



International Civil Aviation Organization

**AIR NAVIGATION SYSTEMS IMPLEMENTATION GROUP**

**Third Meeting (ANSIG/3)**  
*(Cairo, Egypt, 2 – 4 July 2018)*

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**Agenda Item 4.2.2: Specific Air Navigation Issues**

CNS ISSUES

*(Presented by the Secretariat)*

**SUMMARY**

This paper provides update on the CNS issues in the MID Region; CRV Project, Registered Frequency list, AMHS SITA Transition and PBCS Implementation.

Action by the meeting is at paragraph 3.

**REFERENCES**

- CRV Workshop Report
- CNS SG/8 Report
- MIDANPIRG/16 Report

**1. INTRODUCTION**

- 1.1 The MIDANPIRG/16 meeting was held in Kuwait from 13 to 16 February 2017.
- 1.2 The CNS SG/8 meeting was held in Cairo, Egypt from 26 to 28 February 2018.
- 1.3 The ICAO Common aeronautical Virtual Private Network (CRV) Workshop was held in Cairo, Egypt on 1st of March 2018. The Workshop was attended by a total of thirty (30) participants from eight (8) States and the CRV Service Provider (PCCW Global Limited).

**2. DISCUSSION**

***CRV Project***

2.1 The meeting may wish to recall that MIDANPIRG/16 agreed that the procurement framework of the APAC CRV be used for the implementation of the MID IP Network Project and that the CRV procurement includes all ICAO MID States as potential users. Furthermore, six (6) States (Bahrain, Iran, Jordan, Kuwait, Lebanon and Sudan) confirmed their commitment and three (3) States (Oman, Saudi Arabia and UAE) confirmed provisional commitment to the project.

2.2 The CRV Workshop was organized to provide a forum to discuss/clarify CRV's Technical aspects and any pending issue. The CRV's service provider (PCCW Global) explained the CRV Network design and the CRV packages, Security, VOIP implementation as well as the reactive maintenance actions.

2.3 During the CRV Workshop, some States raised concern about high cost and requested PCCW to revise the price list. Moreover, it was agreed that States complete the high level questionnaire with their requirements and provide their preferred national telecommunication service provider. Eight (8) States (Bahrain, Iraq, Jordan, Kuwait, Lebanon, Qatar, Saudi Arabia and UAE) completed the high level questionnaire.

2.4 In connection with the above, it was noted that the eight (8) States have chosen different packages for their connections. As the connection should have same SLA at both ends, the secretariat revised States' inputs and prepared a consolidated proposal with unified package for all States as at **Appendix A**, including the safety assessment; and requested CRV's focal points to approve and complete their data. Two (2) States (Jordan and Qatar) provided their inputs to the proposal.

2.5 In order to request from the CRV's Service provider prices revision, the meeting is invited to agree on the following Draft Conclusion:

***DRAFT CONCLUSION 3/X: MID CRV REQUIREMENTS***

*That, in order to request price revision from the CRV's Service provider for the MID Region, States are urged to complete the MID CRV requirements at **Appendix 3X**, not later than **1 August 2018**.*

***Frequency Finder Tool***

2.6 The CNS SG/8 noted that new version of the Frequency Finder tool has been developed and urged States to use it. However, the registered frequency database in the Frequency finder tool is not up-to-date.

2.7 The Secretariat requested Frequency's focal points to verify their States' frequency lists. Five (5) States verified their data (Egypt, Qatar, Saudi Arabia, Sudan and UAE). Therefore, the meeting is invited to agree to the following Draft Conclusion:

***DRAFT CONCLUSION 3/X: REGISTERED FREQUENCY UPDATE***

*That, States that have not yet done so, be urged to*

- a) verify and update existing registered frequencies in the COM list;*
- b) add any missing frequencies with the full details, where applicable;*
- c) delete unused frequencies;*
- d) send the changes in excel format generated by the FF export function; and*
- e) provide the ICAO MID Office with feedback before 15 August 2018*

***SITA Integration***

2.8 The CNS SG/8 noted the progress made in SITA AMHS Gateway inter-connections and transition to AMHS in the different ICAO Regions. It was highlighted that the progress is pending completion of address validation and appropriate configuration update with some AMHS COM Centres to complete transition within the MID Region.

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2.9 The CNS SG/8 developed SITA Type X Transition Action Plan, and agreed that the Regional transition date is (21 June 2018) AIRAC Cycle 185. Some States did not validate their User addresses as and when requested, on another hand, it is required that all addresses should be validated in order not to create any non-delivery issue. Therefore, the SITA Transition was postponed.

2.10 The meeting may wish to note that ICAO EUR/NAT Aeronautical Fixed Services Group (AFSG) decided that AMHS connectivity between EUR and any other Region should not be implemented until the MID SITA Gateway is established.

### ***PBCS Implementation***

2.11 The CNS SG/8 noted that effective 29 March 2018, Performance Based Communication Standards (PBCS) will be implemented over portions of the NAT and APAC oceanic flight information regions in order to reduce separation standards; and airlines intending to fly into portions of the NAT/APAC oceanic airspaces will require PBCS operational approvals.

2.12 The CNS SG/8 noted that ANSP readiness to process flight plan PBCS designators is one of the pending tasks, which are associated with PBCS implementation in the MID Region. Therefore, the meeting urged States, as a matter of high priority, to conduct tests before 29 March 2018, to ensure the readiness of their flight processing systems. In this vein, the ICAO MID Office provided sample FPL test scripts including the PBCS designators. Seven (7) States (Egypt, Jordan, Iraq, Lebanon, Saudi Arabia, Sudan and UAE) confirmed the conduct of successful test and their readiness to handle the PBCS as required.

## **3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) urge States to cooperate with the MID AMC Team and make the required Routing changes to facilitate AMHS SITA Gateway Transition in the MID Region; and
- b) endorse, as appropriate, the proposed Draft Conclusions.


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APPENDIX A

Part I: Data Communication, the table below shows the required intra-regional data connection over CRV Network

State	Bahrain	Egypt	Iran	Iraq	Jordan	Kuwait	Lebanon	Libya	Oman	Qatar	Saudi	Sudan	Syria	UAE	Yemen
Bahrain	Grey		Green			Green	Green			Green	Green			Green	
Egypt		Grey			Green		Green								
Iran	Green		Grey	Green		Green			Green						
Iraq			Green	Grey		Green					Green		Green		
Jordan		Green			Grey						Green				
Kuwait	Green		Green	Green		Grey				Green	Green		Green		
Lebanon	Green	Green		Green			Grey				Green				
Libya								Grey				Green			
Oman			Green						Grey		Green				Green
Qatar	Green					Green			Green	Grey	Green			Green	
Saudi	Green			Green	Green	Green	Green		Green	Green	Grey	Green		Green	Green
Sudan								Green			Green	Grey			
Syria				Green		Green							Grey		
UAE	Green										Green			Grey	
Yemen									Green		Green				Grey

Notes:

- 1- Package A is selected for all states in the MID Region.
- 2- The bandwidth of each data connection is 64K.
- 3-  Means data connection between two states
- 4- The table below shows the required inter-regional connections between APAC and MID regions over the CRV Network:

State	Inter-regional connection with APAC Region
Bahrain	Singapore
Iran	Pakistan
Kuwait	Pakistan, China
Oman	India, Pakistan

Safety Assessment

The following Intra-regional connections should be maintained as backup in case of total CRV disruption

<b>State</b>	<b>Inter-regional Backup line</b>
<b>Bahrain</b>	Oman
<b>Egypt</b>	Saudi Arabia, Sudan
<b>Iran</b>	UAE
<b>Iraq</b>	Bahrain, Jordan
<b>Jordan</b>	Lebanon, UAE
<b>Kuwait</b>	Lebanon
<b>Lebanon</b>	Jordan, Kuwait
<b>Libya</b>	Egypt
<b>Oman</b>	Bahrain, UAE
<b>Qatar</b>	Bahrain, UAE
<b>Saudi</b>	Egypt
<b>Sudan</b>	Egypt
<b>Syria</b>	Bahrain
<b>UAE</b>	Jordan, Oman
<b>Yemen</b>	VSAT Net.

Required Bandwidth for data

State	Number of data Connections	Total Bandwidth
Bahrain	7	512 K
Egypt	2	128 K
Iran	5	256 K
Iraq	4	256 K
Jordan	2	128 K
Kuwait	8	512 k
Lebanon	4	256 K
Libya	1	64 K
Oman	5	256 k
Qatar	5	256 K
Saudi	10	1024 K
Sudan	2	128 K
Syria	2	128 K
UAE	2	128 K
Yemen	2	128 K

Part II: Voice Communication (*pls fill*)

State	Bahrain	Egypt	Iran	Iraq	Jordan	Kuwait	Lebanon	Libya	Oman	Qatar	Saudi	Sudan	Syria	UAE	Yemen
Bahrain	Grey									Green					
Egypt		Grey			Green										
Iran			Grey												
Iraq				Grey											
Jordan		Green			Grey						Green				
Kuwait						Grey									
Lebanon							Grey								
Libya								Grey							
Oman									Grey						
Qatar	Green									Grey	Green			Green	
Saudi					Green					Green	Grey				
Sudan												Grey			
Syria													Grey		
UAE										Green				Grey	
Yemen															Grey

The table shows the required intra-regional **Voice** connection over CRV Network.

Notes:

- 1- Package A is selected for all states in the MID Region.
- 2- Each voice call session requires 104Kbps as voice will be converted to VoIP.
- 3-  Means **VOIP** connection between two states



4- The table below shows the required inter-regional VOIP between APAC and MID regions over the CRV Network:

State	Inter-regional connection with APAC Region
Bahrain	Singapore
Iran	Pakistan
Kuwait	Pakistan, China
Oman	India, Pakistan

Safety Assessment

In case of total failure of the CRV service, the dialup connection may be used or *mention any voice connection you wish to maintain*

State	Voice Backup line
Jordan	Dialup used with all
Qatar	Bahrain, UAE

Required Bandwidth for VOIP

State	Number of Voice Connections	Total Bandwidth
Bahrain		
Egypt		
Iran		
Iraq		
Jordan	3	512 k (Cairo,Jeddah,Riyadh)
Kuwait		
Lebanon		
Libya		
Oman		
Qatar	10	1 M
Saudi		
Sudan		
Syria		
UAE		
Yemen		

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