International Civil Aviation Organization

Tenth Meeting of the Air Traffic Management Sub-Group (ATM/SG/10) of APANPIRG

Video Teleconference, 17 – 21 October 2022

Agenda Item 5: ATM Systems (Modernisation, Seamless ATM, CNS, ATFM)

FLIGHT CTOT ON DEMAND SERVICE VIA ACARS IN CHINA

(Presented by China)

SUMMARY

This paper describes the provision of flight CTOT on demand services via ACARS by ATMB of CAAC at 134 airports starting from the end of 2019 in accordance with ARINC 623 standards.

1. INTRODUCTION

1.1 Calculated Take Off Time (CTOT) service is an innovative application in Data link Flight Information Service(D-FIS). The CTOT service system installed at each airport have been equipped with datalink capability and dedicated datalink communication links have been set up with the ADCC AIRCOM Service to enable aircraft to assess CTOT service via VHF datalink. The message to request and respond to CTOT information follows the AEEC 620, 622 and 623 specifications.

1.2 At the end of 2019, CAAC provided CTOT services at 134 airports. The pilots could enter the ICAO airport code in the D-ATIS function and select the "en route information service" option to obtain CTOT information.

2. DISCUSSION

The Significance of providing CTOT services

2.1 CDM/ATFM system is constructed to improve the predictability among relevant departments. One of the current problems is that pilots do not have direct access to CTOT information and the updates. Generally, pilots need to get the CTOT information by asking the tower controller or the airline dispatcher. If CTOT information is not acquired in time, it will directly affect -decision-making and preparation, causing flight delay and passenger wait. In special cases, The CTOT of some fights have to be changed due to complicated WX or new decisions,, and pilots air traffic controllers need to constantly exchange CTOT information, thus causing heavy v workload.

Technical realization of providing CTOT service

2.2 Based on the existing D-ATIS system, CTOT service uses existing avionics equipment and datalink technology to carry out the CTOT real-time information on demand service. The process includes

- The service provider of datalink is connected to CDM/ATFM System;
- By extracting key data such as " flight identification" and "the airport code" from the CTOT request message
- The CTOT Service will reply the message back to the airplane.

2.3 After pilots apply for CTOT service, they will receive CTOT information and CTOT data will be automatically pushed to pilots if there are changes.

2.4 As shown in the following example, flight CES2918 got a reply from CTOT service, the message is displayed by airborne multifunction control display unit (MCDU), and the airborne printer also prints relevant information, as shown in the figure.

1.1.

More digital flight information services in the future

2.5 In the future, we will consider further integrating other information, such as COBT or TSAT from DMAN, other interated IT system or data center, to further reduce air-ground voice communication workload and bring more convenient digital services to pilots.

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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