



International Civil Aviation Organization

**The Sixth Meeting of the APANPIRG ATM Sub-Group
(ATM/SG/6)**

Hong Kong, China, 30 July – 03 August 2018

Agenda Item 4: ATM Systems (Modernisation, Seamless ATM, CNS, ATFM)

INITIATIVES TO ENHANCE HONG KONG FIR AIR NAVIGATION SERVICES

(Presented by Hong Kong, China)

SUMMARY

This paper presents the initiatives that Hong Kong China has launched in order to optimize the airspace capacity such as enroute airspace review, implementation of AIDC and reduction of spacing requirements with adjacent ANSPs. The initiatives are essential to achieve the ICAO Regional Seamless ATM plan and enhance airspace capacity in a safe and orderly manner.

1. INTRODUCTION

1.1 To meet the upcoming air traffic growth and maintain a high standard of air navigation service at the Asia Pacific region, Hong Kong CAD has launched several initiatives to optimize airspace capacity.

1.2 The initiatives involve the review of enroute airspace structure within Hong Kong FIR to manage controllers' workload and increase overall effectiveness, maximisation of the usage of ATS Interfacility Data Communication (AIDC) interoperability with adjacent Air Traffic Control Centres (ATCCs) to enhance operations efficiency and a study to reduce surveillance-based longitudinal spacing across FIR boundary.

2. DISCUSSION

Airspace Review

2.1 Hong Kong CAD has commenced an enroute airspace review early this year. The review is based on the traffic pattern and volume to analyse the ATC sector workload, the airway structure and the number of crossing tracks. The aim of the review is to identify areas prone to ATC workload and propose means to reduce air traffic complexity, such that the airspace capacity can be enhanced in a safe and efficient manner.

Implementation of AIDC with adjacent ANSPs

2.2 AIDC is one of the essential means to streamline the coordination between ATS units. The automated data exchange between ATC systems support timely dissemination of flight data and is proven to be effective and reliable in reducing the controller workload and maintaining data integrity.

2.3 Hong Kong CAD has been maintaining close liaison with the respective regional Air Traffic Management Bureau of Civil Aviation Administration of China (CAAC ATMB) on the progressive implementation of AIDC. Following the successful completion of the technical and interoperability tests with Guangzhou ATCC and H24 operational trial, Hong Kong CAD has implemented the AIDC operation at selected transfer of control points with Guangzhou ATCC with effect from May 2018. Standard AIDC ICD messages such as EST, ACP, TOC and AOC are adopted. It is anticipated that implementation of AIDC operation would be expanded to other major transfer of control points in the Pearl River Delta (PRD) region in 2019 tentatively.

2.4 AIDC Interoperability Test with Manila was conducted on 17 May 2018. The test focused on four AIDC message types, namely EST, ACP, LAM and LRM, planned to be used on three FIR boundary fixes between Manila and Hong Kong. The implementation date is subject to the replacement schedule of their new ATMS.

2.5 In the aim to reduce the workload of the air traffic controllers and increase operational efficiency, Hong Kong CAD has planned to explore the technical feasibility for extending the application of AIDC operation to streamline handoff procedures under surveillance environment.

Reduction of Spacing Requirements with Adjacent ANSPs

2.6 To be in line with ICAO Regional Seamless ATM initiative and achieve the goals/action plan agreed in the South China Sea Traffic Flow Review Group and SEACG/25 meetings, Hong Kong China has initiated discussions with ATCCs concerned a way forward for the future phased implementation of reduced longitudinal spacing.

2.7 Under the initiative of IFATCA Asia Pacific Region, the 11th Meeting of East Asia Air Traffic Management Coordination Group (EATMCG/11) was held in Cebu, Philippines between 10 and 12 July 2018. In the meeting, Hong Kong China presented a working paper stating that there was a genuine need to expedite the re-designation of A461 and A583 to become RNP10 routes to facilitate reduction of longitudinal spacing. The idea was welcomed by the Philippines and both parties agreed that the initiative should be accomplished as soon as possible subject to the Philippines' successful transition to their new ATMS which was expected to materialize by mid-August 2018.

2.8 In addition, subject to the outcome of a safety assessment to be conducted by Hong Kong China and the agreement with Taipei, 20NM reduced longitudinal spacing would be applied at the common boundary of the two parties in order to harmonise with the spacing reduction plan in the western and south-western portion of Hong Kong FIR.

3. ACTION BY THE MEETING

3.1 The meeting is invited to note the information contained in this paper.

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