

Cooperative measures to enhance safety and efficiency in the AKARA corridor

Presented by ROK

Singapore, 2~6 October 2023.



1. Introduction

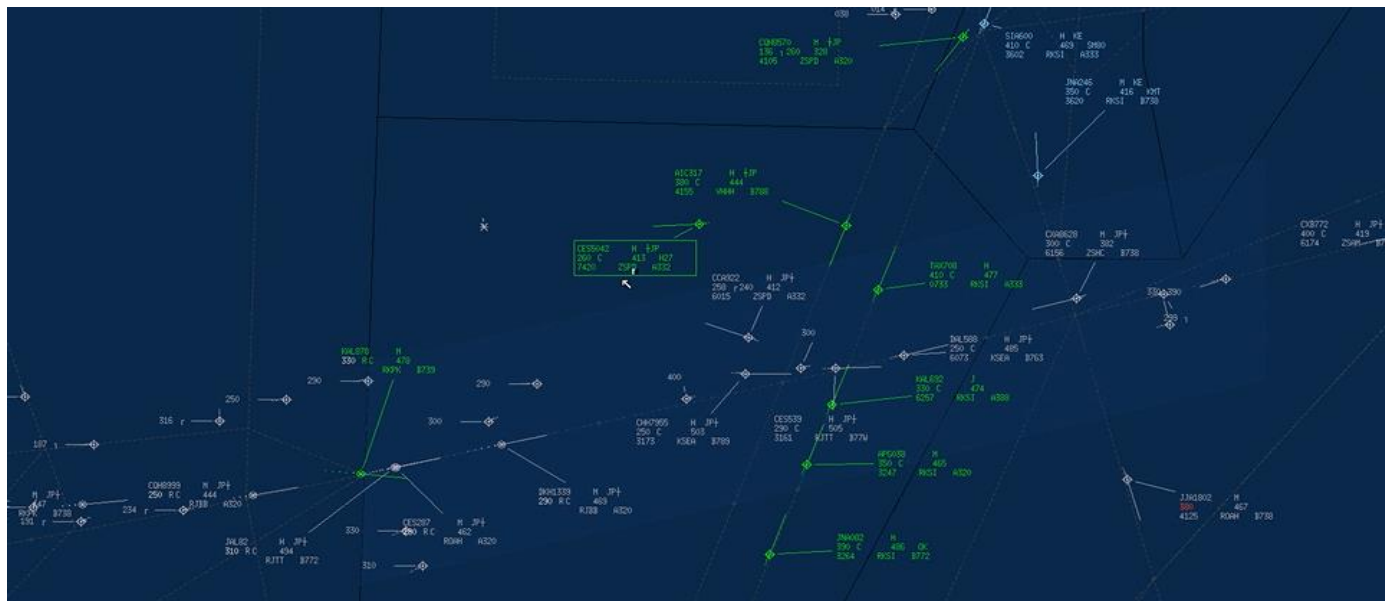
- ❖ After implementation of phase 1, ROK is working closely with Japan and China to provide the best service for aircraft to fly efficiently in the AKARA corridor.
- ❖ In addition, ROK has set up a task force to develop the plan to operate more efficiently, maintain current safety and to increase capacity in the AKARA corridor airspace.





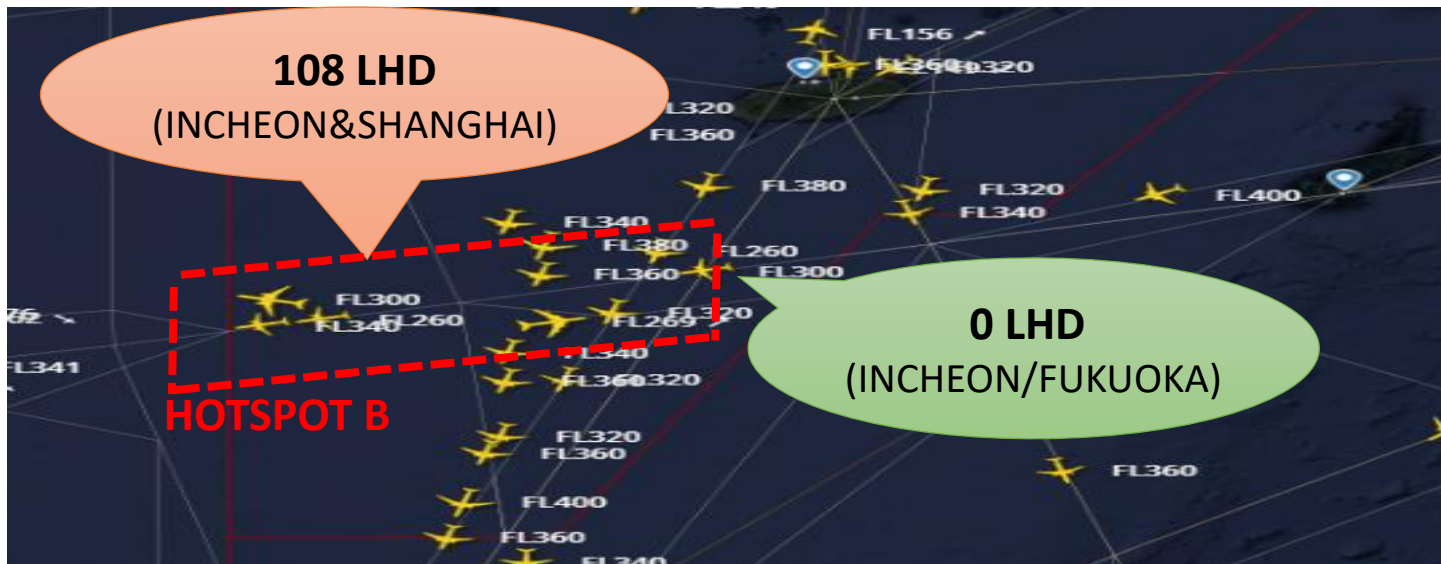
1. Introduction

- ❖ ROK has developed a roadmap to improve the control operation system and establish a data-driven operating environment to support controllers' work and enhance efficiency.
- ❖ However, the implementation of AIDC and adjustment of longitudinal separation minima are necessary not only to improve the efficiency and capacity, but also to advance the allocation of altitude to be more seamless in the AKARA corridor.



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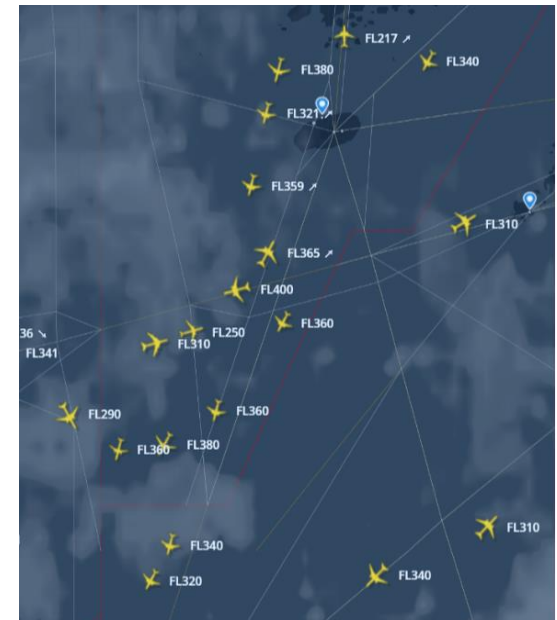
- ❖ According to the 28th Meeting of the APAC RASMAG, the result of the AKARA corridor's airspace assessment in 2022 was 0.24×10^{-9} which met the target safety level (5×10^{-9}).
- ❖ However, 108 LHDs were reported between Incheon ACC and Shanghai ACC in 2022, and all LHDs were in Category E (coordination errors as a result of human factors issues).



2. Discussion

AIDC Implementation

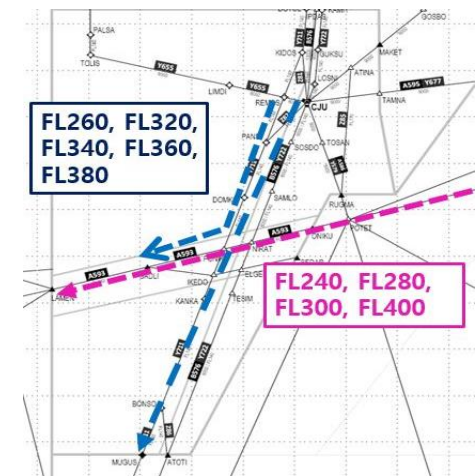
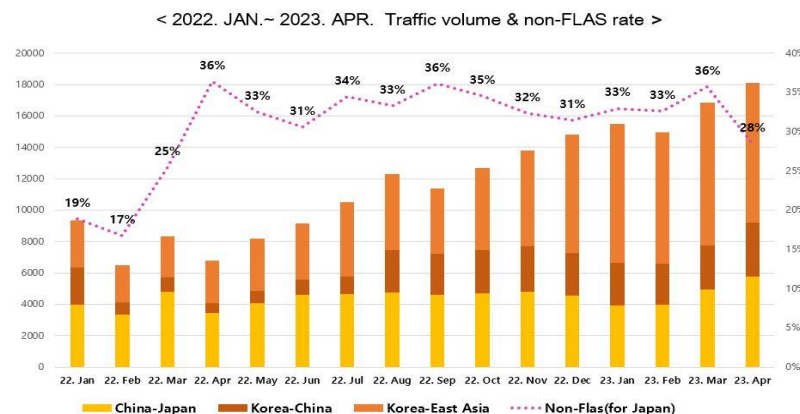
- ❖ AIDC operations will help reduce human error and systematically exchange the information to verify real-time flight information, and system-based estimated time will enable more effective collision prevention and capacity management. AIDC is one of the top priorities of ICAO APAC Seamless ANS Plans and is essential to reduce LHD and the workload of controllers.
- ❖ ROK's Incheon ACC has completed the construction of an AIDC system to connect with Shanghai ACC in June 2023.
- ❖ Therefore, it is suggested that consultations between Incheon and Shanghai ACC be started as soon as possible.



2. Discussion

Longitudinal Separation Minima

- ❖ Since phase 1 implementation, Incheon ACC of ROK is applying the increased use of Non-FLAS altitudes in consideration of traffic conditions and actively provides best service to allocate requested altitude to aircraft in the east-west bound.
- ❖ Incheon ACC is actively providing Fukuoka ACC with the support to enable them to assign Non-FLAS altitudes to the east-west bound traffic.
- ❖ The ROK has increased the ratio of non-FLAS altitude use from 1% to up to 36% in the AKARA Corridor since the implementation of phase 1.

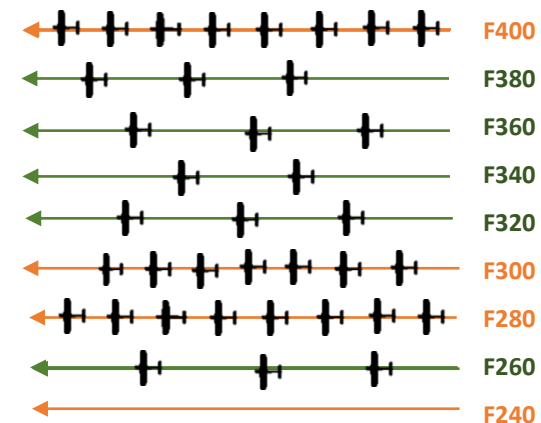


< FLAS in the AKARA corridor >

2. Discussion

Longitudinal Separation Minima

- ❖ By the way, two separation minima in the AKARA corridor applies differently for each flight direction.
- ❖ One is a 20-mile separation minima for aircraft from east and west (China and Japan), and the other is a 10-minute (about 60 miles) for aircraft via CJU(departed Korea). In addition, if an aircraft from Fukuoka FIR uses the same altitude as an aircraft from Korea, the separation minima between them should be maintained at 10 minutes.
- ❖ Considering that the current surveillance capabilities of the ROK and China are sufficient to cover the entire Incheon FIR and Shanghai FIR respectively, the ROK proposes to apply a 20NM separation minimum according to the ICAO APAC Seamless ANS Plan.





3. Proposal

- ❖ AKARA Corridor was recognized as one of the most congested areas in the Asia-Pacific region and identified as LHD Hot Spot at the 20th Meeting of the APAC Regional Airspace Safety Monitoring Advisory Group (RASMAC/20, Bangkok, 2015). At that time, the reasons of its designation as a hot spot were the unique ATS arrangement and flight level restrictions (now known as FLAS). The former has been solved, but limited flight levels still remain.
- ❖ The ROK will make every effort as a contracting states to enhance the safety and efficiency of airspace users of the AKRAR corridor through the close cooperation with China and Japan.
- ❖ ROK propose to implement the AIDC and reduce the longitudinal separation minima for enhancement of safety and efficiency in the AKARA corridor.
- ❖ Therefore, it is suggested to start the consultations between Incheon and Shanghai ACC as soon as possible.



Thank you

감사합니다



Ministry of Land,
Infrastructure and Transport