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AIRCRAFT GLOBAL TRACKING ACHIEVEMENTS IN CHINA

(Presented by the People's Republic of China)

EXECUTIVE SUMMARY

ICAO established the high level concept of operation for global aircraft tracking known as the GADSS. SARPs for normal flight tracking using existing technologies had been adopted in 2015 and will become applicable on 8 November 2018. To embrace ICAO's long term requirements on global flight tracking, CAAC is currently developing its own Implementation Plan for Civil Aviation Flight Tracking of China. The Draft Implementation Plan consists of three steps and the Flight Standards Department of CAAC drafted Advisory Circular on Normal Flight Tracking to keep pace with the NATII group. The Draft Advisory Circular is currently under soliciting of public opinions and will be issued in August 2016. A Regional Demonstration on Normal Flight Tracking of China also commenced in June to encourage airlines of China to explore potential problems and find out solutions in the normal flight tracking trial implementation.

<i>Strategic Objectives:</i>	This working paper relates to the Safety and Air Navigation Capacity and Efficiency Strategic Objectives.
<i>Financial implications:</i>	
<i>References:</i>	

1. INTRODUCTION

1.1 Background

1.1.1 After the loss of MH370, ICAO established the high level concept of operations for global flight tracking, the framework of which is known as Global Aircraft Distress and Safety System (GADSS). A global aircraft tracking solution utilizing technologies in use today is compellingly needed in the short term. The Normal Aircraft Tracking Implementation Initiative was formed in 2015 to achieve the abovementioned goal. The SARPs for normal flight tracking was adopted by the ICAO Council in 2015 and will become applicable on 8 November 2018. The complimentary SARPs for normal flight tracking and the guidance material for normal flight tracking implementation will be circulated after NATII-2 group's finalization.

1.2 The Draft Implementation Plan for the Civil Aviation Flight Tracking of China

1.2.1 CAAC always concerns operation safety as the highest priority. In order to compile with the GADSS Concepts of Operation in the medium and far future, CAAC assigned the Flight Standards Department leading a group to develop the Implementation Plan for the Civil Aviation Flight Tracking of China. The Draft Implementation Plan suggests that the whole implementation consists of three successive phases. In the beginning phase, the global tracking capability using existing techniques and systems for normal flights will be established in this years. The next phase aims to provide seamless global flight tracking capability based on emerging technologies. And the final vision of GADSS long term requirements will be accomplished in the last phase. The Draft Implementation Plan including its global objectives and further details are still under carefully investigation and evaluation.

1.3 The Draft of Advisory Circular on Normal Flight Tracking Implementation

1.3.1 The Flight Standards Department of CAAC finished the Draft of Advisory Circular on Normal Flight Tracking Implementation Guidance for Operators of China in May 2016 and is soliciting public opinion on the Draft Advisory Circular. The Draft consulted the Normal Flight Tracking SARPs in Annex 6, Part1 and the draft on Aircraft Tracking Implementation Circular (Circular 347 of ICAO) which is still being developed by the NATII-2 working group. According to the Draft, operators of China conducting CCAR121 passenger transportation operations shall establish their ground capability of Normal Flight Tracking in their operational area outside the nine Flight Information Regions (Beijing, Shenyang, Shanghai, Wuhan, Guangzhou, Kunming, Lanzhou, Urumqi and Sanya) of China. Risk assessment policy and corresponding procedure requirements are included in the draft in order to allow operators vary from the automated reporting interval under specific circumstances. The draft also specifies the responsibility of the operator, the recommended implementation steps, evaluations on normal flight tracking capability of the operator, training requirements of the operator and tracking data retention requirements. The Advisory Circular is planned to be applicable in August 2016 after final revisions.

1.4 The Regional Demonstration on Normal Flight Tracking of China

1.4.1 The Regional Demonstration on Normal Flight Tracking of China commenced on June 1st aims to demonstrate normal flight tracking capabilities of international or oceanic operations based on ACARS position reports and encourage operators of China to explore potential problems and find out solutions during the trial of implementing normal flight tracking procedures stated in the Draft Advisory Circular. China Airlines, China Southern Airlines, China Eastern Airlines and China Hainan

Airlines participate in the demonstration and selected more than 30 routes for demonstrating. The whole set of normal flight tracking data have been being collected while preliminary analysis suggests that 4D/15 Tracking requirements can be satisfied in most international or oceanic operations.

1.5 **The Operation and Monitoring Center of CAAC**

1.5.1 The Operation and Monitoring Center of CAAC obtains operational data of flights directly from the operators of China which enables the Center to conduct flight tracking and operational monitoring. Currently the tracking capability mainly relies upon ACARS position reports sending from the aircrafts and will be improved by fusing multiple tracking data such as ADS-B in the future.

2. **DISCUSSION**

2.1 **The Civil Aviation Normal Flight Tracking Policy of China**

2.1.1 The principle intent of the Normal Flight Tracking Policy of China is to meet the requirements states in SARP of Annex 6, Part 1, 3.3.1 while taking the current operation conditions of China's Civil Aviation into consideration. The policy requires operators in China who is applicable to CCAR121 and conducting passenger transportation to establish core normal flight tracking capability in their operation areas. A 4D/15 Tracking is required when a flight is operating outside the nine Flight Information Regions (Beijing, Shenyang, Shanghai, Wuhan, Guangzhou, Kunming, Lanzhou, Urumqi and Sanya) of China, the operator shall obtain the 4D information of the aircraft on their ground monitoring system with a maximum interval of 15 minutes.

2.2 **The Risk Assessment of Normal Flight Tracking**

2.2.1 The Risk Assessment Requirements in SARP of Annex 6, Part 1, 3.3.5 provide operators a chance to vary from the automated reporting interval requirements under specific circumstances. Similar risk-based deviation is included in the Exposure Draft of Advisory Circular, where the risk assessment procedures, approved by the CAAC, are required to be conducted at the pre-flight flight planning stage, while the risks as well as the corresponding mitigations shall be clearly identified.