



INTERNATIONAL CIVIL AVIATION ORGANIZATION

**TWENTY FIFTH MEETING OF THE
ASIA/PACIFIC AIR NAVIGATION PLANNING AND
IMPLEMENTATION REGIONAL GROUP (APANPIRG/25)**

Kuala Lumpur, Malaysia, 8 – 11 September 2014

**Agenda Item 3: Performance Framework for Regional Air Navigation Planning and
Implementation**
3.2: ATM
**THE ONGOING COOPERATION BETWEEN MONGOLIA AND
ITS NEIGHBORING COUNTRIES**

(Presented by Mongolia)

SUMMARY

This paper provides the implementation of automatic coordination between Mongolia and its neighboring countries of Russian Federation, and the People's Republic of China. Also it provides brief information of the feet system implementation planning of Mongolia.

Strategic Objectives:

- A: **Safety** – Enhance global civil aviation safety
- B: **Air Navigation Capacity and Efficiency**—Increase the capacity and improve the efficiency of the global aviation system
- E: **Environmental Protection** — minimize the adverse environment effects of civil aviation activities.

Action by the meeting is at Para 3 to this Working Paper

1 INTRODUCTION

1.1 The Civil Aviation Authority of Mongolia (CAAM) is highly concentrating on improving the safety of Air navigation services, developing an effective ANSP, and implementing projects recommended by ICAO. Moreover, CAAM's taking its best efforts for the close cooperation between its neighboring countries of the Russian Federation and the People's Republic of China. Due to geographical feature of Mongolia, bridging Europe and Asia, Mongolia always aims to improve its safety. In 2011 Mongolia implemented the RVSM successfully. In order to support the harmonization between the Russian Federation and the People's Republic of China, Mongolia plans to reduce longitudinal separation from 90km to 30 km which is going to be ready in September 18, 2014. In addition, Mongolia needs to adopt an automatic coordination, and solid coordination of "feed vs meters" between the Russian Federation and the People's Republic of China.

2. DISCUSSION

Automatic coordination

2.1 At present Mongolia has a manual coordination that leads ANSP to face some difficulties due to the LHD with its neighboring countries. In this case, Mongolia needs to adopt the automatic coordination. The ATM centers of the Russian Federation perform OLDI recommended by EUROCONTROL, and the ATM centers of the People’s Republic of China perform AIDC recommended by APANPIRG. Therefore, Mongolia is required to adopt an automatic coordination which is capable of supporting both OLDI and AIDC. In this frame work, Mongolia made an agreement with its two neighbors to organize a working group to implement OLDI with the Russian Federation and AIDC with the People’s Republic of China. The AIDC exchange meeting between the Communication Navigation Surveillance Division of North China Regional Air Traffic Management Bureau of CAAC and The Communication Navigation Surveillance services of CAAM will be held in October, 2014.

2.1.1. From 2011 to 2013 LHD report shows that the most of the LHD reports caused by the coordination error.

LHD Report between FL 290 and FL 410

- (1) Reporting Agency: National Air Traffic Services of Mongolia
- (2) Location of deviation (Fix/Airway/Latitude-Longitude): INTIK/A575/43 °41'30"N
111°55'00"E
- (3) Date of Occurrence (UTC): 02 August -2013
- (4) NOPAC/CENPAC/CEP/SOPAC/Japan-Hawaii/South China Sea/BOB/Other: Other
- (5) Flight Identification and Type: CCA961/ A332
- (6) Assigned/Expected Flight Level: 9800
- (7) Observed/Reported Final Level Mode C/Pilot Report: 11100–Pilot Report
- (8) Duration at the Incorrect Flight Level: Less than 1 MINUT
- (9) Cause of Deviation: **Coordination error**
- (9a) If Cause of Deviation is due to coordination errors in the ATC-to-ATC transfer of control responsibility as a result of human factors issues (Category E), Was an automated capability (e.g. AIDC) used for the coordination of the flight?
Yes No
- (9b) If applicable, were the Supervisors of the transferring and receiving ACCs advised of this LHD occurrence?
Yes No
- (10) Other Traffic: None
- (11) Crew Comments (if any, when noted): Nil

(12) Remarks: Neighboring ACC (China) didn't make criticism

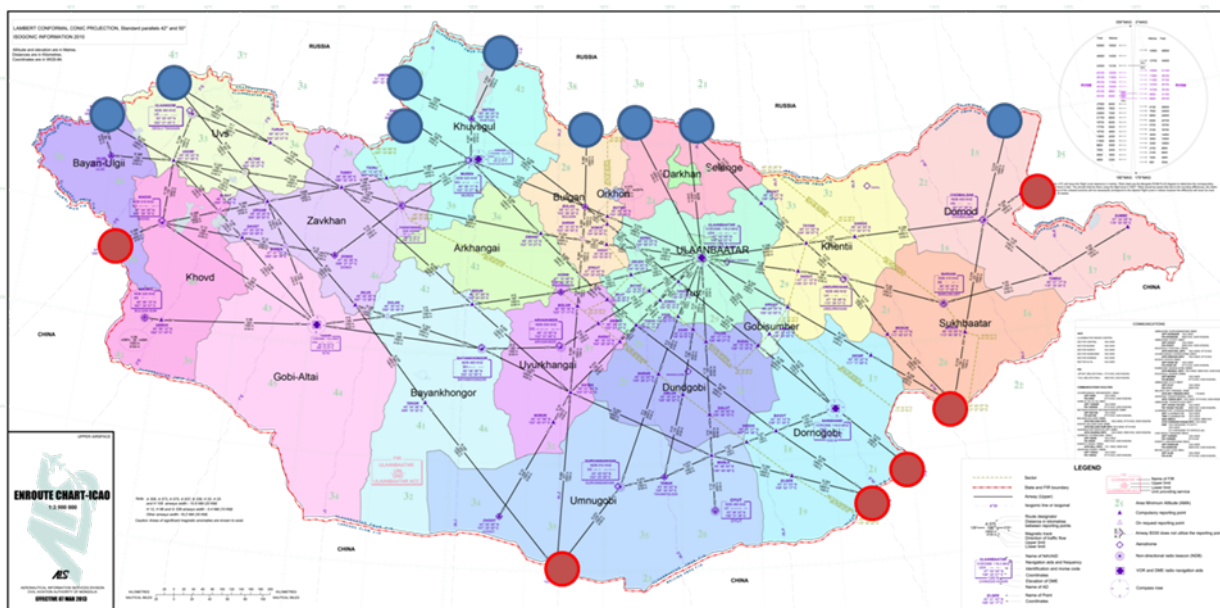
2.1.2. The issues of the implementing both OLDI and AIDC:

- The different format message will impact on the human factor which may cause the Safety issues. Mongolia requires extra regulation and training.
- Mongolian automation system is capable of support both OLDI and AIDC. However our automation support AFTN based AIDC messages only. Mongolia plans to implement ATN for later but the automation does not support ATN based AIDC messages. Therefore, in order maintain the both OLDI and AIDC automatic coordination, Mongolia required to do some major upgrade on the automation with significant amount of cost.

Feet and Metric system

2.2 At present, Mongolia has 9 entry/exit points with the Russian Federation and 6 entry/exit points with the People’s Republic of China. Due to the use of different measurement unit system by the Russian Federation on 9 entry/exit points, Mongolia uses 6 entry/exit points as a transition of feet/ meters in order to provide the flight level transition. The remaining 3 entry/exit points which are considered as high volume of flight, the Russian Federation provides the flight level transition. The Russian Federation chose to use the feet system for RVSM since 2011. Therefore, Mongolia has planned to implement feet system and is expected to be ready in the beginning of 2016. In this case, Mongolia is required to make an agreement with the People’s Republic of China in order to establish a transition area between feet and metric system. Due to the high volume of flight on the entry/exit points between the People’s Republic of China and Mongolia, Mongolia needs to focus on establishing the transition area between the feet and metric system.

2.2.1. This photo shows that the different measurements system of entry/exit points (Blue color indicates feet, red color indicates meters)



2.3 The problem related to the feet and metric system explains as:

The Russian Federation sends/receives feet based plan data and the People’s Republic of China sends/receives meters based plan data. Therefore, Mongolian automation system requires converting feet and metric plan data. In this case, the workload of system increased and chances of system fault increased.

3. ACTION BY THE MEETING

3.1 The Meeting is invited to:

- a) Discuss the necessary mechanisms required to support an enhancement in the effective and safe transition between Mongolian airspace and its neighbors in the areas of ground-ground data-link and flight level schemes;
- b) Consider and discuss that the states are supposed to use single data communication method/protocol (AIDC or OLDI) regarding to the framework of Seamless ATM plan.

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