 1 (24 th July 2014) : EST, ACP, LAM, LRM Phase 2 (3Q 2015): ABI, TOC, AOC	Phase 2 operational trials started on 15 June 2015
Malaysia/ Kuala Lumpur, Kota Kinabalu and Kuching ATCCs	December 2014	December 2015: Kota Kinabalu ATCC January 2016: Kuching ATCC February 2016: Kuala Lumpur ATCC	ABI, EST, ACP, LAM, LRM, TOC, AOC	Messages for different phases and ATCCs are yet to be finalized. Coordination meeting planned for July 2015 for discussion.
Philippines/ Manila ACC	December 2014	December 2015	ABI, EST, ACP, LAM, LRM, TOC, AOC	Initial testing December 2014 with interim system. Further technical testing will be scheduled for July 2015.
Indonesia/Jakarta ATSC	TBA	December 2016	ABI, EST, ACP, LAM, LRM, TOC, AOC	Jakarta ATSC expected AIDC capability in September 2015. Discussions on AIDC implementation to commence in 3Q 2015.