

Eighteenth Meeting of the Cross Polar Trans East Air Traffic Management Providers' Work Group (CPWG/18)

(Paris, France, 16-19 December 2014)

Agenda Item 8: CNS/ATM Issues

OPERATIONAL CONSTRAINTS AND ROUTE FLEXIBILITY ISSUES AFFECTING LONG RANGE OPERATIONS BETWEEN NORTH AMERICA AND CHINA

(Presented by United Airlines)

SUMMARY

This Information Paper presents details of operational constraints and route flexibility issues affecting long range operations between North America and China.

The Group is invited to note the information contained herein and provide support to encourage China to increase operational efficiency of both Cross Polar and non-polar operations by increasing the number of entry and exit fixes and approving more routing options within China.

Introduction

1. Introduction

1.1 The subject of increased flexibility for operations into, out of, and over China has been an ongoing issue for airspace users since the opening of the Cross Polar routes in 2000.

1.2 The limited flexibility has resulted in less efficient operations, increased fuel burn and increased emissions, and contributed to delays at the major China airports and operations over China.

2. Discussion

2.1 The attached PowerPoint presentation (**Attachment A** refers) illustrates the significant differences in flexibility for international operations when comparing the operational constraints of China with Russia.

3. Action by the Meeting

3.1 The CPWG is invited to:

- a) note the information provided;
- b) provide support to encourage China to increase the operational efficiency of both Cross Polar and non-polar operations by increasing the number of entry and exit fixes and approving more routing options within China.

Cross Polar Working Group/18 Paris December 16-18, 2014

Route Flexibility Comparisons China and Russia Presented by United Airlines

Powerpoint illustrating a comparison of route flexibility affecting long range operations between North America and China

The subject of increased flexibility for operations into, out of, and over China has been an ongoing since the opening of the Cross Polar routes in the year 2000.

The limited flexibility has resulted in less efficient operations, increased fuel burn and increased emissions, and contributed to delays at the major China airports and operations over China.

The powerpoint illustrates the significant differences in flexibility for international operations when comparing the operational constraints of China with Russia.

The CPWG is requested to take note of the presentation and provide support to encourage China to increase operational efficiency of both Cross Polar and non-polar operations by increasing the number of entry and exit fixes and approving more routing options within China.

Description of each slide:

Slide 1 Presentation topic, date, and location (Paris)

Slide 2 China Traffic Flows

- Very heavy traffic flows between major regions in China – Beijing, Shanghai, and Pearl River Delta
- Limited traffic flows connecting Russia and Mongolia with China
- Limited traffic flows between Shanghai and Japan and North Pacific Region

Slide 3 China Entry/exit points with Russia and Mongolia

- Overview of entry/exit points and international ATS route structure

Slide 4 Cross Polar and Non Polar entry points

- Cross Polar Flights : LAMEN MAGIT SIMLI POLHO MORIT
- Example Non Polar Flight KSFO –ZUUU: MAGIT
- Example Non Polar Flight ZUUU – KSFO: LAMEN

Slide 5 China ATS Route Constraints

- Limited to a single route from entry to destination
- Example ZUUU to KSFO

Slide 6 Cross Polar flexibility with Russia

- Chicago (KORD) Shanghai (ZSPD) Flight with various routing options into and over Russia
- Flexibility becomes compressed when entering China

Slide 7 ZUUU to KSFO Example

- Limited to single route within China and then almost unlimited flexibility across the Pacific

Slide 8 KSFO to ZUUU Example

- Significant route flexibility from US and through Russian airspace
- Compressed to single entry into China
- Single approved routing within China

Slide 9 AKARA Corridor constraints

- Flights entering or leaving China via LAMEN use A593
- Significant flight level constraints in both directions
- Inefficient flight levels depending on direction of flight
- Significant delays possible departing Shanghai towards Japan when convective weather affects operations at or east of China
- 170nm from Shanghai (Pudong) to the Fukuoka FIR
- Need escape route from Shanghai south or north of A593 to reduce delays when convective weather causes delays

Slide 10 Russian entry/exit fixes - North America flights to/from China

- 21 entry/exits between Anchorage and Russia FIRs
- 8 entry exits between Iceland/Norway and Russian FIRs
- 5 entry/exits between Russia/Mongolia and China (2 of which are uni-directional (MAGIT and ARGUK))

Slide 11 Russia ATS Route flexibility for North America/China flights

- All international routes between entry and exits are approved for day of operation flexibility

Slide 12 Russian ATS International Routes

- Provides flexibility to enable best route based on winds and other factors on a daily basis

Slide 13 Russia/China entry/exit points

- ARGUK is unidirectional eastbound
- MAGIT is unidirectional westbound
- SULOK is entry/exit between Russia and Mongolia for entry/exit China at POLHO

Slide 14 Summary

- There is a significant need for more entry/exits points into/out of China
- There is a significant need for more internal China route flexibility

Slide 15 Thank You

- Questions?