Sixth Meeting of the Asia/Pacific Airport Collaborative Decision Making Task Force (APA-CDM/TF/6)

Video Teleconference, 28 to 30 April 2021

Agenda Item 3: State A-CDM Planning and Implementation Updates

PROGRESS OF A-CDM IMPLEMENTATION IN JAPAN

(Presented by Japan)

SUMMARY

Japan Civil Aviation Bureau (JCAB) introduced A-CDM into three major airports in Japan. This paper presents a brief update on the progress after the implementation.

1. INTRODUCTION

1.1 Airport CDM (A-CDM) aims to improve the efficiency and resilience of airport operations by optimizing the use of resources and improving the predictability of air traffic. It achieves this by encouraging the airport partners (airport operators, aircraft operators, ground handlers and air traffic controllers) and Air Traffic Flow Management (ATFM) function to work more transparently and collaboratively, exchanging relevant accurate and timely information. It focuses especially on aircraft turn-round and pre-departure processes.

1.2 In order to correspond appropriately to the future growth of air traffic demand as well as the diversified needs of users, through the collaboration of industry, academia and government, the future of the air navigation services have been examined from various angles and also based on global trends. JCAB established the long-term vision for the future air traffic systems, which is called Collaborative Actions for Renovation of Air Traffic Systems (CARATS), and has introduced new technology into our airspace.

1.3 A-CDM is now globally recognized and is initially implemented in three airports in Japan, including Tokyo (Haneda) Airport, Narita Airport and New Chitose (Sapporo) Airport in accidence with CARATS as well as the Asia Pacific Seamless ANS Plan.

2. DISCUSSION

Tokyo Airport (RJTT/HND)

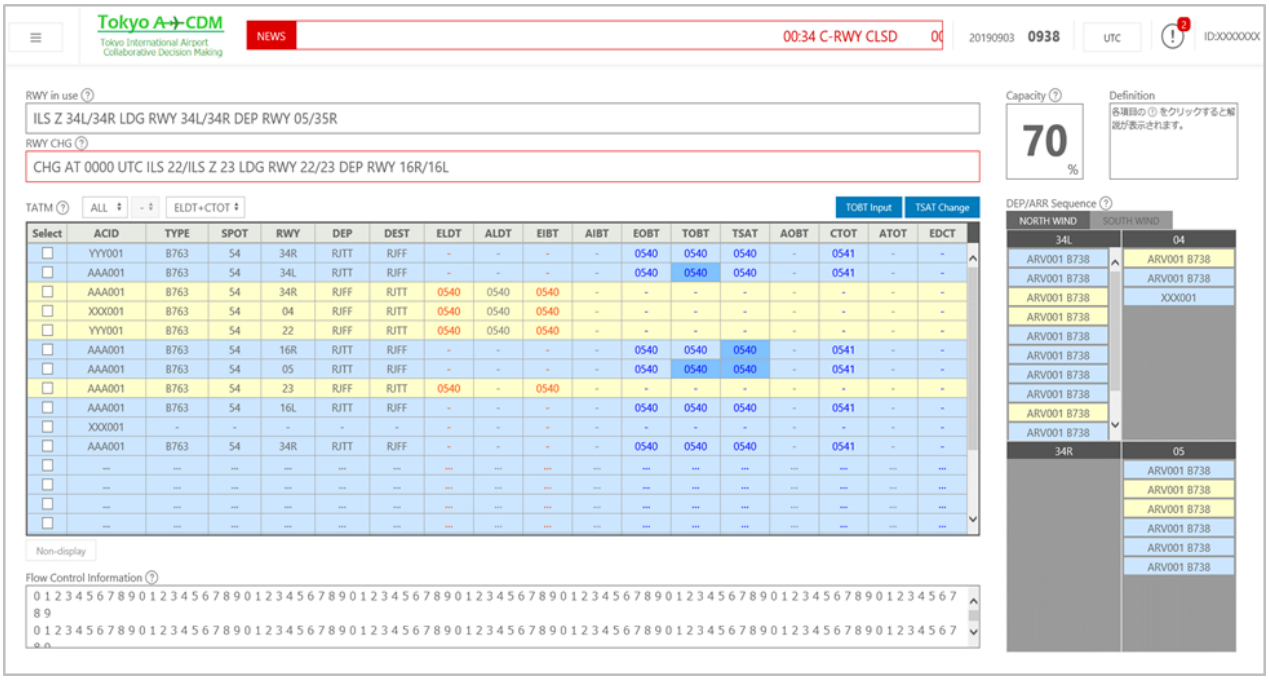
2.1 Tokyo Airport is conveniently located about 14 km south of central Tokyo and also known as Haneda Airport. There are four runways as follows; Runway A (3000m x 60m), Runway B (2500m x 60m), Runway C (3360m x 60m), Runway D (2500m x 60m).

2.2 In 2014, JCAB started the initial operation of A-CDM in the framework called "Cooperative operation at Haneda Airport" using the Automated Radar Terminal System (ARTS). The trial operation of "DMAN/SMAN" also started to improve the efficiency of departing aircraft and surface operations by sharing individual aircraft operation information, Target Start-up Approval Time (TSAT) and ATFM information through these system connections.

2.3 In 2020, the A-CDM Management Board was established and initiated a full-scale operation of the A-CDM through the sharing of airport operational information. The A-CDM at Haneda Airport includes airlines, airport terminal building, catering, fueling, power supply, ground handling companies, Japan Meteorological Agency, customs, immigration and quarantine, and ANSPs. Each organization posts the latest information on aircraft operations and airport management on the A-CDM Web site, and the information can be viewed by each organization, making it possible to obtain more accurate information in real-time and enhance each activity while reducing unnecessary losses.

2.4 The A-CDM system not only exchanges Target Off-Block Time (TOBT) and TSAT information but provides the following information to establish common situational awareness and support appropriate decision-making among the parties concerned.

- Airport operation overview
- Ground traffic movement
- Bay assignment chart
- Slot availability
- ATM overview
- Traffic Volume
- Towing Information
- Bulletin Board System (BBS)
- Live Cameras



(Sample) ATM overview

2.5 With regard to the operation of TSAT using Visual Docking Guidance System (VDGS), JCAB is currently assessing the validity of each set value in accordance with the reorganization of airspace and new ATS routes configuration in the Tokyo terminal approach area.

Narita Airport (RJAA/NRT)

2.6 Narita Airport is located about 60 km east of Tokyo and is used by more than 30 million passengers a year (in 2018) as the major international airport in Japan. There two parallel runways including Runway A (4,000m x 60 m) and Runway B (2,500m x 60m).

2.7 As for Narita Airport, Narita International Airport Corporation (NAA) initiated A-CDM in 2020, and since then, it has taken lead in sharing milestone information, relevant information via the system with stakeholders concerned, such as airlines, handling companies, ANSPs, etc. The following is the information provided on the A-CDM website at Narita Airport. Regarding the TSAT operation at Narita Airport, we are currently at the stage of setting parameter values. JCAB makes preparation for TSAT, but it is unclear when it will go into operation due to the impact of COVID 19.

- Flight Operation Status
- Traffic Movement Status
- Airport Operation Condition
- Breaking Action (S/I condition)
- Weather Information

Expansion to other high-density airports

2.8 The implementation of A-CDM to other high-density airports and the upgrading of A-CDM are currently under consideration among relevant stakeholders and also in the framework of CARATS.

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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