



INTERNATIONAL CIVIL AVIATION ORGANIZATION

COM COORDINATION MEETING CHINA-PAKISTAN

Beijing, China
(7 - 9 May 2015)

MEETING REPORT

(SUMMARY OF DISCUSSIONS)

1. INTRODUCTION

1.1 The COM Coordination Meeting hosted by the Air Traffic Management Bureau of CAAC was held in at Headquarters of ATMB, Beijing, China from 7 to 9 May 2015. The objective of the meeting was to develop a common understanding on the identified air navigation deficiency in the COM field between China and Pakistan and to address the ground/ground communication issues between Lahore and Urumqi and Air/ground communication around boundary between China and Pakistan from technical and operational aspects through development of a remedial action plan.

Attendance

1.2 The meeting was attended by 15 participants from ATMB, China and PCAA, Pakistan and a representative of ICAO APAC Office. List of participants is provided in **Appendix A** to this Report.

Opening and Organization

1.3 In his opening speech, Mr. Li Qiguo, Deputy Director General, ATMB, CAAC highlighted the importance of the meeting and rapid development of air traffic between China and Pakistan. He extended warm welcome to the participants from Pakistan and appreciated support from ICAO Regional Office.

1.4 Mr. Li Peng, Regional Officer CNS, ICAO APAC Office, acted as moderator and secretary of the meeting who also welcomed the participants to the meeting on behalf of Mr. Arun Mishra, Regional Director and expressed gratitude to the ATMB for hosting the meeting.

1.5 The meeting was rescheduled from 6-8 May to 7 - 9 May 2015 due to late arrival of participants from Pakistan. The meeting considered 5 Working Papers under 5 agenda items.

Agenda of the Meeting

1.6 The Agenda Items adopted by the meeting was as follows:

- Agenda Item 1:** Review of AFS communication requirements between China and Pakistan
- Agenda Item 2:** Review aeronautical communication deficiency identified by APANPIRG in September 2014
- Agenda Item 3:** Discuss on the remedial options and develop action plan including milestones
- Agenda Item 4:** Initial Letter of Agreement or MoU for technical support and cooperation between China and Pakistan on the action plan
- Agenda Item 5:** Any Other Business

1.7 The meeting was conducted in English including all papers and this Report. Chinese interpretation service was provided to the Participants by ATMB.

2. DISCUSSIONS

Agenda Item 1: Review of AFS communication requirements between China and Pakistan

1.1 The meeting reviewed the AFS communications requirements between the two States as presented in WP/02 by the Secretariat. The meeting noted the following AFS requirements as specified in the Regional Air Navigation Plan (ICAO Doc 9673 Vol. II) FASID Tables.

- AFTN circuit between Beijing and Karachi;
- ATN/AMHS connection link between Beijing and Karachi;
- ATS Direct Speech Circuit between Lahore and Urumqi; and
- AIDC between Lahore and Urumqi with target date to be determined

Requirements for Direct Speech Circuit

1.2 It was noted that category for ATS DSC between Lahore and Urumqi is classified as "A" which requires establishment of direct communications between Air Traffic Controllers at ACCs within 15 seconds. It was further understood that a dedicated line would meet the requirement.

1.3 In this connection, the meeting discussed the issues of current performance of operation. The IDD being used is not reliable and stable. Sometimes, the connection of calls from either side could not be made smoothly due to poor quality of the public line. Participant from Urumqi regional ATMB informed that sometimes the call was through with ringing but the phone was not picked up. Pakistan explained that ringing tone might not be heard by the air traffic controller on duty. It was further advised that the IDD phone is located at side of the air traffic controller console in Lahore which should not be an issue of concern.

Requirements of AFTN Circuit Performance

1.4 The requirement for AFTN circuit is that the circuit performance should be better than 97 % availability of the total time for which it is operational.

1.5 In this connection, China informed the meeting that the performance of circuit which is carried over a 64 Kbps leased data channel is also not satisfactory. In the first 4 months of 2015, 101.6 hours out of service of circuit were recorded. Improvement of its performance is required. The meeting was informed that if the availability of the circuit is below 97%, then regular exchange of the performance information of the circuit should be made between administrations concerned with copy to the ICAO Regional Office. This was the requirement agreed by the RAN Meeting Asia/Pacific in May 1993. The meeting considered necessary for timely exchange of information on circuit performance including the ATS direct speech circuit. Therefore, the following points of contact on the performance monitoring from China and Pakistan were designated during the meeting:

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1.6 In order to improve performance of this circuit, both China and Pakistan were urged to contact their own service provider find out the reason of poor quality and asking for improvement. Further timely and regular information (monthly) exchange on the performance is required.

1.7. Regarding the ATN/AMHS implementation between Beijing/Karachi, two States expressed their willingness to further coordinate for its early implementation as Mumbai/Karachi AMHS connection had been put into operation and successful trial for Mumbai/Beijing AMHS connection had been conducted.

1.8 Regarding requirement for AIDC implementation between Lahore and Urumqi, the meeting was informed that, the ATM system (Indra, SPAIN) is capable to process AIDC ICD version 2 compatible. Currently, Pakistan is conducting testing with India which using APAC AIDC ICD version 3. Secretariat provided clarification on the AIDC ICD versions and emphasized that more important is the message sets to be supported based on the ATS requirement and agreement between two ACCs. It also informed that the PAN Regional ICD on AIDC was adopted by APANPIRG/25 meeting which become effective from October 2015 when the same was adopted by NAT Region.

1.9 China informed the meeting that current ATM system in Urumqi did not support AIDC function. The new ATM system to be commissioned by the end of 2016 would be capable to process AIDC messages. States were encouraged to employ AIDC to reduce the voice communication error in the ATS handling over service in accordance with Conclusions adopted by APANPIRG in the last few years. China and Pakistan should plan for its implementation once the new ATM system at Urumqi is put into operation.

Agenda Item 2: Review the aeronautical communication deficiency identified by APANPIRG in September 2014

2.1 Under this agenda, the meeting again reviewed the outcome of the APANPIRG/25 meeting and CNS SG/18 meeting on the identified COM deficiencies (WP/03). It was recalled that the COM deficiencies between Pakistan and China was identified by the Regional Airspace Safety Monitoring Advisory Group (RASMAG) in early 2014 and endorsed by APANPIRG/25 in September 2015. This COM Co-ordination Meeting was expected to agree on a practical and solid implementation plan for improving ATS direct speech circuit between Lahore and Urumqi ACCs and make a recommendation on improvement of air/ground communication around the boundary between China and Pakistan.

2.2 The meeting recognized that collaborative actions should be taken by both sides through development of a fully coordinated action plan as it was safety impact deficiency. In this regard, Air Traffic Management Bureau (ATMB), China proposed a solution using VSAT technology to resolve the ground/ground communications between Lahore and Urumqi. The meeting noted that the status of remedial plan derived from this meeting is expected to be reviewed by the Nineteenth meeting of CNS Sub-group of APANPIRG in July 2015.

Agenda Item 3: Discuss on the remedial options and develop action plan including milestones

3.1 Under this agenda item, China presented WP/04 on solutions for communications between China and Pakistan and Pakistan also provided information and considerations on solutions for communication improvement between China and Pakistan (WP/05).

3.2 China also provided a proposal on scenario of solutions detailed in a document named SOLUTIONS FOR COMMUNICATIONS BETWEEN CHINA AND PAKISTAN.

3.3 Both China and Pakistan through their presentations confirmed the poor quality of the current ATS direct speech circuit through IDD and agreed to upgrade the circuit with a new proposal for using dedicated VSAT channel.

3.4 Regarding VHF coverage gap between two States, Pakistan called it a “grey area of VHF coverage” between GILGIT and PURPA along ATS Route G325 is around 80 NM and flying time for most aircraft is approx. 8 to 10 minutes. To resolve the problem, a Remote Control Air Ground (RCAG) VHF station at location between GILGIT and PURPA should be established. The ideal location identified was GARELTH-HUNZA (KARIMABAD town). Need for four VHF transceivers with three operating frequencies was identified i.e. 127.500 MHz (for both primary and hot standby); 132.550 MHz for the secondary frequency and 121.500 MHz for the emergency service. Necessary preparation for the associated civil works and supporting facilities including power supply and air conditions etc. were also required.

3.5 Both sides recognized that VHF coverage gap exists for the segment between GILGIT and PURPA and around. The transfer point between Urumqi and Lahore ACCs is PURPA over which main ATS routes W112 and B215 go through.

SOLUTIONS AND ACTION PLAN AGREED

3.6 Based on the proposal presented by China, the meeting discussed and agreed with the following scenario of solutions:

3.6.1 Regarding deficiencies of VHF coverage gap, China would like to support Pakistan to establish RCAG VHF station (EVHF) at GARELTH-HUNZA or nearby. China will provide 4 VHF transceivers and one compatible VSAT remote terminal to join the existing VSAT network hub at Lahore. Pakistan will be responsible for the space satellite resource for the required bandwidth (using PAKSAT-1R satellite) and VSAT equipment at hub site in Lahore to support this relay VSAT link. The detailed specifications for required equipment including associated connectivity equipment will be provided by Pakistan to China within two weeks after the meeting.

3.6.2 Regarding upgrading existing ATS direct speech circuit from IDD to a dedicated VSAT circuit, China will provide two VSAT terminals equipment for this VSAT circuit. One set will be installed at Lahore and another one will be used at Urumqi. The Chinese satellite will be used for the spectrum bandwidth required for this dedicated circuit which will be managed by ATMB, China. The interface requirement for integration with VCCS of Indra ATM system will be provided by Pakistan to China within two weeks after the meeting.

3.7 In order to ensure the magnetic environment is suitable for installation of VSAT using Chinese Satellite, a site survey visit by experts from China to Lahore was considered necessary. This would facilitate selection of site of the Antenna for the dedicated VSAT linking to Urumqi for the ATS voice communication. The purpose of the visit would also include discussions on the interface between VSAT and the VCCS. The meeting agreed following action item:

ACTION ITEM/1 BY CHINA AND PAKISTAN

That, ATMB will make arrangement for its experts to visit Lahore by the end of August 2015 for a site survey conducting magnetic environment inspection for choosing site of Antenna for the dedicated VSAT communication link with Urumqi serving ATS direct speech circuit in order to enhance flight safety.

3.8 The initial list of equipment to be provided by China to Pakistan for improvement of the air/ground VHF communication around boundary between China and Pakistan and upgrading the ATS direct speech circuit between Lahore and Urumqi is provided in **Appendix B** to this Report. For air/ground communication facilities, China will facilitate the installation of the remote RCAG station after necessary training conducted at Lahore for first installation for ground/ground communication and Pakistan will be responsible for integration the signal including voice tune signal at Lahore Hub site. For the ground/ground voice communication using VSAT, China will be responsible for installation of the VSAT equipment at Lahore and Urumqi. Pakistan is responsible for integration with the existing VCCS of their ATM system. The list of equipment will be further adjusted based on the specification requirement to be provided by Pakistan within two weeks and agreement achieved through emails between two States.

3.9 It was further understood that Pakistan will provide travel facilitation such visa application and accommodations (hotel and meals) to the engineers from China during the site survey and installation. Number of experts and times of necessary visits will be discussed between two States in the near future.

3.10 It was considered necessary for experts from China to conduct onsite training to the qualified engineer and technician nominated from PCAA. Pakistan will provide travel facilitation including visa requirement and accommodations (hotel and meals) for the instructor conducting the on-site training.

3.11 The initial project timeline/milestone agreed by the meeting is provided in the **Appendix C** to this report. This will subject to further adjustment based on the result of site survey and readiness of site for RCAG EVHF Station at Garelth-Hunza.

Agenda Item 4: Initial Letter of Agreement or MoU for technical support and cooperation between China and Pakistan on the action plan

4.1 Both China and Pakistan considered not necessary to sign MoU or TMC at this stage. However, some sort of document may be required for other formalities such as equipment import/export and/or other purpose in the future. This will be further discussed by two States later when necessary.

Agenda Item 5: Any Other Business

5.1 The participants from Xinjiang ATMB took the opportunity having exchanged operational experience with counterparts from Pakistan. The meeting was informed that ATMB will send a delegation to Karachi, Pakistan by the end of May 2015 to renew ATS LoA between Urumqi and Lahore when further concerned issues will further be discussed.

5.2 The participants observed the VSAT demonstration equipment brought to the meeting by engineers of ATNC of ATMB.

5.3 Participants from Pakistan expressed gratitude and appreciation to ATMB for the hospitality and opportunity given for visit to Beijing Air Traffic Control Centre closer to Beijing Capital Airport and Satellite communication facilities and Network Control Centre at Shilihe. They also Thanked ICAO Regional Office for the coordination role played in resolving the COM deficiency. They also requested ICAO Regional Office to provide assistance in addressing flight safety issues between Afghanistan and Pakistan.

5.4 In closing the meeting, the Moderator thanked the host for their support to the ICAO regional activities and good arrangement made for the meeting and thanked all participants for their active participation of the meeting.

**COM Co-ordination Meeting
Beijing, China
7 – 9 May 2015**

Appendix A to the Report

LIST OF PARTICIPANTS

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Appendix B to the Report

INITIAL EQUIPMENT LIST TO BE PROVIDED TO PAKISTAN

For Lahore ACC VSAT station (ATS Direct Speech Circuit)				
No	Name	Description	Quantity	remarks
1	C-band (2.4 meter) ring focus antenna		1	
2	C-Band BUC (10W)	Type N interface	1	
3	C-Band LNB	Type N interface	1	
4	attenuator	Type BNC interface	2	
5	Comtech CDM570L IP Satellite modem		1	
6	1 to 4 power splitter	L-BAND\ Type N interface	1	
7	CNG1000 voice gateway		1	Pending information from PCAA
8	IP-based Phone		1	Pending information from PCAA
9	router		1	Pending information from PCAA
10	Ethernet switch	8 port	1	
11	cabinet		1	
For EVHF remote Air/Ground radio station				
No.	Name	Description	Quantity	remarks
1	VHF radio	Including radio/filter/antenna/remote controller	4	127.500MHz (master,stand-by) 132.550MHz 121.500MHz
2	C-band(2.4meter)ring focus antenna		1	
3	C-Band BUC (10W)	Type N interface	1	
4	C-Band LNB	Type N interface	1	
5	attenuator	Type BNC interface	2	
6	Comtech CDM570L IP Satellite modem		1	
7	1 to 4 power splitter	L-BAND\ Type N interface	1	
8	router		1	Pending information from PCAA
9	Ethernet switch	8 port	1	
10	cabinet		1	

Appendix C to the Report

AGREED MILESTONES FOR THE PROPOSED PROJECT

1.1 Equipment delivery(China)

Item	Starting Time	Execution Time(Days)	Finish Time
Site Survey	2015/5/11	90	2015/8/10
Purchase Equipment	2015/6/1	90	2015/9/30
Equipment Acceptance	2015/10/1	15	2015/10/15
Equipment transportation(for Pakistan)	2015/10/16	30	2015/11/15

1.2 Equipment installation and Civil Works preparation(Pakistan)

Item	Starting Time	Execution Time(Days)	Finish Time	Remarks
Preparation for outdoor equipment installation	2015/8/11	30	2015/9/10	antenna foundation construction, outdoor line pipe, lightning protection and grounding, power supply
Preparation for indoor equipment installation	2015/9/11	30	2015/10/10	temperature and humidity ,power supply, cable tray,grounding

1.3 Equipment installation and engineering (China and Pakistan)

1.3.1 For Lahore ACC

Item	Starting Time	Execution Time(Days)	Finish Time
Equipment Installation(including outdoor device and indoor device)	2015/11/16	2	2015/11/17
Equipment Training	2015/11/18	3	2015/11/20
System Commissioning	2015/11/20	10	2015/11/30
Operation Trial	2015/12/1	30	2015/12/31
Sign communication agreement	2016/1/1	1	2016/1/1

1.3.2 For VHF remote radio station

The implementation date is determined according to the preparation of the VHF remote radio station.