



*International Civil Aviation Organization*

**EIGHTEENTH MEETING OF THE COMMUNICATIONS/NAVIGATION  
AND SURVEILLANCE SUB-GROUP (CNS SG/18) OF APANPIRG**

Asia and Pacific Regional Sub-Office, Beijing, China  
(21 – 25 July 2014)

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**Agenda Item 10: Review status of CNS deficiencies (APANPIRG Deficiency List)**

**STATUS OF CNS DEFICIENCIES**

(Presented by the Secretariat)

**SUMMARY**

This paper presents information on the progress in resolving the deficiencies identified by APANPIRG in the CNS fields. The deficiency list also includes long standing deficiency addressed by relevant meetings.

**1. INTRODUCTION**

1.1 Assisting States in resolving the safety related deficiencies is one of the most important tasks assigned to the PIRGs. The APANPIRG maintains an up-to-date List of Deficiencies in all the air navigation fields. In order to assist the work of APANPIRG, the CNS Sub-group regularly reviews the status of deficiencies in the CNS fields and provides the necessary updates and guidance to the States.

1.2 The list of deficiencies in the CNS fields is provided in the **Attachment** for review by the Meeting.

**2. DISCUSSION**

2.1 The status of the deficiencies in the CNS fields was reviewed by APANPIRG/24 Meeting held in Bangkok in June 2013. The Secretariat has updated the deficiency list based on the limited information received from States and other sources.

2.2 Deficiencies in the CNS fields have been addressed as follows:

2.3 **The current situation of air-ground communications in Yangon FIR**  
(Report updated in March 2013)

2.3.1 Based on reports from operators, about 70% flights had normal air ground communication over Yangon FIR.

2.3.2 It is informed that the DCA Myanmar has been making efforts in close coordination with IATA and ICAO Regional Office. However, it was recognized that:

- For HF communication, the administration installed 1 KW high power HF facilities but some problems still exist; and
- For ADS-C/CPDLC, it was recently reported that the interface between ATM system and SITA was updated from X.25 communication protocol to IP protocol on 14 March 2013. IP connectivity was reported stable. However, the FANS system still exhibits some instability. In March, the FANS uplink success rate has been high at 99.84% including both VHF data link and SATCOM. Airlines logged in were SIA, CPA, UAE, QTR, MAS, THY, DLH, THA, FIN etc.

2.3.3 DCA. Myanmar is still working with IATA towards achieving a position whereby current IFBP requirements can be removed. Latest updates from airspace user are expected.

#### 2.4 **Navigation Aids Performance deficiencies in Philippines** (First report in September 2009)

2.4.1 Disruption of Air Traffic Services in Manila FIR was reported on 13 September 2009 for about two hours.

2.4.2 It was informed that the new CNS/ATM project was expected to be operational by 2013 which has been delayed till 2015. IATA had expressed concern about the discontinuation of CPDLC trial due to some technical problem.

2.4.3 The CAAP was urged to inform ICAO Regional Office again to completely remove the deficiency from the list once the new DVOR/DME being put into operation. Updates from Administration concerned are expected.

#### 2.5 **Poor ground/ground communication between Afghanistan and Pakistan** (First reported in 2011)

2.5.1 Issues related to unreliability of AFS communication between Afghanistan and Pakistan was brought to the notice of APANPIRG/21. Lack of reliable communication infrastructure between Afghanistan and Pakistan, poor performance of Aeronautical Fix Service including data communication between Kabul and Karachi and ATS voice communication between Lahore and Kabul had become issues of concerns. Karachi – Kabul AFTN circuit was out of service from 31 August 2011 resulting from unserviceable VSAT system. AFS requirements as specified in the regional air navigation plan are not met. Administrations were urged to work out a remedial solution and improve AFS service.

2.5.2 A COM coordination meeting Afghanistan and Pakistan was held in Karachi, in June 2012. The meeting developed a remedial action plan. A follow-up COM coordination meeting is scheduled to be held from 9-10 December 2014. India assistance in hosting this COM coordination meeting is expected.

2.5.3 For AFTN traffic temporary arrangement has been made via a VPN connection. For ATS Direct Speech circuits, arrangements have been made using IDD hot lines. However, some operational issues still exist. The COM coordination meeting developed a remedial plan with action times to be implemented:

- Action Item 2: Mid-term by end of March 2013, harmonize VSAT terminal equipment and select common network service provider to recover the VSAT Links; (still not recovered) and
- Action Item 3: Long-term by end of June 2014, establish 2 MB dedicated landline connection with multiplexers between Afghanistan and Pakistan to support both data and voice communication between COM centres and ACCs. – Not implemented and status needs to be updated.

2.5.4 It was reported by Pakistan that efforts had been made to recover VSAT circuit by replacing aging parts. Further efforts are expected from concerned States. The meeting is expected to review the current status of the ground/ground communications between Afghanistan and Pakistan.

## **2.6 Ground to ground data communication between Myanmar and China**

2.6.1 The AFTN circuit between Beijing and Yangon had been out of service since 14 July 2008 due to the CU board of the VSAT system being out of order. The AFTN traffic between China and Myanmar is exchanged via alternate routing via Bangkok. No other alternate routing available for Myanmar in case of the Yangon/Bangkok circuit becoming out of order. There was no immediate plan in place to get the failed CU board repaired to restore the circuit.

2.6.2 The circuit is specified in the regional Air Navigation Plan - FASID Table CNS 1A. In addition to the normal AFTN traffic between Myanmar and Z AFS Routing Area, the circuit also plays a critical role as the alternate routing for Bangkok-Yangon circuit.

2.6.3 The prolonged outage status has to be resolved as it was considered important to avoid situation of single point of failure.

2.6.4 A COM coordination meeting in February 2014 developed two action items to rectify the deficiency as soon as possible with target date no later than October 2014. In end of February an E1 (2 Mbytes) circuit has been ordered from Myanmar side for connection through China Unicom. The terminal equipment (Huawei) for fiber cable was purchased in June 2014 in accordance with the Action Agreed No. 2 at the COM Coordination meeting. Updates on this from Administration concerned are expected.

## **2.7 ATS direct speech circuit between Pakistan and China**

2.7.1 Air Traffic Transfer mistakes reported between Lahore and Urumqi Area Control Centers (ACCs) in 2010 was brought to the notice of Pakistan and China. These mistakes were initially found attributable to the dissatisfactory performance of ATS Direct Speech Circuit provided between the ACCs of the two States. A special coordination meeting between China and Pakistan was held in Karachi in 2011 with LOA renewed. The ATS direct communication operating via IDD was observed not stable. In recent RASMAG/19 meeting held in Pattaya in May 2014, it was identified as one of concerned issues that require further improvements and necessary remedial action. It was stated that China had proposed enhancements to communications and ATS surveillance near the border, but had encountered difficulties in establishing the facilities, which might best be sited in Pakistan (but this posed questions regarding ownership and maintenance). China again requested ICAO to work with Pakistan to resolve the problem, as they were concerned about the safety risks at the PURPA crossing point. It was identified that a Special Coordination Meeting is required between Pakistan and China to address this high risk situation. Accordingly, both the States were requested to investigate the current operating status and take urgent action to improve AFS communication between Lahore/Karachi and Urumqi ACCs.

**3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) review the deficiencies listed in the Attachment;
- b) update the list based on recent actions taken by States, if any;
- c) identify additional deficiencies, if any; and
- d) recommend actions for resolving the remaining deficiencies.

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## APANPIRG/24

## Appendix C to the Report on Agenda Item 4

## REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE CNS FIELD IN THE ASIA/PACIFIC REGION

Identification		Deficiencies			Corrective Action			
Requirement	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Target date for completion	Priority for action
Adequate and reliable VHF COM	Myanmar	<p>Quality and reliability of RCAG VHF inadequate and unavailability of required coverage.</p> <p>Improvement has been observed and pilot reports continued to indicate occasional communication difficulties.</p> <p>Further improvement has been observed with occasional communication problems reported.</p> <p>From 2 to 13 April 2012, a survey was conducted by IATA. 129 of 349 aircraft from 11 airlines reported problems of one sort or another (HF, VHF or Data Link) 50 reported no communication had been established.</p> <p>Current status is expected from space users.</p>	<p>1998</p> <p>Early 2008</p> <p>June 2011</p> <p>April 2012</p>	<p>Improvements in the quality of link to RCAG stations and power supply system at some remote stations are required.</p>	<p>An action plan was developed to upgrade equipment at RCAG stations, provide VSAT link at all RCAG stations, to improve power supply system.</p> <p>ICAO missions were conducted.</p> <p>DCA Myanmar has replaced equipments at all 6 RCAG sites with digital VHF system and has provided VSAT links and solar power supply system at all sites.</p> <p>The installation of new high power HF with full associated equipment to be done at Yangon ACC by the end of year 2011;</p> <p>The current VCSS (Voice Control Switching System) has already been upgraded since first quarter 2011</p> <p>The interface between new ATM system and CSP was upgraded from X.25 to IP in March 2013. The connectivity was stable but ATM/FANS system exhibits some instability.</p> <p>Replacement of new communication equipments such as head set, inter-com system and DSC line configuration have already been completed since the end of May 2011.</p>	DCA Myanmar	<p>Revised target date is end of 2011</p> <p>This deficiency will be removed from the list upon receipt of official report providing full details of action taken by Myanmar and confirmation by the users.</p> <p>Further improvements need to be taken by the DCA Myanmar including both operational and technical arrangements</p>	A

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Requirement	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Target date for completion	Priority for action
Adequate and reliable Nav aids and navigation service	Philippines	Un-serviceability of both the ILSs and the DVOR at Manila airport	19 June 2010	<p>A letter from CAAP informed that the ILS system with associated DME had been commissioned in January and April 2011 respectively.</p> <p>Arrangement for continuous DVOR/DME operation was made by temporarily relocating old DVOR/DME facilities from another place.</p>	<p>The significant breakdown of the services was considered a deficiency if remedial action was not taken.</p> <p>The Administration was requested to inform about the remedial action taken to avoid breakdown of power supply. Power supply module has been replaced;</p> <p>For DVOR/DME, a plan to replace temporary aging facilities with new system is in place which was expected to be completed in early 2012</p>	Civil Aviation Authority of the Philippines (CAAP)	2014	A
Reliable ground to ground communication as specified in the regional air navigation plan (Doc.9673)	Afghanistan and Pakistan	Unreliability of AFS communication between Afghanistan and Pakistan was brought to the notice of APANPIRG/21. Lack of reliability in the AFS including data communication between Kabul and Karachi and ATS voice communication between Lahore and Kabul was identified.	September 2010	<p>Follow-up letters from ICAO regional offices were sent to Administrations concerned in April 2010 and further follow- up in March 2011</p> <p>A COM coordination meeting – Afghanistan and Pakistan was held in June 2012 in Karachi, Pakistan. A Remedial action plan was developed.</p>	<p>In March 2012, initial discussion on improvement of AFS communication was held at a special ATS coordination meeting. The COM coordination meeting in June 2012 developed a remedial action plan with three action items:</p> <ol style="list-style-type: none"> <li>1. Near-term by end of September 2012, fully utilize the VPN circuit operational since January 2012 for exchange of AFTN traffic, organize users' training if required;</li> <li>2. Mid-term by end of March 2013, harmonize VSAT terminal equipment and select common network service provider to recover the VSAT Links; (efforts being by PCAA replacing</li> </ol>	Ministry of Transport and Civil Aviation Afghanistan and CAA. Pakistan	December 2014	A

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					<p>aging parts of VSAT. However, the same efforts expected from Afghanistan)</p> <p>3. Long-term by end of June 2014, establish 2 MB dedicated landline connection with multiplexers between Afghanistan and Pakistan to support both data and voice communication between COM centres and ACCs.</p> <p>Follow-up COM coordination meeting is expected to be held in Dec. 2014</p>			
Regional air navigation plan – FASID Table CNS 1A	Myanmar	AFS data circuit between Beijing and Yangon had been out of service since Mid. July 2008.	September 2008	The circuit serves exchanging traffic between Myanmar and Z AFS routing area and also plays a critical role as alternate routing for Bangkok-Yangon circuit.	A COM Coordination meeting in February 2014 developed an action item to rectify the deficiency as soon as possible.	DCA. Myanmar and ATMB	June 2014	A