



International Civil Aviation Organization

**NINETEENTH MEETING OF THE COMMUNICATIONS/NAVIGATION
AND SURVEILLANCE SUB-GROUP (CNS SG/19) OF APANPIRG**

Bangkok, Thailand, 20 – 24 July 2015

Agenda Item 3.3: Review outcome of COM Coordination Meetings
Agenda Item 9: Review status of CNS deficiencies (APANPIRG Deficiency List)

OUTCOME OF COM COORDINATION MEETINGS

(Presented by the Secretariat)

SUMMARY

In order to address identified COM Deficiencies, few COM coordination meetings were held between States since CNS SG/18 meeting. This paper highlights the outcome of these COM coordination meetings.

1. INTRODUCTION

1.1 A COM Coordination Meeting hosted by Airports Authority of India (AAI) was held in at Headquarters of AAI, New Delhi, India from 16 to 17 December 2014. The objective of the meeting was to develop remedial action plan for the identified air navigation deficiency in the COM field from technical and operational perspective and briefing on the current status of air/ground communication capability in Afghanistan and ground to ground communications with neighboring States. The report of the meeting is available at following link: <http://www.icao.int/APAC/Meetings/Pages/2014-COM-CM.aspx>

1.2 A follow-up meeting was held in the IATA Office, Abu Dhabi, UAE on 25-26 February 2015. The objective of the meeting was to update the remedial action plan agreed earlier for the identified air navigation deficiency in the COM field. The meeting noted that 28 February 2015 was the day that existing service contract for VSAT service supporting air/ground VHF communication covering Kabul FIR and ground/ground communication between States concerned would expire. The report of the meeting is available at following link: <http://www.icao.int/APAC/Meetings/Pages/2015-CCM.aspx>

1.3 Another COM Coordination meeting between China and Pakistan was hosted by ATMB in 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. <http://www.icao.int/APAC/Meetings/Pages/2015-CCM-CHN-PAK.aspx>

2. DISCUSSION

COM deficiency between Afghanistan and neighboring States

2.1 The meeting reviewed outcome of APANPIRG/25 meeting on the air navigation deficiencies in which the poor ground/ground communication between Afghanistan and Pakistan was listed. Flight plan and communications issues between Iran and Afghanistan was also an issue need to be addressed.

Review of AFS communication requirements between Afghanistan/Pakistan, Afghanistan/Islamic Republic of Iran and India/Pakistan

2.2 The AFS communications requirements between the States concerned as specified in the Regional Air Navigation Plan (ICAO Doc.9673 Vol. II) FASID Tables were reviewed by the meeting through WP/02. The meeting noted that the ground/ground communication plays vital role for provision of Air Navigation Service to the operators and other air space users.

Review the current circuit performance and operational status of AFS communications between States

2.3 Through IP/02 and a presentation, India provided the current status of AMHS/AIDC implementation with neighboring States concerned. China was requested to sign TMC as the trial was completed. Pakistan was requested to sign the TMC for AMHS connectivity between Mumbai and Karachi and sign MoU for AIDC between Karachi and Ahmedabad.

2.4 Pakistan confirmed that letter with signed TMC and MoU had been received and were being processed for approval. It was agreed that the TMC on AMHS will be signed by 23 January 2015. The MoU on AIDC specifically for operation between Karachi and Ahmedabad was estimated to be signed by the end of January 2015. As it will be confined for Ahmedabad-Karachi as first step of AIDC application, further discussions on slight amendment to the MoU through exchange of emails would also be required.

Restoration of the VSAT Operation between Afghanistan and Pakistan

2.5 The incompatibility of the VSAT terminal and operation still remains. Afghanistan informed the meeting that ND SATCOM IDU5000 and ND SATCOM IDU7000 had been working compatible within Afghanistan. In addition, IDU 5000 terminal had been kept available for communications with neighboring States including Pakistan.

2.6 Pakistan informed that as result of last trial for the VSAT link, CRC frame error remained a problem thus blocking the restoration of the VSAT links.

2.7 Afghanistan further informed the meeting that initial discussion with a new service provider – Space COM, Canada had been initiated. It was anticipated that in the next few weeks, contract with the new service provider would be signed. The service would cover continued the satellite spectrum service with the existing spectrum service provider – ASIASAT 5. The contract would also include maintenance service and recover those VSAT ground stations which have been out of service. Some parts of the VSAT terminals may need to be upgraded and most of parts of existing terminals can be extended for use. This would also apply to those terminals located in Pakistan.

2.8 Afghanistan was requested to keep Pakistan informed about the changes required through emails once the contract with the new service provider is signed. Necessary site survey at VSAT sites in Pakistan by the new service provider was identified.

Status of AFS Communications issues between Afghanistan and Pakistan

The following was recorded in the COM coordination meeting in 2012:

- Data channel for AFS AFTN/AMHS connection between Karachi and Kabul has been suspended since 31 August 2011;
- Channel for ATS Direct Speech circuit between Kabul and Lahore was suspended from 23 June 2011; (ODU & SIC/Demod cannibalized for use in Karachi VSAT); and
- ATS Direct Speech circuit between Kabul and Karachi suspended since 31 August 2011.

2.9 The VSAT equipment from ND SATCOM at Lahore and Karachi was upgraded from Module IDU3000 to IDU5000 in 2007 and RF ODU for the VSAT was also upgraded from 10 watts to 20 watts in 2009.

2.10 The required DSCs currently were arranged through ISD hot-line to the dedicated number at Kabul ACC (terminated at ATC assistant position) with a mobile number at supervisor position as an alternate.

Current AFTN Traffic

2.11 It was recalled from the previous COM coordination meeting report that the out-going AFTN messages from Pakistan are forwarded to UK ARTEMIS via VPN as requested by Afghanistan. However it works as one-way traffic only with no confirmation received for the messages sent. Afghanistan confirmed at previous meeting that a VPN circuit with UK ARTEMIS became operational since January 2012. The circuit was established based on a letter of request from Ministry of Transportation and Civil Aviation of Afghanistan to PCAA and Ministry of Foreign Affairs dated 22 October 2011 after the AFTN circuit over VSAT link became unserviceable.

2.12 It was recalled that currently the KAIA RMS VSAT MX team was part of contract arrangement of ISAF which was providing Network Management Service for the whole VSAT network.

2.13 It was noted that that Afghanistan had arrangements for a number of years with the AsiaSat through PASCOW (based in Singapore and PCCW in Hong Kong) for the satellite spectrum bands used. The contract was expected to renew by 28 February 2015.

2.14 There was an issue of FPL and ATS movement messages distribution for those flights departure from Afghanistan (WP/05). The meeting considered that it is a procedure issue in Kabul between ATS units and AFTN centre. Necessary terminal and training for such service would be required. It was recommended to assess such requirement and examine current practice and develop a recommended solution. This action is required to be initiated by the ACAA.

Development of a remedial action plan

2.15 The meeting tentatively agreed to the following remedial action plans which are subject to further confirmation and deliberation at the next fact to face meeting scheduled for 24-25 February 2015 in either Dubai or Abu Dhabi:

ACTION ITEM 1: Flight Plan and ATS message processing

That, Afghanistan make an arrangement for an expert to examine the procedure of Flight Plan and other movement ATS messages. So transmission and distribution of the ATS message to the neighboring FIR including Iran and Pakistan could be made in a timely manner.

ACTION ITEM 2: Restoration of VSAT Communications – Afghanistan and Pakistan

That, Afghanistan and Pakistan work with relevant service providers to harmonize VSAT terminal equipment to be used and select common network service provider for the Satellite Radio Spectrum with target date of circuits restoration by May 2015 (to be confirmed at the next meeting in Feb.2015)

ACTION ITEM 3: TMC and MOU for the AMHS and AIDC connection between India and Pakistan

That, Pakistan was requested to the return the signed TMC for AMHS between Karachi and Mumbai by 23 January 2015 and MOU on AIDC (confined to Karachi/Ahmedabad as the first step between two States) by end of January 2015.

ACTION ITEM 4: Hosting next COM Coordination Meeting

That, Representative from IATA coordinate with their Office in Abu Dhabi to make arrangement for hosting next COM coordination meeting from 25 to 26 February 2015 in either Dubai or Abu Dhabi. Early confirmation on the exact venue and necessary information for the participants is expected by 22 December 2014 to ICAO APAC Regional Office.

ACTION ITEM 5: Letter of Invitation for next COM Coordination Meeting

That, Recognizing the importance of AFS and AMS for Air Navigation Service to serve Afghanistan airspace and the urgency for another face to face COM coordination to confirm initial outcome of COM coordination held in December 2014, ICAO APAC Office was requested to issue a letter of invitation as soon as possible preferably by 22 December 2014 for the next COM Coordination meeting in the MID region hosted by IATA from 25 to 26 February 2015.

2.16 A follow-up COM meeting was held in the IATA Office, Abu Dhabi, United Arab Emirates (UAE), on 25-26 February 2015. The objective of the meeting was to update the remedial action plan agreed earlier for the identified air navigation deficiency in the COM field from a technical and operational perspective. The meeting noted that 28 February 2015 was the day that existing service contract for VSAT service supporting air/ground VHF communication covering Kabul FIR and ground/ground communication between States concerned would expire.

2.17 Afghanistan informed the meeting that in following up the action plan agreed earlier, ACAA had signed the contract with the service provider (SpaceCom). The service scope continued the satellite spectrum service with the existing spectrum service provider – ASIASAT 5. The contract would have included the maintenance service and recovered those VSAT ground stations which had been out of service. Some parts of these VSAT terminals may need to be upgraded and most of parts of existing terminals can be extended for use. This would also apply to those terminals located in the Pakistan and Iran.

2.18 Afghanistan further informed the meeting the changeover to the new service provider had taken place in evening of 25th February 2015 lasting about 2 hours. The change took place this time include all eight VSAT. The other three sites would be connected at the next step. It was reconfirmed later in the evening and on 26 February 2015 the changes, including relay link frequencies changes in the C-bands, were carried out successfully around 19:30 hours, 25 February 2015. VHF air/ground communication for Air Traffic Service was working successfully through SpaceCom International.

2.19 While expressing appreciation for the action taken by the ACAA regarding the successful change between the VSAT service providers, the meeting urged Afghanistan to take any necessary action to make an arrangement for the experts from the new service provider to conduct site surveys at VSAT sites in Pakistan and Iran. Such need was also identified by the COM coordination meeting held in December 2015.

2.20 Afghanistan was reminded of the responsibly, given to the new service provider, for the end-to-end testing between VSAT terminals in Pakistan and Afghanistan. Pakistan and Iran were also urged to take a cooperative approach and provide the required assistance for such a survey. Any recommendations derived from such a survey need to be further discussed and agreed upon among States concerned.

2.21 Afghanistan also informed that the ground facilities for HF air/ground communication serving as back-up during the transition and for future daily operational use had been installed. Lack of information was noted regarding the operational HF frequencies in the NOTAM issued by ACAA for the period of changeover and for the daily operation, The meeting noted that in order to make the availability of HF air/ground communication capability for Kabul FIR, necessary training for those radio operators on HF radio communication skills would also be required, subject to the further discussions with the parties concerned in Afghanistan. In addition, HF day and night frequencies to be guarded by Kabul ACC should also be made available through the established procedures.

2.22 In this connection, Iran (I.R.) informed that the HF frequencies used by Teheran and published in their AIP are as follows:

Night Frequencies: 5658 kHz; 5667 kHz; 6925 kHz; 8091 kHz and 8918 kHz.

Day Frequencies: 10018 kHz; 13312 kHz; 13288 kHz.

The communication status between Iran and Afghanistan/Pakistan

2.23 Iran informed the meeting that the data (AFTN) communication had been out of order for a number of years. The requirement for such circuit was listed in the MID Regional ANP (Air Navigation Plan). The traffic was currently sent via an alternate routing. The ATS voice communication was exchanged through International Direct Dial arrangement. The minimum operational requirement for voice communication was met.

2.24 Iran also informed the meeting that the Aeronautical Fixed Service (AFS) between Iran and Pakistan through a dedicated 64 Kbps leased line supporting both data and voice communication was satisfactory.

2.25 Pakistan echoed its confirmation that Pakistan had placed a router on the shared data circuit and both voice and data traffic was operating perfectly normally up until the date of the meeting. Additionally out-going AFTN/data traffic collected recently against their routing destinations were classified as follows:

B=02
C=89
E=395
K=339
L=388
M= Nil
S= Nil
T=Nil

2.26 The information of good performance of AFS communication between Iran (I.R.) and Pakistan should be taken into consideration when the contingency plan for the sub-region was developed.

2.27 IATA emphasized the need for open and transparent communications with Afghanistan CAA and ANS service providers impacting safety of flight i.e. Planned ATC system outages, replacements or airspace changes

Updates on remedial action plan

2.28 Since the key Administrations were not available for development of actions plans, the relevant action item agreed earlier and some additional action items developed by this meeting are listed below:

ACTION ITEM 1: Flight Plan and ATS message processing

That, Afghanistan make an arrangement for an expert to examine the procedure of Flight Plan and other movement ATS messages. So transmission and distribution of the ATS message to the neighboring FIR including Iran and Pakistan could be made in a timely manner.

ACTION ITEM 2: Restoration of VSAT Communications – Afghanistan and Pakistan

That, Afghanistan and Pakistan work with relevant service providers to harmonize VSAT terminal equipment to be used (through a technical survey) and recover the VSAT communication supporting both ATS voice and AFS data with target date of circuits restoration by May 2015.

ACTION ITEM 3: Restoration of VSAT Communications – Afghanistan and Iran (New Action Plan)

That, Afghanistan and Iran (I.R.) work with relevant service providers to harmonize VSAT terminal equipment to be used (through a technical survey) and identify a common network service provider for the Satellite Radio Spectrum with target date of circuits restoration by the end of 2015.

ACTION ITEM 4: Monitoring the air/ground communication – IATA (New Action Plan)

That, IATA provide timely feedback on the operational status of the air/ground communications (focusing VHF and HF in the future as well) to the Afghanistan Civil Aviation Authority (ACAA) and copy to ICAO APAC Regional Office.

2.29 Delegate from Iran (I.R.) further stated that the Islamic Republic of Iran will be ready to any cooperation to investigate the establishment of the VSAT or any other kinds of communications between Iran and Afghanistan. In following it, Iran would play the role of alternate AFS communication point between Afghanistan and Pakistan.

Review of AFS communication requirements between China and Pakistan

2.30 The meeting reviewed the AFS communications requirements between the two States including data circuit and direct speech circuit. The status of circuit performance were also reviewed.

2.31 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.

2.32 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.

2.33 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.

2.34 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.

Review the aeronautical communication deficiency identified by APANPIRG in September 2014

2.35 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.

2.36 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.

Discuss on the remedial options and develop action plan

2.37 China made proposals on the solutions for communication deficiencies between China and Pakistan and Pakistan also provided information and considerations on solutions for communication improvement between China and Pakistan.

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

2.39 Both China and Pakistan confirmed the poor quality of the current ATS direct speech circuit through IDD that need to be improved and agreed to upgrade the circuit with the new proposal for using dedicated VSAT channel.

2.40 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.

SOLUTIONS AND ACTION PLAN AGREED

2.41. The meeting developed an action plan and an initial project timeline/milestone which is provided in **Appendix C** to the meeting report. It will subject to further adjustment based on the result of site survey and readiness of site for RCAG EVHF Station at Garelth-Hunza.

3. ACTION BY THE MEETING

3.1 The meeting is invited to note the information provided in this paper and discuss any relevant matters as appropriate.
