



International Civil Aviation Organization

COM CO-ORDINATION MEETING

People's Republic of China, Japan, Mongolia and Russian Federation



Shanghai, People's Republic of China, 18 – 20 October 2011

Agenda Item 3: Review performance of AFTN and ATS Direct Speech Circuits between China and Mongolia including alternate arrangement

REVIEW OF AFS CIRCUITS PERFORMANCE BETWEEN CHINA AND MONGOLIA

(Presented by the Secretariat)

SUMMARY

This paper reviews AFS communication performance and circuit operational status between China and Mongolia.

1. INTRODUCTION

1.1 This paper provides guidelines, technical provisions and operational requirements for AFS communication for the area with interest of the meeting. It also reviews AFS communication performance and circuit operational status between China and Mongolia.

2. DISCUSSION

General Performance requirement for Aeronautical Fixed Service (AFTN)

2.1 In accordance with Conclusion 10/2 – Aeronautical Fixed Telecommunication Network (AFTN) circuit performance of the Third ASIA/PAC RAN meeting held in Bangkok in 1993, States are requested to conduct and exchange monthly circuit performance charts for those AFTN circuits which do not function satisfactorily 97 % of the time during which the circuit is scheduled to be in operation. The statistics of circuit loading data are also conducted and exchanged twice a year (23-25 April and 23-25 October) according to the Conclusion 10/4 of the Third ASIA/PAC Regional Air Navigation meeting.

Reliability Requirements for Critical Circuits supported by VSAT Link

2.2 The APANPIRG/11 meeting held in 2000 noted that in order to provide reliable aeronautical mobile service communication to the new ATS route B330, Remote Control Air-Ground Extended Range (RCAG ER) VHF station has been installed in the southern part of Mongolia. The extended range VHF provides coverage to all the existing and new ATS routes passing through Mongolian airspace from China.

2.3 It was also noted that VSAT is one of reliable means of communications employed by several States in the Region to support AFS communication. However, spare parts for critical modules and elements such as redundant channel cards, RF unit should be readily available for replacement to ensure rapid restoration during breakdown. A reliable power supply system was considered as an essential facility to be provided. It was however recognized that for those VSAT stations providing both ATS direct speech and critical AFTN circuits without the provision of an alternate routing between States, an alternative communication link should be provided in order to assure required reliability. In light of above consideration, the APANPIRG/11 meeting adopted the following conclusion:

Conclusion 11/15 - Alternative arrangements for VSAT

That, States consider the provision of an alternative communication links for:

- a) critical AFS communications which are supported by a single VSAT system between States; and
- b) remote control air-ground (RCAG) VHF stations supported by a single VSAT link.

2.4 Based on the above Conclusion, ICAO APAC Regional Office recommended both Mongolia and China to take necessary action to improve performance and reliability of the AFS circuits including AFTN and ATS Direct Speech Circuits between China and Mongolia.

2.5 Mongolia informed the APANIRG/21 meeting held in September 2011 about the status of Mongolia's AFS implementation and 2 Mbyte high speed circuit implemented in October 2010 between Mongolia and China over optical fiber cable. The newly commissioned ground circuit supports AFS including AFTN and ATS direct speech circuit between Ulaanbaatar and Beijing. The circuit will also be employed to conduct ATN/AMHS based AIDC pre-operational trials involving comprehensive connection tests. The planned AMHS and AIDC connection will use the ground circuit which has become part of the Aeronautical Fixed Service infrastructure. This improvement is achieved as a result of continuous efforts made by both CAA Mongolia and CAAC in accordance with APANPIRG Conclusion 11/15.

2.6 While being congratulated for the improvement of the aeronautical fixed service made, China and Mongolia are requested to review the performance status of the landline circuit since its implementation at the end of 2010. States are also requested to develop an action plan for further improvement and the next step for ATN/AMHS implementation including AIDC application between two States.

3. ACTION BY THE MEETING

3.1 The meeting is invited to review the performance status of the landline circuit and next step for migrating to ATN/AMHS service in accordance with regional implementation plan adopted by APANPIRG.
