



International Civil Aviation Organization

Fourth Meeting of the South Asia/Indian Ocean ATM Coordination Group (SAIOACG/4) and Twenty-First Meeting of the South-East Asia ATM Coordination Group (SEACG/21)

Hong Kong, China, 24 – 28 February 2014

Agenda Item 4: Implementation of CNS/ATM Systems

THAILAND AIDC IMPLEMENTATION AIRSPACE CAPACITY ENHANCEMENT

(Presented by Thailand)

SUMMARY

The purpose of this paper is to present Thailand's effort to enhance airspace capacity in the Bangkok FIR through the implementation of electronic aircraft handoff via AIDC with its neighboring FIRs along with the implementation of the new ATS system.

1. INTRODUCTION

1.1 The meeting would recall the approval of the ICAO Asia-Pacific Seamless ATM Plan by ICAO APANPIRG/24 Meeting in June 2013, which is expected to serve as an Asia-Pacific regional vehicle to implement ICAO Aviation System Block Upgrades (ASBU) concept in a harmonized manner.

1.2 The ICAO Asia-Pacific Seamless ATM Plan, in accordance with Preferred ATM Service Level Phase I (PASL Phase 1 – para 7.35), provides expectations for electronic aircraft transfer of control between ATC units via AIDC unless an alternate means of automated transfer of control is available by November 2015.

1.3 Such expectations on AIDC implementation is in accordance with ASBU element B0-FICE: Ground – Ground Integration and Interoperability, which was categorized in Priority 1, the highest priority in the ICAO Asia-Pacific Seamless ATM Plan.

1.4 In accordance with the ICAO Asia-Pacific Seamless ATM Plan, informal ATM coordination groups such as Mekong ATM Coordination Group (MK-ATM/CG) and Group of Five ANSPs Informal ATM Coordination Group (G5) have agreed to implementation of AIDC among the participating States.

1.5 Meanwhile, Thailand continued to experience rapid air traffic growth. Airborne traffic movements in the Bangkok FIR grew at the rate of 10–16% per annum from 2010 to 2013. The average number of daily airborne flights in the Bangkok FIR increased from 1,280 flights per day in 2010 to 1,900 flights per day in 2013. Such rapid growth of air traffic quickly puts pressure on ATM infrastructure.

2. **DISCUSSION**

2.1 In an effort to support continued rapid traffic growth expected from the establishment of ASEAN Economic Community (AEC) among the members of Association of Southeast Asia Nations (ASEAN) in 2015, Thailand has procured a new Air Traffic Service system under the “Thailand Modernization of CNS/ATM System” (TMCS) project, with a plan for an operational trial in late 2015.

2.2 The ATS system provided as part of the TMCS project will support AIDC version 3 as in accordance to the ICAO Asia-Pacific Seamless ATM Plan.

2.3 Therefore, based on the guidance adopted from ICAO Asia-Pacific Guidance Material for the Asia/Pacific Region for ADS/CPDLC/AIDC Ground Systems Procurement and Implementation, Thailand intends to coordinate with all of its neighbors to implement AIDC at all FIR boundaries based on the following tentative schedule:

- a) **Phase 1:** Operational Concept and Procedures Coordination (2014)
Coordinate Operational Concept, Procedures and identify message sets and relevant Interface Control Document (ICD) with neighboring FIRs: Kuala Lumpur, Phnom Penh, Vientiane and Yangon
- b) **Phase 2:** System Test and Verification (January – March 2015)
Harmonize relevant ICD; conduct data network and transfer of control test with neighboring FIRs
- c) **Phase 3:** Operational Trial and Implementation (April – October 2015)

2.4 It is expected that implementation of AIDC aircraft transfer of control will enable approximately 20 percent in airspace capacity enhancement in ACC sectors by freeing ATCOs from workload related to aircraft transfer-of-control coordination through voice. In addition, it is expected that the AIDC implementation will also bring associated safety benefits in reducing transfer-of-control errors. Nevertheless, it should be noted that AIDC implementation schedule is dependent upon the success of ATS system operational trial and its implementation timeframe.

3. **ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) Note Thailand’s initiative to implement AIDC with all of its neighboring FIRs;
- b) Discuss AIDC implementation in the Asia-Pacific region, which could enable increased airspace capacity and enhance safety of ANS operations; and,
- c) Discuss relevant matters as appropriate.

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