International Civil Aviation Organization

MID ATS Messaging Management Centre Steering Group

Fourth Meeting (MIDAMC STG/4)
(Cairo, Egypt, 18 – 19 March 2019)

Agenda Item 4: **Establishment of the MID IP Network**

CRV PROJECT

(Presented by the Secretariat)

SUMMARY
This paper aims to inform the meeting about the successful test of the CRV project done by Pilot States, and request States to review their CRV Requirements. Action by the meeting is at paragraph 3.
REFERENCES
- CRV OG/5 Meeting Report - MSG/6 Meeting Report

1.   INTRODUCTION

1.1   The CRV aims to help States achieve a safe, secure, reliable and economical backbone network to handle current and anticipated network traffic demand as well as enabling the new features enhancement in the APAC and MID Regions. MIDANPIRG/16 though Conclusion 16/15 invited States to engage with the recommended supplier to establish individual service contracts.

2.   DISCUSSION

2.1   The meeting may wish to note that eight (8) States (Bahrain, Iraq, Jordan, Kuwait, Lebanon, Qatar, Saudi Arabia and UAE) provided their network requirements through the completion of the high level questionnaire.

2.2   It was noted that States selected different packages for the same connections. In order to request price revision from CRV service provider, the Secretariat prepared consolidated proposal with unified package for all MID States at **Appendix A**.

2.3   MSG/6 meeting through conclusion 6/28 agreed that States should complete their CRV Network Requirements:

> *MSG CONCLUSION 6/28:   MIDCRV REQUIREMENTS*
>
> *That, in order to request price revision from the CRV's Service provider (PCCW Global) for the MID Region, States that have not done so, are urged to complete the MID CRV requirements at Appendix 5.3P, not later than 15 February 2019.*

2.4   CRV service provider (PCCW) offered a bundle discount with around 10-15% less if Six (6) States place order in the same period. However, CRV overall cost could be reduced if a high number of States join the project.

2.5   During the CRV OG/5 meeting, that held in Hong Kong (23-23 January 2019), the result of tests from the CRV Pilot Project was presented. The tests conducted through Pilot Project proved the concept of the CRV network against the 10 points of test plan established at CRV OG/2 meeting. It's may wish to note that it is not necessary for other States to duplicate a similar testing.

2.6   The testing resolved various issues such as Local Loop interface misconfiguration, test equipment issues and communication issues. New Zealand shared the comprehensive testing report containing detailed results of tests.

2.7   A technical visit to the Network Control Centre of PCCW Global and their Satellite Ground Stations was arranged. The CRV Pilot Service Acceptance Test report was signed by the CRV Co-Chairs with PCCWG on the successful test results at the PCCWG office on 24 January, 2019.

3.   ACTION BY THE MEETING

3.1   The meeting is invited to:

a)   note the successful test results of the Pilot Project;

b)   encourage States to engage with the PCCW before the end of 2020 to get benefits of the project; and

c)   review and update **Appendix A** as deem necessary.

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	▨		X			X	X			X	X			X	
Egypt		▨			X		X								
Iran	X		▨	X		X			X					X	
Iraq			X	▨		X					X		X		
Jordan		X			▨						X				
Kuwait	X		X	X		▨				X	X		X		
Lebanon	X	X		X			▨				X				
Libya								▨				X			
Oman			X						▨	X	X			X	X
Qatar	X					X			X	▨	X			X	
Saudi	X			X	X	X	X		X	X	▨	X		X	X
Sudan								X			X	▨			
Syria				X		X							▨		
UAE	X		X						X	X	X			▨	
Yemen									X		X				▨

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

State	Inter-regional Backup line
Bahrain	Oman, Saudi and UAE
Egypt	Saudi Arabia
Iran	UAE
Iraq	Bahrain, Jordan
Jordan	Lebanon, UAE
Kuwait	Lebanon
Lebanon	Jordan, Kuwait
Libya	Egypt
Oman	Bahrain, UAE
Qatar	Bahrain, UAE
Saudi	Egypt
Sudan	Egypt
Syria	Kuwait
UAE	Jordan, Oman
Yemen	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	6	512 K
Yemen	2	128 K

Part II: Voice Communication (<mark>*pls fill*</mark>)

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

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
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
Egypt	Dialup with Jordan
Jordan	Dialup used with all
Qatar	Bahrain, UAE

Required Bandwidth for VOIP

State	Number of Voice Connections	Total Bandwidth
Bahrain	Jeddah (3X) Riyadh (3X) Abu Dhabi (4x) Muscat (1x) *Iran (1x)* *Kuwait (2X)* *Qatar (4X)*	2080 Kpbs
Egypt	1 with Jordan	128 K
Iran		
Iraq		
Jordan	3	512 k (Cairo,Jeddah,Riyadh)
Kuwait		
Lebanon		
Libya		
Oman		
Qatar	10	1 M
Saudi		
Sudan		
Syria		
UAE	15	1560 K
Yemen		

Notes:

1- The preferred National Telecommunication provider for UAE is "Etisalat"
2- Jordan does not prefer to contract with "Orange" as National Telecom. Provider

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