



International Civil Aviation Organization

**The Special ATS Coordination Meeting Cross Polar and Russian Trans-East
ATS Routes (SCM POLAR & RTE)**

Bangkok, Thailand, 15 and 16 November 2005

Agenda Item 2: Operations Asia/North America via cross-polar/Russian Far East routes

HARMONIZED VERTICAL SEPARATION MINIMA IN THE NORTH ASIA

(Presented by Mongolia)

SUMMARY

This paper provides information on the flight level standards used in Mongolia. It is proposed to transit to ICAO flight level standards with the introduction of RVSM.

Introduction

Mongolia manages a relatively small airspace compared to the much larger contiguous airspaces of China and Russia; therefore, continuing close coordination with the civil aviation entities in these States is an important requirement.

Use of different flight level standards adds to the workload of air traffic controllers. The paper provides a proposal to use a common set of flight level standards in the region with the implementation of Reduced Vertical Separation Minima (RVSM).

Flight Level Standards

Air Traffic Management of en-route traffic within Mongolian airspace is conducted by the Ulaanbaatar Area Control Centre. The ACC is located in Ulaanbaatar and has jurisdiction over all of the Ulaanbaatar Flight Information Region, although jurisdiction over a certain area is delegated to a sub-ACC at Muren.

The majority of air traffic in the ULN FIR is comprised of aircraft flying from Europe and North America through Russia to China, and vice versa. Total traffic movements average about 900 flights per week. The relative volumes of en-route traffic on the major air routes are visually represented in **Figure 1**.

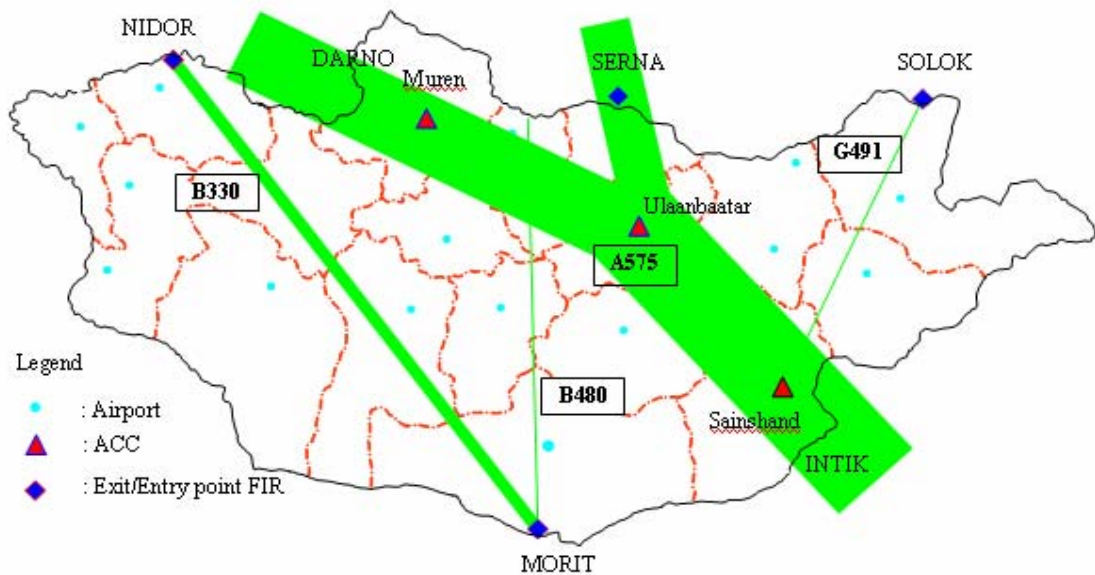


Figure 1. Relative Traffic Flows in the Ulaanbaatar FIR as of early 2005

The current method of air traffic management is based on Procedural air traffic control. Aircraft are confined to the established airways structure and separated longitudinally by 10 minutes (about 150 kilometers in distance) and vertically by 500 meters above 8100 MSTD and by 300 meters below 8100 MSTD, and by 1000 meters above 12100 MSTD.

Both Russia and Mongolia designate flight levels in Metric Standards (MSTD). China also uses metric flight levels but the vertical separation minima differ from those used by Russia and Mongolia. ICAO Standard Flight Levels are designated in Feet or Meters.

Russia has informed Mongolia in 2003 that it intends to implement reduced vertical separation minima in its airspace, and has asked our cooperation to implement reduced vertical separation minima same time. Mongolia is located between two big airspace users China and Russia. This will require very careful planning, preparation and implementation to make the changes safely and with minimal disruption to air traffic. Human factor issue is very important in the implementation of this program.

Conclusion

Mongolia supports implementation of Reduced Vertical Separation Minima (RVSM) in the region.

In connection with the implementation of RVSM in this region, the issue of unified flight level standards shall be considered by the concerned States.

The implementation of RVSM is considered to be one of the most cost effective means to enhance airspace capacity in the short term. The implementation of RVSM will also standardize flight levels for Russia, Mongolia and China.

Action required

The meeting is invited to:

- a. note the paper; and
- b. discuss the introduction of common flight level standards with RVSM implementation in the sub-region.

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