



**INTERNATIONAL CIVIL AVIATION ORGANIZATION
ASIA AND PACIFIC OFFICE**

**REPORT OF THE
COM CO-ORDINATION MEETING**

Shanghai, China, 18 - 20 October 2011

The views expressed in this Report should be taken as those of the
COM Coordination Meeting and not of the Organization

Approved by the Meeting
and published by the ICAO Asia and Pacific Office

1. Introduction

1.1 A COM Co-ordination Meeting attended by China, Mongolia and the Russian Federation was held at Paradise Hotel Shanghai, China from 18 to 20 October 2011. The meeting was hosted by the Air Traffic Management Bureau of CAAC, China.

1.2 The objectives of the meeting were to review status of implementation of the established requirements for AFTN/ATS direct speech circuits and to develop coordinated Action Plans of implementation and to improve performance of some specific circuits of concern to satisfy the established operational requirements.

2. Attendance

2.1 The meeting was attended by 18 participants representing China, Mongolia and the Russian Federation. Japan sent regret expressing inability to participate in the meeting as other activities were being hosted by Japan in the same week. A list of participants is at **Attachment 1**.

3. Officers and Secretariat

3.1 Mr. Li Peng, Regional Officer Communication, Navigation and Surveillance (CNS) of the ICAO Asia and Pacific Office served the meeting as Moderator and the Secretary.

4. Opening of the meeting

4.1 Mr. Pan Yuechen, Deputy Director General of Eastern China Regional Air Traffic Management Bureau of China opened the meeting. In his opening address, he emphasized the importance of cooperation between neighbouring States to provide efficient Aeronautical Fixed Service communications for the safety and regularity of air navigation and hoped that the outcome of the meeting would facilitate implementation and improvement of AFS requirements. He also highlighted recent development in the CNS fields in China and expressed the pleasure for hosting the meeting in Shanghai. Ms. Zhang Jing, Director, International Cooperation Division of Air Traffic Management Bureau (ATMB) also extended warm welcome to all the participants to China and emphasized the need to improve Aeronautical Fixed Service to support ATS operations through closer cooperation among States and wished for the success of the meeting.

4.2 On behalf of ICAO Regional Director, Mr. Li Peng highlighted the objective of the meeting and emphasized the importance of the meeting for the development of a well co-ordinated Action Plan for improvement of AFS in the North Asia including interconnection with the Russian Federation. He encouraged a fruitful deliberation to achieve the objectives of the meeting.

5. The Agenda Items of the meeting

5.1 The agenda items adopted by the meeting were as follows:

Agenda Item 1: Review of AFS communication requirements in the Sub-region of North Asia, Russian Federation Far East including FASID Tables CNS 1A – AFTN Plan, CNS 1B – ATN Router Plan, CNS 1C – AMHS Plan and CNS 1D - ATS Direct Speech Circuits Plan

Agenda Item 2: Review the current implementation and operational status of AFS communications between States and discuss alternate routing arrangement for Fukuoka/Moscow circuit

- Agenda Item 3:** Review performance of AFTN and ATS Direct Speech Circuits between China and Mongolia including alternate arrangement
- Agenda Item 4:** Review performance of ATS Direct Speech Circuits and AFTN between China and Japan including alternate arrangement
- Agenda Item 5:** Discuss implementation plan of ATN/AMHS between States
- Agenda Item 6:** Review operational status of AFS communication between Mongolia and Russia and discuss alternate AFTN routing arrangement for circuit between Ulaanbaatar and Beijing via Irkutsk/Moscow/Fukuoka
- Agenda Item 7:** Any Other Business

6. Organization, Working Arrangements and Language

6.1 The meeting was held as a single body throughout the meeting. The working language was English inclusive of all documentation and this report. Chinese was also used with interpretation. A list of Working Papers, Information Papers and Presentations reviewed and discussed by the meeting are at **Attachment 2**.

Agenda Item 1: Review of AFS communication requirements in the Sub-region of North Asia, Russian Federation Far East including FASID Tables CNS 1A – AFTN Plan, CNS 1B – ATN Router Plan, CNS 1C – AMHS Plan and CNS 1D - ATS Direct Speech Circuits Plan

Review of AFS requirements

1.1 Under this agenda item, the meeting reviewed the requirements for AFTN and ATS direct speech circuit plans. The related information on the development and amendment procedure for regional air navigation plan was introduced by the Secretariat. The conclusions, strategies and policies adopted by Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG) were also noted by the meeting.

1.2 The meeting reviewed the AFS requirements for the area under the consideration by this meeting as contained in the Table CNS 1A – AFTN Plan, Table CNS 1B ATN Router Plan, Table CNS 1C - AMHS Plan, Table CNS 1D - ATS Direct Speech Circuits Plan and Table CNS 1E – ATS Inter-Facility Data Communication (AIDC) Implementation Plan. The meeting noted that these regional air navigation planning tables for the aeronautical communication were regularly reviewed by the regional planning bodies and the last updates to some of these tables were adopted by APANPIRG/22 Meeting held in September 2011. States were requested to implement the relevant requirements of FASID without undue delay.

1.3 The meeting also noted that the ASIA/PAC FASID had been prepared to serve as a planning tool to facilitate transition to the CNS/ATM systems in an evolutionary manner. The FASID is, therefore, expected to be updated regularly to facilitate planning and implementation of the air navigation services and facilities in the region based on changes in the operational requirements. Mostly States or regional planning bodies may propose amendments to the Plan from time to time.

1.4 Based on the development trend of regional air navigation planning process, the FASID would become part of e-ANP which is being studied and would be considered by the AN Conf/12 to be held in November 2012.

Policy and Performance Requirement

1.5 The meeting reviewed the principles and requirements as provided in the Recommendations adopted by the ASIA/PAC/3 RAN meeting regarding AFS performance requirement and management.

1.6 The meeting noted that the requirement for AFS circuit performance should achieve and maintain 97% or higher circuit reliability. The meeting also noted the following two categories of performance requirements are specified in the planning table for ATS direct speech circuits:

Type A - indicates ATS requirement for the establishment of voice communication within 15 seconds.

Type D - indicates requirements for instantaneous communications.

1.7 The meeting noted the role and importance of AIDC for ATS coordination identified by the regional air navigation planning bodies. Introduction of AIDC between ATS facilities would significantly reduce the coordination errors observed in controller to controller verbal communication across FIR boundaries. States were urged to work together towards implementation of compatible AIDC capabilities between neighboring ATS facilities as early as possible.

1.8 The meeting also noted that target date for implementation of AIDC between Fukuoka and Taipei is 2012 as specified in the planning Table CNS 1E. Noting the requirement for direct speech circuit between Shanghai and Fukuoka ACCs, China considered essential to implement AIDC between two ACCs and the requirement needs to be established through further coordination between Administrations concerned. .

1.9 The meeting also encouraged China and Mongolia to review the operational requirement for establishment of AIDC circuit between Beijing and Ulaanbaatar ACCs.

1.10 Mongolia informed that meeting that Ulaanbaatar has established ATS direct speech circuits with Hohhot, Lanzhou and Urumqi through VSAT links and also has ATS direct speech circuit between Ulaanbaatar and Hailar through IDD.

1.11 Russian Federation informed the meeting (IP/3) of the requirements for ATS direct speech circuit between ACCs in China and various ATS units in the Far East Russian Federation. In addition to TES VSAT phone number 878 located at APP Khabarovsk and 877 at Khabarovsk ACC Sector 3, the following requirements for additional TES numbers or direct speech circuits have been identified after ATM centre at Khabarovsk will be consolidated from 20 October 2011:

Additional three links required to be established between Harbin ACC and Khabarovsk ACC – Sector 4 and Sector 12; and Blagoveshchensk TWR

Additional two links required to be established between Shenyang ACC and Khabarovsk ACC sector 13; and Vladivostok APP

1.12 The projected requirements for additional TES numbers or direct speech circuits after new ATM centre in Shenyang would be established are as follows:

Shenyang ACC would be required to establish ATS speech circuits with Khabarovsk ACC sectors 3, 4, 12 and 13.

1.13 Russian Federation and China were requested to review these ATS operational requirements based on the development and make proposals to the ICAO Regional Office for updating information in the regional planning document – FASID.

Agenda Item 2: Review the current implementation and operational status of AFS communications between States and discuss alternate routing arrangement for Fukuoka/Moscow circuit

2.1 The meeting reviewed the guidelines, technical provisions and operational requirements for AFS communication focusing the area of interest to the meeting. The meeting also discussed the requirements and related issues for AFTN routing directory changes which resulted from closure the inter-regional AFTN circuit between Khabarovsk and Fukuoka on 7 April 2011.

2.2 The meeting noted that at the fifth meeting of Aeronautical Telecommunication Network Implementation Coordination Group (ATNICG/5) in June 2010, Japan presented a proposal for AFTN Routing Change between Japan and Russia in view of the developments that had taken place. It was agreed that ICAO Regional Office should coordinate with Europe Region for updating the AFTN routing directory. A proposal for the closure of the circuit between Fukuoka and

Khabarovsk after implementation and satisfactory operation of the 64 kbps land line AFTN circuit between Fukuoka and Moscow was noted by the CNS/MET Sub-group/14 meeting. APANPIRG/21 meeting held in 2010 adopted Conclusion 21/25 as formulated by ATN Implementation Coordination Group.

2.3 In accordance with above Conclusion, ICAO Bangkok Office carried out coordination with ICAO Paris Office regarding AFTN routing change required. It was agreed to update relevant routing changes in AFTN/CIDIN directory after the proposal was reviewed by the AFS group in the Europe Region.

2.4 Since the proposed change also needs action to be taken by the Beijing AFTN centre for alternate routing arrangement in case of the circuit between Moscow and Fukuoka becomes un-serviceable, consultation and coordination with China was also carried out in order to update the APAC AFTN Routing Directory. However, it was informed that assessment of circuit capacity and operational performance is required before taking over the alternate routing responsibility.

2.5 It was recalled that the AFTN circuit between Moscow and Fukuoka was upgraded from analog low speed 200 Baud to digital high speed 64 Kbps on 14 January 2009. The performance of the circuits has been stable and the statistics of AFTN traffic load demonstrated less than 6 percent occupancy since the switchover.

2.6 The traffic loading statistics for the AFTN circuits between Japan and Russia provided by Japan were as follows:

The statistics between Japan and Russia AFTN circuit is as follows.

Fukuoka-Moscow	64kbps (October 23-25, 2010)
Peak Percent hourly (Input and Output)	= less than 1%
Input 20,978characters hourly	218,776 characters daily
Output 120,403characters hourly	1,660,449 characters daily
Fukuoka- Khabarovsk	2,400bps (October 23-25, 2010)
Peak Percent hourly (Input)	= less than 2% 12,138characters hourly
Peak Percent hourly (Output)	= less than 6% 46,457characters hourly
Percent daily (Input)	= less than 1% 99,011characters daily
Percent daily (Output)	= less than 3% 535,884characters daily

Proposal from Russian Federation

2.7 Russian Federation presented the traffic loading statistics for Moscow/Fukuoka AFTN circuit and performance report for the Khabarovsk/Beijing AFTN circuit supported by VSAT link. The meeting noted that 269 AFTN messages were received at peak hour around 15:00 hours from Fukuoka on 6 September 2011 which stands for 3.88 percent of total channel capacity. 2.22 percent was recorded for the same peak hour traffic in February 2010 and 2.73 percent was recorded for February 2011. The trend in the traffic growth was noted by the meeting. The outgoing traffic from Russian Federation to Japan was relatively low. The circuit performance report for Khabarovsk/Beijing VSAT circuit indicated that there were eight times with total duration of 31 hours 29 minutes failures for the period from 1 June to 1 October 2011. The main reason of the failure was caused by the problems at the satellite station.

2.8 Noting that performance and reliability of the Khabarovsk/Beijing VSAT link require improvement and/or upgrading, Russian Federation proposed to establish a 64 Kbps landline data circuit to support both data traffic and ATS voice communication requirements. It was recommended to use 9.6 Kbps sub-channel for the AFTN Messages which is considered good enough to

accommodate the data traffic between Khabarovsk and Beijing as well as for alternate traffic in case of failure of the Moscow and Fukuoka circuit. It was proposed to use asynchronous mode with standard RS-232 physical interface. China considered requirement for the channel capacity for the new circuit between Khabarovsk and Beijing should be 2 Mbyte. Russian Federation expressed that this proposal would be presented for consideration for technical discussion in the near future.

2.9 In order to optimize the technical solution for interworking of Air Traffic Services between the Far East Russian Federation and China, the proposed circuit can be configured to support requirements of ATS direct speech circuits between the controllers at several locations in Far East Russian Federation and Harbin/Shenyang in China. Russia would not object should China agree to establish a separate digital circuit solely for ATS speech purposes for interworking. The proposed schematic solution allows realization, with the new landline circuit, of 1 data transmission (AFTN) and up to 5 or 6 speech circuits using G.729A or G.723.1 codec. The detailed technical consideration for new circuit may be further discussed and agreed by the technical staff of the communication centres of Khabarovsk and Beijing. The initial configuration chart proposed by Russian Federation is provided in **Appendix A** to this report.

Proposal from China

2.10 A working paper presented by China highlighted the requirement for the alternate AFTN routing and related proposal for technical solution. The paper reviewed the current status and performance of relevant AFTN circuits. The paper also discussed the necessary conditions for the proposed alternate routing arrangements as follows:

- to upgrade signal speed for the VSAT TES link between Beijing and Khabarovsk from 2400 bps to 64 Kbps
- to establish a new landline circuit between China and Russia to improve the performance reliability;
- to employ synchronous link control with X.25 communication protocol for the new Beijing/Khabarovsk circuit; and
- SVC (Selective Virtual Circuit) would be established for Khabarovsk/Beijing AFTN messages transmission

2.11 The meeting was invited to consider additional alternate routing for Beijing-Khabarovsk AFTN circuit via Beijing-Fukuoka-Moscow circuit. Once the landline circuit is established between Beijing and Khabarovsk, the proposed alternate routing for the AFTN traffic between Moscow and Fukuoka and v.v. can be implemented.

2.12 The meeting discussed both proposals made by China and Russian Federation as mentioned above and formulated following action plan.

ACTION AGREED NO. 1 – MID TERM, CHINA AND RUSSIAN FEDERATION

That, to improve the performance of AFS data circuit, China and Russian Federation agreed to establish a LDD/d landline circuit between Beijing and Khabarovsk by the end of September 2012 and take following actions:

- nominated focal contact points (POC) for the establishment of the circuit which is provided in **Appendix B** to this Report;

- initiate discussions on technical specifications, communication protocol (including determination on transmission mode used for AFTN circuit either Asynchronous (preferred by Russia) and Synchronous mode (preferred by China), make and model of multiplex and routers to be employed etc. through exchange of e-mails;
- sign LOA on establishment of the circuit including testing procedure for planning purpose and implementation requirement;
- take phased approach to implement ATS direct speech circuits between ATS units of two countries over the landline circuit; and
- Keep VSAT link as backup and coordinate for upgrading to 64 Kbps.

2.13 The meeting also agreed that as temporary arrangement, alternate routing for AFTN traffic on the Moscow/Fukuoka circuit will be via Beijing/Khabarovsk circuit or Beijing/Ulaanbaatar/Irkutsk circuit subject to upgrading of the signalling speed and code currently used between Ulaanbaatar/Irkutsk in January 2012.

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

3.1 Under this agenda item, the meeting reviewed the performance and operational status of AFTN and ATS Direct Speech Circuits between Mongolia and China.

Reliability Requirements for Critical Circuits supported by VSAT Link

3.2 The meeting recalled that VSAT has been recognized as one of reliable means of communications employed by several States in the Asia and Pacific Regions to support AFS communication. However, spare parts for critical modules and elements such as redundant channel cards, RF unit were considered as necessary requirement to ensure rapid restoration during breakdown. A reliable power supply system was also considered as an essential requirement to be provided. APANPIRG 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 had adopted the conclusion 11/15 urging States to consider the provision of an alternative communication links for critical AFS communications which are supported by a single VSAT system between States.

3.3 According to above Conclusion, ICAO APAC Regional Office had recommended 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.

3.4 The meeting noted that a 2 Mbyte high speed circuit was implemented in October 2010 between Mongolia and China over optical fibre cable. This landline circuit supports both AFTN and ATS direct speech circuit between Ulaanbaatar and Beijing. The circuit will also be employed to conduct ATN/AMHS and AIDC pre-operational trials involving comprehensive connection tests. The planned AMHS and AIDC connection will use this ground to ground circuit. This improvement is achieved as a result of continuous efforts made by both CAA Mongolia and ATMB China. China expressed that a separate discussion for AIDC implementation with Mongolia including potential additional circuit is required.

3.5 While being congratulated for the improvement made for the aeronautical fixed service, the meeting reviewed the recent performance report and operational status of the AFS between two States. Both China and Mongolia expressed satisfactory performance of the circuits since the implementation of the landline.

3.6 Mongolia informed the meeting that 25 times interruptions had been reported for VSAT ATS direct speech circuits during the transition period. It was clarified that these interruptions might have been caused by either improper procedure used or VSAT terminal equipment. China informed the meeting that since integration of two links completed on 1st March 2011, new number for Beijing ACC 771 in addition to 700 has been used. Air traffic controllers at Ulaanbaatar side were recommended to use 771 as primary.

3.7 Additional explanation was provided by China on reason of interruption of the VSAT communication. Satellite communication suffers abnormal interruption and interference during equinox period which occurs twice a year. There was longer time of system breakdown during the period of switching over to the new C-band satellite on 12-13 August 2011. User States were requested to contact the Network Control Centre of VSAT system in time to report abnormal condition observed for earlier assistance and resolution.

Agenda Item 4: Review performance of ATS Direct Speech Circuits and AFTN between China and Japan including alternate arrangement

4.1 China made a presentation on the critical requirement for the ATS direct speech circuit between Shanghai and Fukuoka. The meeting noted development history of the circuit since 2003 and its current configuration and operational status. 13 cases of interruptions were reported since 2009, duration of 6 occurrences were more than one hour. These interruptions seriously impacted air traffic separation between Fukuoka and Shanghai ACCs.

4.2 The meeting discussed the issue and potential reason for the interruption. Considering encouragement and guidelines developed by APANPIRG on implementation of AIDC, China was requested to coordinate with Japan for establishment AIDC between Fukuoka and Shanghai. In this connection, China was further invited to make reference regional ICD for AIDC adopted by APANPIRG and the pan-regional ICD for AIDC being consolidated. The good sample of AIDC implementation identified was the one between Seoul and Fukuoka.

4.3 Hot-line arrangement as backup means for the ATS direct speech circuit was also considered as one of cost effective solution. China was requested to coordinate with Japan for such arrangement through their VCCS integrated with ATM automation system. Secretariat was also requested to facilitate with such coordination with Japan.

ACTION AGREED NO. 2 - LONG TERM, CHINA AND JAPAN

That, China coordinate with Japan for implementation of AIDC between Shanghai and Fukuoka ACCs with a target date of implementation in 2013. Japan be requested to consider using IDD hotline for backup means by integrating it with VCCS associated with ATM Automation system.

Agenda Item 5: Discuss implementation plan of ATN/AMHS between States**Regional planning and guidance for ATN/AMHS Transition**

5.1 The Secretariat provided introduction on the regional planning body and guidance materials adopted by APANPIRG as developed by the ATN Implementation Coordination Group. The regional implementation status was also highlighted. States were encouraged to coordinate implementation of ATN/AMHS according to the regional implementation plan as specified in the FASID.

5.2 The meeting noted that the requirement and target date for implementation of ATN/AMHS were specified in the regional air navigation planning tables as discussed under Agenda Item 2.

5.3 The meeting also noted the strategy for implementation of the aeronautical telecommunication network (ATN) in the Asia/Pacific Region as adopted by the APANPIRG/21 under Conclusion 21/20. The AMHS Technical Specification adopted by APANPIRG/22 under Conclusion 22/18 was noted by the meeting. States were also urged to expedite the implementation of ATN/AMHS interconnection for compatible operation in accordance with ICAO Asia/Pacific Regional Implementation Plan in a time bound manner.

5.4 The meeting noted the ATN/AMHS planning and implementation related activities in China. The meeting also noted the planning and process of ATN/AMHS implementation between Beijing and Seoul which has been put into operational use since 1 June, 2011.

5.5 Mongolia informed the meeting that AFTN connection and service implemented at 18 airports throughout the country. Two international connections – one with China and another with Irkutsk are supported by both VSAT systems and landline Fiber Optic cable. AFTN switch at Ulaanbaatar was replaced in 2007. Purchasing contract for AMHS was signed in 2011. FAT for AMHS will be conducted in 2011. Mongolia has a plan to install AMHS gateway to be installed in first Quarter 2012 and scheduled to implement AMHS in the time frame from 2011 to 2013.

5.6 The meeting noted the AMHS implementation activities including SPACE project in the European region and AMHS operation between Spain and Germany; AMC off-line service and Pan European Network (PEN) status. The meeting was informed that Russian Strategy on AMHS implementation is being developed. Number of AMHS/AFTN gateways will be covered in the Strategy. It was informed that a domestic company is developing AMHS system in Moscow. Russian Federation was urged to take into account the requirement for the local flexible connections with COM Centres in the Asia and Pacific Regions for implementation of AMHS.

5.7 Based on the information provided by China and Mongolia, the meeting discussed AMHS implementation plan between Beijing and Ulaanbaatar. The meeting agreed to set target date for implementation of AMHS between China and Mongolia in October 2012 and conduct technical and operational trials starting from May 2012. A 64 Kbps sub-channel over 2 M-byte landline fiber Optic cable (available ports for such channel on CISCO routers were confirmed by two sides) will be utilized for AMHS testing and commissioning. Based on successful experience gained in AMHS implementation with Republic of Korea, China recommended to use OSI compatible ATN router for this AMHS connection.

ACTION AGREED NO. 3 – MID TERM, CHINA AND MONGOLIA

That, China and Mongolia coordinate for implementation of AMHS between Beijing and Ulaanbaatar with a target date of implementation in October 2012. Two administrations will determine type of ATN Router to be used and commence technical trial by June 2012.

Agenda Item 6: Review operational status of AFS communication between Mongolia and Russia and discuss alternate AFTN routing arrangement for circuit between Ulaanbaatar and Beijing via Irkutsk/Moscow/Fukuoka

6.1 Mongolia made a presentation on the operational status of AFS communication between Mongolia and Russia, and discussed additional alternate AFTN routing arrangement for Ulaanbaatar and Beijing circuit.

6.2 The meeting noted the limitation and performance status of the circuit between Irkutsk and Ulaanbaatar. The circuit operational status between Ulaanbaatar and Irkutsk is functioning satisfactory. Mongolia has only one international AFTN routing which is via Ulaanbaatar and Beijing. Therefore, Mongolia has intension to establish alternate routing via Ulaanbaatar/Irkutsk/Khabarovsk and/or via Ulaanbaatar/Irkutsk /Moscow/Fukuoka in order to enhance the performance reliability of the AFS communication in Mongolia.

6.3 The Ulaanbaatar-Irkutsk circuit currently is supported by both VSAT and Fiber optic at signal speed of 300 baud using code ITA2. In order to enable the proposed alternate routing arrangement, the need to upgrade the Ulaanbaatar and Irkutsk circuit was identified as follows:

- The signal speed of the AFTN channel needs to be upgraded from 300 Baud to 4800 bps;
- Alphabet code used for the circuit should be changed from ITA2 to IA5.

6.4 The loading statistics conducted on 4-5 October 2011 for the AFTN circuit between Ulaanbaatar and Irkutsk is shown as follows.

Percent daily (input)	=less than 0.76%, 75511, characters daily
Percent daily (output)	=less than 0.05%, 8924, characters daily

6.5 It was further clarified that low traffic volume indicated that only local ATS messages between Ulaanbaatar and Irkutsk are exchanged over the circuit. Russian Federation confirmed that internal routing configuration between domestic locations in Russian can be dynamically made based on the requirement.

6.6 In view of the foregoing, the meeting agreed to establish an alternate routing for Ulaanbaatar-Beijing circuit with primary choice via Ulaanbaatar-Irkutsk-Khabarovsk-Beijing and secondary option via Ulaanbaatar – Irkutsk –Moscow- Fukuoka. Accordingly, the meeting agreed with the following Action Item:

**ACTION AGREED NO. 4 – MID TERM, MONGOLIA, CHINA AND
RUSSIAN FEDERATION**

That, in order to provide additional alternate routing for AFS traffic between Ulaanbaatar and Beijing, Mongolia, China and Russian Federation agreed to establish alternate routing for this circuit via Irkutsk/Khabarovsk/Beijing and v.v. The target date for implementation of this alternate routing is 20 January 2012. Russian Federation and Mongolia further agreed to upgrade Ulaanbaatar/Irkutsk circuit to 4800 bps from 300 Baud and code from ITA2 to IA-5 by the end of 2011.

Agenda Item 7: Any other business**Note of appreciation**

7.1 The meeting expressed its appreciation and gratitude to the Air Traffic Management Bureau of CAAC in particular, the Eastern Regional Administration of ATMB for hosting the COM Coordination Meeting, for the wonderful arrangements made and for all activities arranged including technical visit to the ATC, AFS and AMS facilities in Pu Dong Airport and a field visit organized during the meeting.

7.2 On behalf of the participants, Mr. Dorjsuren Nanzad from Mongolia and Mr. Tregubenkov Oleg from Russia Federation thanked Air Traffic Management Bureau, for the warm hospitality extended to their delegations.

7.3 The Moderator thanked the participants of the meeting for their active participation and valuable inputs and expressed hope that the Action Plans developed by the meeting would be implemented in a timely manner with the spirit of cooperation demonstrated at the meeting.

7.4 In closing meeting, Mr. Bu Enshu, Dy. Director CNS Division ATMB, expressed appreciation to the Participants from Mongolia and Russian Federation for the cooperative spirits demonstrated during the discussion and thanks and looking forward to closer coordination with Administrations for implementation of actions agreed by the meeting. He also thanked ICAO Regional Office for the cooperation opportunity provided to ATMB in hosting the meeting in China.

Time Frame

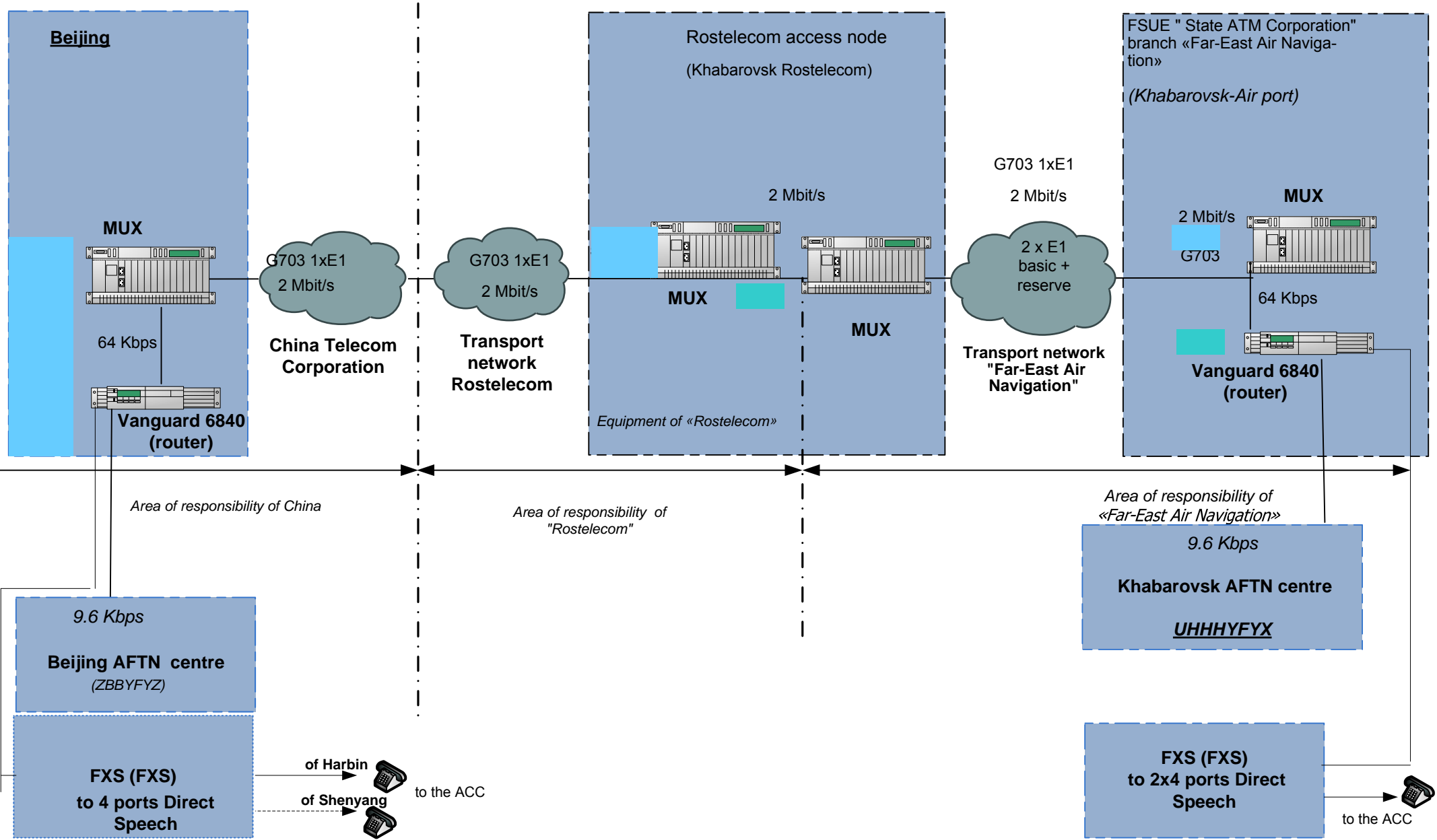
7.4 The definition of time frame indicated in the Action Plan agreed by the meeting is as follows:

IMMEDIATE: Action to be taken immediately after the conclusion of the meeting

MID TERM: Action to be taken within one year

LONG TERM: Action to be taken within two years

Diagram of digital circuit 64 Kbps Khabarovsk - Beijing



**NOMINATED FOCAL CONTACT POINTS (POC) FOR THE ESTABLISHMENT
OF CIRCUITS AND ROUTING CHANGES**

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COM Co-ordination Meeting
Appendix B to the Report

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**COM Co-ordination Meeting
Shanghai, China
18 – 20 October 2011**

Attachment 1 to the Report

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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



LIST OF WORKING AND INFORMATION PAPERS

WP/IP No.	Agenda	Subject	Presented by
WORKING PAPERS			
1	-	Provisional Agenda	Secretariat
2	1	Review of AFS Requirements and Planning Tables	Secretariat
3	1	Review of ATS Direct Speech Circuit and AIDC plan	Secretariat
4	2	Review of AFTN Routing Directory Change	Secretariat
5	3	Review of AFS Circuits Performance between China and Mongolia	Secretariat
6	5	Discussion on ATN/AMHS Implementation between States	Secretariat
7	2	Ground Data Transmission Circuit Khabarovsk - Beijing	Russian Federation
8	6	Review of Operational Status of AFS Communication between Mongolia and Russia, and Discuss Alternate AFTN Routing Arrangement for Ulaanbaatar and Beijing Circuit via Irkutsk/Moscow/Fukuoka	Mongolia
9	2	Review of Operational Status of AFS Communication between Beijing and Russia, and Discuss Alternate AFTN Routing Arrangement for Ulaanbaatar and Beijing Circuit via Irkutsk/Moscow/Fukuoka	China
INFORMATION PAPERS			
1	-	Meeting Bulletin	Secretariat
2	2	AFTN Routing Directory Change Proposal	Secretariat
3	1	ATS Direct Speech Circuits including Phone links between ATS Units of the Russian Federation (Khabarovsk, Blagoveshchensk, Vladivostok) and the Area Control Centres of China (Harbin, Shenyang) and DPR of Korea (Pyongyang)	Russian Federation

WP/IP No.	Agenda	Subject	Presented by
4	5	Aeronautical Telecommunication Network in Mongolia	Mongolia
5	5	ATN/AMHS Implementation Activity in China	China
6	5	Status of AMHS Connection between China and Republic of Korea	China
