



ICAO

International Civil Aviation Organization

Ninth Meeting of the South China Sea Traffic Flow
Review Group (SCSTFRG/9)

Video Teleconference, 01 – 03 June 2021

Agenda Item 2: Review of the Current and Planned CNS/ATM Capabilities and Identifying Associated Reduced Horizontal Separation

CONTINUOUS PROGRESS IN AIRSPACE CAPACITY ENHANCEMENT IN MANILA FIR THROUGH COLLABORATIVE EFFORTS

(Presented by the Philippines)

SUMMARY

This paper outlines the accomplishments in airspace capacity enhancement in Manila FIR starting from year 2020 and the recent initiatives for optimization to improve further the airspace capacity and ATM efficiency.

1. INTRODUCTION

1.1 The year 2019 can be summarized as a productive year for Manila ACC due to several accomplishments. Among these includes the successful final phase transition of a sub-ACC unit to Philippine ATMC, the AIDC implementations with four neighboring ANSPs, the full operations of ADS-C/CPDLC in west pacific oceanic airspace, and the optimization of major international air routes A461 and A583 within Hong Kong and Manila FIRs and ATS route M646 within Taipei and Manila FIRs.

1.2 Most of the improvements in airspace capacities during that year are focused in the north and west portion of Manila FIR. In fact, even before the year 2019 ends, Manila ACC has already prepared for the commissioning its new sector (referred to as West sector). The establishment of this sector is among the Manila ACC's prerequisites for the implementation of reduced longitudinal spacing of 50NM on the parallel routes N892 and L625, which is situated in the northwest portion of Manila FIR.

1.3 The onset of the global pandemic in the early months of year 2020 has slowed the progress due to several constraints and the commissioning of the new sector in Manila ACC has to be temporarily stalled. But through a viable alternative plan and roadmap, the momentum to progress are still continuous in order to gear up for the future resurgence of air traffic through improved operational efficiency, capacity and safety.

2. DISCUSSION

Airspace Capacity Optimization in the South

2.1 In 2020 the focus of capacity enhancements was extended in the south of Manila FIR borders in order to achieve a continuous efficiency and harmonized benefit in the north-south major traffic flows in Manila ACC.

2.2 In February 2020, the collaborative efforts of Malaysia and Philippines has led to the operational trial of reduced longitudinal spacing of 50NM on routes M646 and A341 between Kota Kinabalu ACC and Manila ACC. The trial is successful and was concluded with the full implementation in March 2020.

2.3 In May 2020, the collaboration between Indonesia and Philippines has led to operational trial of reduced longitudinal spacing of 50NM on routes A461, B472, and G578 between Ujung Pandang ACC and Manila ACC. The operational trial that lasted for about 6 months is successful and was concluded with the full implementation in December 2020 along with the finalization of AIDC implementation in which the successful trial lasted for about a year.

2.4 In October 2020, the airspace restructure in the southern sectors of Manila ACC has been completed to improve the safety and facilitate optimized capacity. The most notable changes in the restructure is the possibility of dynamic sector resizing for load balancing and sector splitting to allow for as much as two more additional control sectors in the south whenever needed to better manage the increase of traffic volume in the future.

2.5 Even before the airspace restructure in the south took place, Manila ACC has already expanded its operations of ADS-C/CPDLC in the extended west pacific oceanic airspace in Q1 of 2020. This is the portion of oceanic airspace situated in the southeast of Manila FIR. The overall improvement of Manila ACC sectors in the south signifies the readiness for future initiatives to enhance airspace capacity.

Collaborative Initiatives in Progress

2.6 Hong Kong ATCC and Manila ACC has already discussed the implementation of RNP4-based longitudinal spacing of 30NM on ATS routes A461 and A583 for aircraft at or above FL290. This will be implemented in phases as follows:

- Phase 1: 30NM longitudinal spacing between RNP4 aircraft pair on route A461 with at least one of the aircraft pair destined to land in airport within Hong Kong or Manila FIR. Target implementation is in Q4 2021.
- Phase 2: 30NM longitudinal spacing between RNP4 aircraft pair on route A461 regardless of aircraft destination. Implementation is subject to the outcome of Phase 1.
- Phase 3: 30NM longitudinal spacing between RNP4 aircraft pair on route A583. Target implementation is in Q4 2023 tentatively.

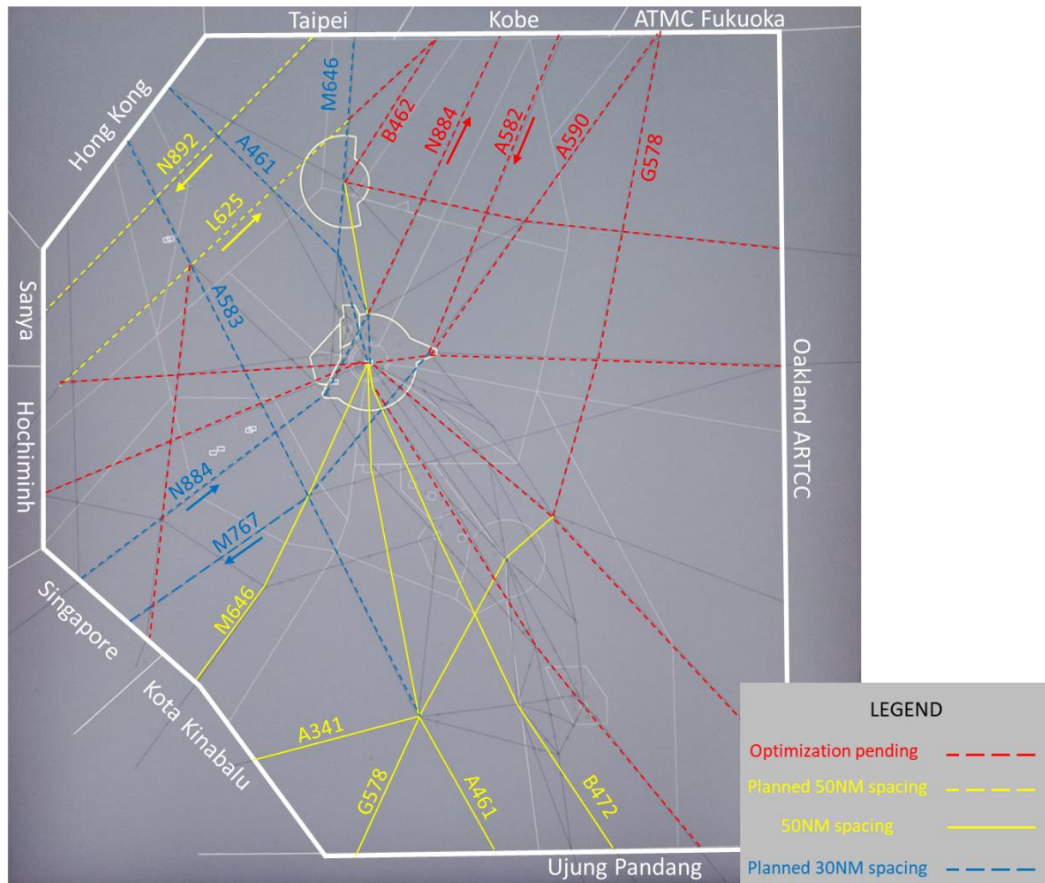
2.7 Singapore ACC and Manila ACC has already collaborated for the implementation of RNP4 route specification on N884 and M767 along with the application of 30NM longitudinal spacing between RNP4-equipped aircraft pair on the said route by Q1 of 2022.

2.8 Taipei ACC and Manila ACC has already collaborated for the trial implementation of 30NM longitudinal spacing on route M646 which will start by Q1 2022 tentatively. During the trial, the application of 30NM spacing shall be between aircraft pair with at least one aircraft destined to aerodromes within Taipei or Manila FIR.

2.9 Likewise, Taipei ACC and Manila ACC is preparing for the coordinated simultaneous implementation of RNP10-based 50NM longitudinal spacing on route N892 with Ho Chi Minh ACC. In connection to this, Manila ACC has already expanded the ADS-C/CPDLC operation in SCS airspace of Manila FIR since Q1 2021 and was already trained for the operation of its new sector, referred to as West sector, also in Q1 of 2021 after the completion of required safety assessments and a thorough trial operation. These accomplishments are among the prerequisites to the implementation of 50NM longitudinal spacing on parallel routes N892 and L625.

2.10 Manila ACC has made initial correspondence with Ho Chi Minh ACC for the possible trial implementation of 50NM longitudinal spacing on route N892 and L625. Manila ACC will be ready for the trial when the negotiation made progress.

2.11 The illustration shown below outlines the progress of airspace capacity enhancement in Manila FIR.



3. ACTION BY THE MEETING

- 3.1 The meeting is invited to:
- a) note the information contained in this paper; and
 - b) discuss any relevant matters as appropriate.

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