International Civil Aviation Organization

The Fifth Meeting of ICAO Asia/Pacific Air Traffic Flow Management Steering Group (ATFM/SG/5)

Bangkok, Thailand, 30 March – 3 April 2015

Agenda Item 5: Development of Regional ATFM Framework

PROGRESS ON PLATFORM OF WED-BASED DISTRIBUTED MULTI-NODAL ATFM INFORMATION EXCHANGES

(Presented by CHINA)

SUMMARY

This paper presents the progress on platform of wed-based distributed Multi-nodal ATFM information exchanges. All participants participate in the information exchanges provide information about themselves and simultaneously they also will share more information. All of them are the beneficiaries in the process of information exchanges. The overall benefit will be promoted to maximum through active participation and collaboration cooperation. China appeals to all stakeholders to participate to the research of information interaction platform, and accelerate the development of regional flow management jointly.

1. INTRODUCTION

1.1 With the advancement of cross-border ATFM in Asia-pacific region, it is a widely common consensus that the information sharing is important for the construction of air traffic flow management. Information sharing is not limited to the scope of the basis of flight operation information, but also a broad range of information sharing in the operation environment and so on, so that all the stakeholders can be collaborative under the environment of a common situation awareness.

1.2 It is very common that the air traffic control work become very passive due to the lack of information sharing channel. Let's take for example the release and implementation of cross-region TMI in South China Sea area, some ANSPs presently claim that ATFM units should issue the flow control information by NOTAM, but some personnel is not willing to issue the NOTAM, as a result, it becomes very difficult to transmit and implement the flow control information.

1.3 To find out its cause, the lack of timely and effective information exchanges which timely makes the ANSPs, airports and airspace users sharing a common situation awareness is one of the main leading causes of passive transmitting and receiving work.

1.4 Since the ATFM/SG3, CAAC has carried out the research on technologies on platform of Wed-based distributed multi-nodes ATFM information exchanges. At present, we have been carried out the first phase of information exchanges platform construction based on the Sanya flight information region in FIR Sanya. The scope of information exchanges not only includes flight operation information, but includes flow information, operation environment information, comprehensive information, etc.

2. DISCUSSION

The main content of CDM/ATFM information platform

2.1　　　The first category: the flight operation information. Mainly includes the flight plan, flight dynamic information, ATFM information (CTOT), etc. For the information issued from different issuer, we can realize the integrated display of the information issued from different issuer through information sharing platform data processing. For example, when Guangzhou and Haikou airports issue the CTOT at the same time, every ANSP airports and airlines concerned will not need to check Guangzhou and Haikou airports' CTOT information. They can concentrate check relevant CTOT information through the information sharing platform.

2.2　　　The second category: capacity and traffic forecast information. Mainly includes every airspace unit's (including the airport runway, sector, fix) traffic capacity and the changes of the expected capacity. When the relevant capacity falls, they can make reasonable decision according to their own situation in advance.

2.3　　　The third category: flight operation environment information, mainly including bad weather, unknown traffic which may results in constrains on the airspace unit, etc. Through the understanding of the operation environment, Stakeholders can be collaborative under the environment of a common situation awareness.

2.4　　　The fourth category: comprehensive information. Providing a communication and exchange platform of traffic flow management, reporting the latest information of hot point. The participants can communication with each other depends on it.

Ways of Information exchanges

2.5　　　The first category: Platform information collecting. As an opened ATFM information exchanges platform, the users of platform of Web-based distributed multi-node ATFM information exchanges can conveniently share the flow management information through the internet. The users also can share their information and obtain their needed information through this platform.

2.6　　　The second category: Data exchange interface standard protocol (ICD and so an). According to the ICD, the distributed multi-node ATFM participants can exchange relevant information with another through the same ICD which is strong commonality. CAAC is committed to the research on technology of information exchanges in recent years. Some research results were described in the WP 《Research on way of data exchange in the process of data sharing》 in detail.

2.7　　　The third category: AFTN. As a traditional, strong general way of information exchanges, the AFTN will play an important role in the distributed multi-nodal ATFM information exchange. Through the AFTN, not only we can receive information such as flight plan, flight dynamic and so on, but also can realize distribution of CTOT by issue the passage such as SAM, SRM, SCM. Simultaneously, we can also receive the meteorological information from METAR, TAF, etc. which issued via AFTN.

2.8　　　The fourth category: EMAIL, Fax, Telephone and another ways. Information exchanges is a multi-channel way, all kinds of information transmission mode can be applied in ATFM information exchanges .And simultaneously, the more simple the better way needed in information exchanges. So, E-mail, Fax, Telephone and another way are also an effective way of information exchanges according to the different participants, different technical means and the different demand of information exchanges.

Construction of Cooperation in Information Sharing Platform

2.9   All participants participate in the information exchanges provide information about themselves and simultaneously they also will share more information. All of them are the beneficiaries in the process of information exchanges. The overall benefit will be promoted to maximum through active participation and collaboration cooperation.

2.10   China has preliminary studied on the ATFM information sharing and exchange technique. In order to avoid the waste of resources which is caused by the repeated research, and to promote regional information interaction process as soon as possible, China wants to share the experience and appeals to all stakeholders to participate in the research of APAC cross-border CDM/ATFM information platform, and accelerate the development of regional flow management jointly.

3.   ACTION BY THE MEETING

3.1   The meeting is invited to:

   a)   note the information contained in this paper;

   b)   discuss on the main content of APAC cross-border CDM/ATFM information platform on the first stage;

   c)   participate to the research of information interaction platform to accelerate the development of regional flow management jointly;

   d)   discuss any relevant matters as appropriate.

………………………….