



*International Civil Aviation Organization*

**The Third Meeting of ICAO Asia/Pacific Air Traffic Flow Management Steering Group (ATFM/SG/3)**

Singapore, 10 – 14 March 2013

**Agenda Item 4: Review of Current CDM/ATFM Operations and Problem Areas**

**CURRENT ATFM STATUS IN CHINA**

(Presented by China)

**SUMMARY**

This paper presents current ATFM status in China.

**1. INTRODUCTION**

1.1 In the last decade, average annual growth rate of flight movements in China has already exceeds 10%. In the Asia Pacific region, the continuous economic growth has caused heavy traffic demand. With the increasing traffic demand, the unexpected traffic constraints occur frequently. Developing an ATFM system is a very significant issue. China is on-going to improve the ATFM operation system, organization structure and computer system as well as better achieve the interactive information sharing between airlines and airports through the introduction of CDM at the same time in order to promote the development of ATFM in China. According to statistics, the efficient use of airspace has been significantly improved with the decline of flight delay rate. Since 2012, CDM airport effectively decreases the ground holding and taxi time which saves running cost for the airlines and reduces the carbon dioxide emissions.

**2. OVERVIEW of CDM-ATFM in China**

CDM-ATFM Objectives in China

2.1 CDM-AFTM system is to create safe, orderly, expeditious and economic operational environment meeting traffic demand, to establish seamless collaborative network to utilize maximum capacity and avoid overload for controllers, to reduce en-route holding time, to optimize surface movement, to reduce taxing time, to improve the traffic predictability, and to reduce passengers waiting time onboard and last not least to lead fuel and emissions saving.

2.2 China has established its CDM system at 23 major airports in whole China, CDM system has the function of providing TSAT and CTOT to units concerned such as airlines and airports 90 minutes before estimated time of departure.

2.3 In China, the three-level ATFM system has already been set up. ATFM organization structure is composed of three levels: national level, regional level and terminal level. The following IP (CURRENT ATFM STATUS IN MIDDLE SOUTH REGIONAL AREA OF CHINA) will introduce the operating process and functions of Chinese regional ATFM.

2.4 During the implementation of CDM operation at airports in Beijing, Shanghai, Guangzhou, and Shenzhen, the statistical data indicates that CDM can effectively reduce ground holding time and ground taxiing time. For example, the average taxing holding time reduced by 3.2 minutes for Beijing Capital International airport. The implementation of CDM brings a huge amount of benefits to airlines.

Airports	Total number of departure and arrival	Reduction of taxing time	Economic benefit (million RMB)	Reduction of carbon emission (ton)
Beijing	517,585	3.2	828.14	1,656
Shanghai	218,985	1.15	125.92	252
Shanghai	332,126	1.1	182.67	365
Guangzhou	329,214	2.9	477.36	955
Shenzhen	216,897	1.6	173.52	347

### The Capacity Management.

2.5 The purpose of ATFM is to balance air traffic demand with airspace and/or airport capacity to ensure the most efficient use of the airspace system. This is achieved by ensuring that capacity is utilized to the maximum extent possible and that air traffic volumes are compatible with the capacities declared by the appropriate air navigation service providers. Therefore, the scientific and reasonable assessment of capacity of a certain sector and airport is a fundamental work for ATFM. ATMB of CAAC has already finished all the assessment of sector capacity, airport AAR and airport ADR, and has developed capacity dynamic management procedures.

2.6 The establishment of the early warning and settlement process of large-scale flight delays based on traffic capacity.

This process will bring benefit to the air traffic management system to previously and automatically detect the possible large-scale flight delays, which will try to avoid the large-scale diversion, the long-time holding on the ground and to improve the quality of air traffic service.

2.7 In January 2014, Eastern Regional ATMB CAAC invited ICAO APAC RSO to Shanghai, to conduct a review of the project status of the CDM system. The review increased ICAO APAC RSO's awareness of the Shanghai CDM system, in compliance to the Doc 9971 Part 1. Eastern Regional ATMB CAAC received good recommendations from ICAO APAC RSO that Eastern Regional ATMB CAAC will consider when developing the next phase(s) of the CDM system. The visit also allowed the ICAO APAC RSO and ATMB CAAC to foster a close working relationship which is important for future collaboration efforts in the APAC region.

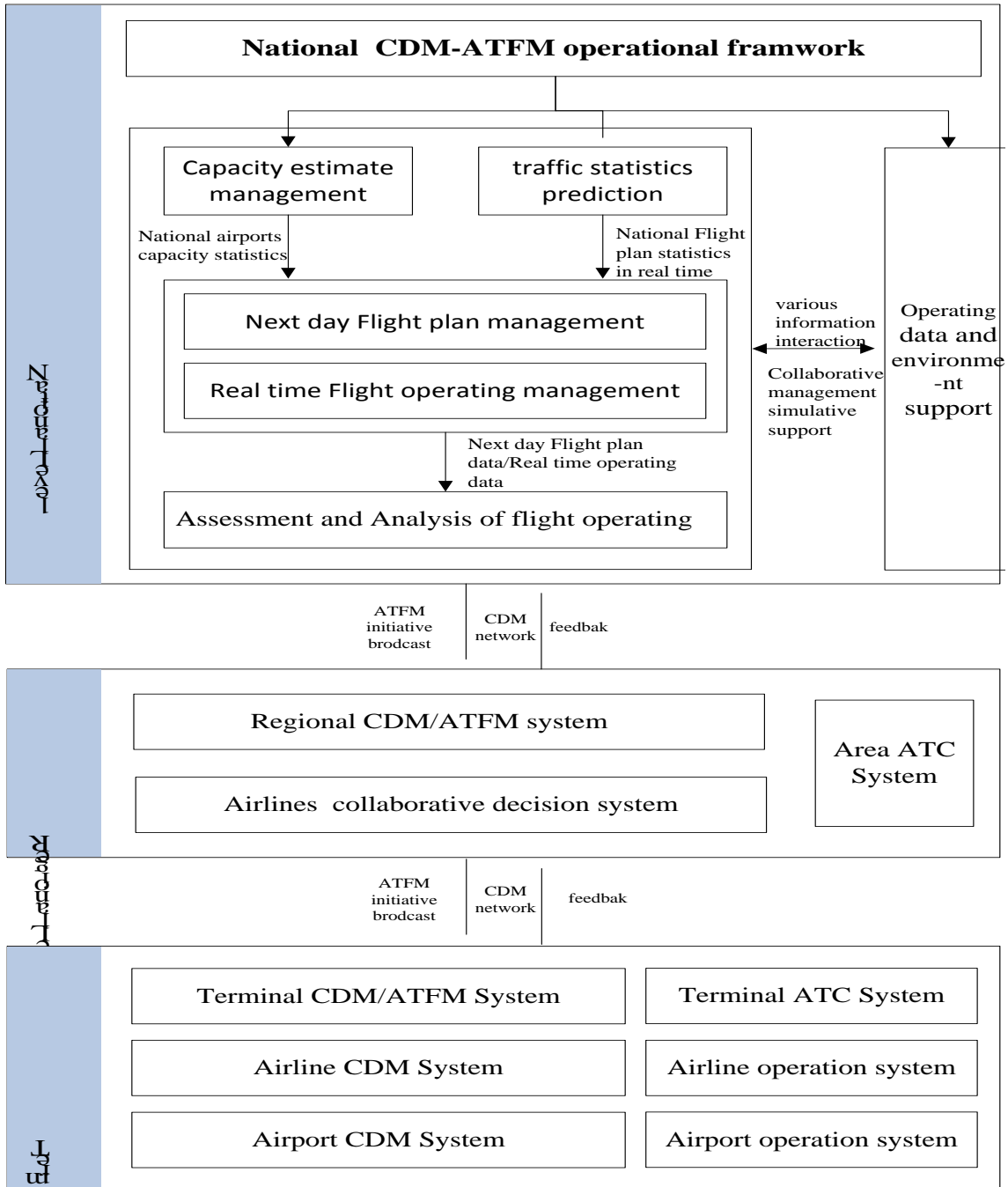
## **3. The future plan**

3.1 ATFM Project—this includes the upgrade of strategic air traffic flow Management system, flight plan management system, traffic situation display and the tactical air traffic flow management system.

### CDM System Construction Project

3.2 Airport-CDM. Project is ongoing to construct CDM system in three phases. The first phase is to establish CDM system in 23 major airports in 2013. The second phase is to establish CDM system to 44 airports at regional level. And the third phase is to establish CDM system at all the rest of the airports in China.

3.3 National level CDM-ATFM system. CDM concept has been introduced into the construction of ATFM system at national level to achieve preprocess and collaborative adjustment of national flight plan, monitor national air traffic status in real time, analyzes and predicts the demand/capacity on airspace and airports, and notices national air traffic imbalances (severe overbalance problem) in time. This system comprehensively solves the trans-regional problem through the implementation of collaborative ATFM initiatives such as GDP, CR, and MIT.



**4. ACTION BY THE MEETING**

4.1 The meeting is invited to:

- a) Note the information contained in this paper; and
- b) Discuss any relevant matters as appropriate.