International Civil Aviation Organization

MIDANPIRG Communication Navigation and Surveillance Sub-Group (CNS SG)

Fifth Meeting
(Cairo, Egypt, 11 - 13 December 2012)

Agenda Item 3:   **Review ATN-IPS Working Group Reports**

REVIEW ATN-IPS WORKING GROUP REPORT

(Presented by the Secretariat)

SUMMARY

This paper presents the outcome of the fourth meeting of the ATN-IPS Working Group and also provides progress made in MID IP Network.

Action by the meeting is at paragraph 3.

REFERENCE

- ATN-IPS WG/4 Report
- MIDANPIRG/13 Report

1.   **INTRODUCTION**

1.1   The first and second IPS Working-Group Meetings (IPS WG1 &/2) were held at the ICAO MID Regional Office in Cairo in 12-14 May 2009 and 11-12 October 2009 respectively. The second meeting was held back to back with the MID AMC training.

1.2   The third and fourth meetings of the ATN-IPS Working-Group (ATN-IPS WG 3&/4) were also held at the ICAO MID Regional Office in Cairo 17 - 19 July 2011 and 21-23 May 2012 respectively. The fourth meeting developed one Conclusion and one Decision and developed list of tasks that need to be addressed by the ATN-IPS Working-Group.

2.   **DISCUSSION**

2.1   The fourth meeting of the ATN-IPS WG noted and updated the follow-up actions taken by concerned parties on MIDANPIRG/13 Conclusion and Decisions relevant to the work programme of the ATN-IPS WG as at **Appendix A** to this working paper.

2.2   The ATN/IPS WG/4 meeting noted that the PAN European Network Service (PENS) implemented in Europe is a common facility that allows ANSPs two different IP interconnection possibilities. In cases where the ANSPs have their own IP networks, they can connect their national IP networks to PENS. However, in other cases where the ANSPs do not have their own IP network, the PENS project can install an access point, consisting of a PENS router, at each location where an IP connection needs to be implemented, in order to provide connectivity with the PENS network.

Furthermore, the meeting was informed that other ICAO Regions are planning for implementing IP networks. Furthermore, the meeting agreed that the MID ATN implementation should take place on the basis of regionally agreed requirements, taking into consideration, the System Wide Information Management (SWIM) concept and any other new developments, mainly the Aviation System Block Upgrade.

2.3   The meeting may wish to note that, ATN-IPS WG/4 developed the analysis for the IP Network survey as at **Appendix B** to this working paper. Furthermore, the meeting noted that SWIM is listed in Block 1 (target timeline for implementation starting from 2018), in the ASBU concept introduced by ICAO. SWIM has close relation with ASBU module B0-30 which is being introduced starting from 2013. It was considered appropriate for the States to develop a regional approach in planning for the implementation of SWIM. The meeting identified the need for a study on an appropriate network to support SWIM including possibility of using public internet and/or using a common network service provider. The meeting was of the view that the initial activity should be performed to incorporate SWIM into the ATN/AMHS Infrastructure.

2.4   The ATN-IPS WG/4 meeting was of the view that the complete SWIM concept is huge and beyond the scope ATN-IPS WG, as it incorporates ATM, AIM, AGA and CNS Infrastructure. Accordingly, the meeting requested the CNS SG to further discuss the matter of organizing MID–SWIM workshop in coordination with the CNS/ATM/IC SG. However, the meeting agreed that a seminar/workshop dedicated to the AMHS/SWIM infrastructure be organized back-to-back with ATN/IPS WG/5 meeting. It was agreed to check if State is willing to host the event. However, the meeting may wish to note that ICAO MID Regional Office is planning for AIM/SWIM Seminar during May 2013 in Istanbul.

2.5   The ATN-IPS WG/4 was infomred that the Twelfth Air Navigation Conference (AN-Conf/12) will be held in Montreal from 19 to 30 November 2012, to gain consensus, commitments and formulated recommendations to achieve a harmonized global air navigation system for international civil aviation, in order to optimize the opportunities in technology and maturing work programmes toward common global objectives. The AN-Conf/12 considered Aviation System Block Upgrades (ASBUs) and the Communications, Navigation, Surveillance (CNS), Aeronautical Information Management (AIM) and avionics roadmaps for inclusion in the Global Air Navigation Plan.

2.6   The meeting may recall that a high-level briefing on ASBUs was held in Cairo on 30 January 2012, and MIDANPIRG/13 meeting supported the following operational improvement identified and agreed that the CNS/ATM/IC SG further review them taking into consideration the outcome of the AN-Conf/12.

- Improved Airport Accessibility

- Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration - AIDC-

- Service Improvement through Digital Aeronautical Information Management

- Improved Operations through Enhanced En-Route Trajectories

- Improved Flexibility and Efficiency in Descent Profiles (CDOs)

- Improved Flexibility and Efficiency in Departure Profiles

- Improved Runway Safety (A-SMGCS)

- Improved Airport Operations through A-CDM

- Improved access to Optimum Flight Levels through Climb/Descent Procedures using ADS-B.

2.7   Based on the above the ATN-IPS WG/3 developed the draft structure Implementation plan for ATS Inter-Facility Data Communication (AIDC) in the Region utilizing the advanced Ground-Ground infrastructure Implementation plan as at **Appendix C** to this working paper and agreed that the CNS/ SG and CNS/ATM/IC SG to review and provide guidance for implementation.

2.8   The meeting may wish to note that ATN-IPS WG/4 meeting had agenda item 4 under which the meeting, followed up the Progress of MID Region ATS Message Management Centre (MID-AMC) project and developed Draft Conclusion 4/1 MID-AMC OPERATION:

> *Draft Conclusion 4/1:   MID-AMC OPERATION*
>
> *That,*
>
> a) *States signed the MOA start using MID-AMC and provide feedback to ICAO MID Regional Office;*
>
> b) *concerned States sign the MOA as at **Appendix 4A** (**Appendix B** to WP/4) to the Report on Agenda Item 4 and send back to ICAO MID Regional Office by 30 June 2012; and*
>
> c) *MID-AMC Board is established with TOR as at **Appendix 4B** (**Appendix C** to WP/4) to the Report on Agenda Item 4.*

2.9   The ATN-IPS WG/4 meeting agreed that ICAO MID Regional Office in coordination with Jordan request support from EUROCONTROL to formalize the synchronization procedure, and any other assistance as needed, in order to comply with MIDANPIRG/13 Conclusion 13/27 (b). Furthermore, a separate working paper is presented by Jordan to note the progress on MID-AMC Project.

2.10   The ATN-IPS WG/4 meeting reviewed and updated the list of tasks based on the outcome of discussion, global and regional developments, as at **Appendix D** to this working paper, and agreed to the following Draft Decision:

> *Draft Decision 4/2:   Revised list of tasks*
>
> *That, the list of tasks of the ATN-IPS Working-Group be updated as at **Appendix 5A** to the Report on Agenda Item 5.*

2.11   The ATN-IPS WG/4 meeting also reviewed the list of members. The meeting was informed that the new updated list will not be considered official, until an official notification is received from the authority of the concerned State. The meeting agreed that the ATN-IPS WG/5 meeting be held in first quarter of 2013.

3.   ACTION BY THE MEETING

3.1   The meeting is invited to:

   a) note the progress of ATN/IPS WG programme;
   b) endorse ATN/IPS WG/4 meeting conclusion in para 2.8 and decisions in para 2.10 ;
   c) provide view on para 2.4 , 2.7.and 2.11; and
   d) propose any improvement for the ATN/IPS WG work programme.

APPENDIX A

FOLLOW-UP ACTION PLAN ON MIDANPIRG/13 CONCLUSIONS AND DECISIONS RELATED TO ATN/IPS

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONCLUSION 13/23: **MID IP NETWORK SURVEY** That, States complete the MID IP Network survey as at **Appendix 4.4A** to the Report on Agenda Item 4.4 and provide feedback to the ATN-IPS WG/4 meeting.	Implement the Conclusion	States ICAO	State Letter Completed Questionnaire	ATN/IPS WG/4	Bahrain, Egypt, Iran, Kuwait, Saudi Arabia and UAE provided the survey
CONCLUSION 13/24: **DEVELOPMENT OF IP BASED MID NETWORKS** That, States, that have not yet done so, be urged to: a) develop national plans, in line with the ICAO Manual on the Aeronautical Telecommunication Network (ATN) using Internet Protocol Suite (IPS) Standards and Protocols (Doc 9896), for migration to IPv6 taking the existing IPv4 based aeronautical systems into account; b) consider the use of IPv4/IPv6 protocol translation devices only as a provisional solution during the migration; and c) include a requirement for both IPv4 and IPv6 in their ongoing Air Traffic Services (ATS) Message Handling System (AMHS) implementation programmes in order to ensure seamless transition and interoperability.	Implement the Conclusion	ICAO States	State Letter		
CONCLUSION 13/25: UPDATE THE AMC SYSTEM That, States be urged to keep the data related to their COM CENTER updated in the EUR-AMC System.	Implement the Conclusion	ICAO States	State Letter	June 2012	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONCLUSION 13/26: **MID AFTN/CIDIN DIRECTORY** That, ICAO MD Regional Office: a) take necessary steps with Jordan to populate the MID AFTN/CIDIN Directory in the MID-AMC; and b) post the MID AFTN/CIDIN Directory in the ICAO MID Website.	Implement conclusion	ICAO Jordan States	MID Routing Directory in MID AMC	December 2012	
CONCLUSION 13/27: **MID-ATS MESSAGE MANAGEMENT CENTRE (AMC) PROJECT** That, a) Jordan complete the development of the MID-AMC; b) ICAO MID Regional Office communicate with EUROCONTROL to provide the necessary support for the project; c) ATN-IPS WG and CNS SG develop the necessary legal framework for the use of the MID-AMC; and d) States be encouraged to use the MID-AMC on trial basis for one year.	Implement Conclusion	ATN-IPS WG ICAO Jordan States	MID-AMC Signature of MOA	December 2012	
DECISION 13/28: **REVISED TOR OF THE ATN-IPS WORKING GROUP** That, the Terms of Reference (TOR) of the ATN-IPS Working-Group be updated as at **Appendix 4.4C** to the Report on Agenda Item 4.4.	Implement the Decision	MIDANPIRG	Updated TOR	April 2012	Completed

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONCLUSION 13/30: NATIONAL PERFORMANCE FRAMEWORK That, States be urged to: a) develop, update and/or complete their National Performance Framework, including the National Performance Framework Forms (PFFs), ensuring the alignment with and support to the regional performance objectives; b) incorporate the agreed MID Region Performance Metrics into their National performance monitoring process; and c) report relevant data necessary for performance monitoring of the air navigation systems to the ICAO MID Regional Office, on a regular basis, with a view to update the Regional PFFs and monitor the MID Region Performance Metrics	Implement the Conclusion	ICAO States	State Letter Feedback and reports	30 Jun. 2012 On regular basis	Implement the Conclusion
DECISION 13/32: ESTABLISHMENT OF THE MID AIR NAVIGATION PLAN AD-HOC WORKING GROUP (ANP WG) That, the MID Air Navigation Plan Ad-hoc Working Group (ANP WG) be established to fulfil the requirements set up by MIDANPIRG through Decision 12/49.	Convene the ANP WG/1 meeting	MIDANPIRG/13	ANP WG established	Apr. 2012	Completed

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONCLUSION 13/63: ELIMINATION OF AIR NAVIGATION DEFICIENCIES IN THE MID REGION That, States be urged to: a) review their respective lists of identified deficiencies, develop associated Corrective Action Plans and forward them to the ICAO MID Regional Office prior to 15 June 2012; and b) use the ICAO MID Air Navigation Deficiency Database (MANDD) for submitting online requests for addition, update, and elimination of air navigation deficiencies, until the official launch of the Centralized Air Navigation Deficiency Database on iSTARS.	Implement the Conclusion	ICAO States	State Letter CAP and necessary updates	15 Jun. 2012	Implement the Conclusion

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APPENDIX B

State   Bahrain (Manama)

State	Speed	ISP	IP Address	Net Mask	Router Type	Data end user interface	Applications in use
Riyadh	64k	Batelco	10.61.11.12	255.255.255.252	Motorola Vangurd 6435	FXO/FXS	Voice
Tehran	64k	Batelco	172.16.10.2	255.255.255.0	Cisco2800	Serial	AFTN
						FXO/FXS	Voice
Kuwait	64k	Batelco	10.61.11.8	255.255.255.252	Motorola Vangurd 6435	Serial	AFTN-Radar
						FXO/FXS	Voice
Jeddah	64k	Batelco	10.61.11.48	255.255.255.252	Motorola Vangurd 6435	Serial	CIDIN
						FXO/FXS	Voice
Doha-1	64k	Batelco	10.61.11.32	255.255.255.252	Motorola Vangurd 6455	Serial	Radar
						FXO/FXS	Voice
Doha-2	64k	Batelco	10.61.11.56	255.255.255.252	Motorola Vangurd 6455	Serial	AFTN
						FXO/FXS	Voice
Dammam	64k	Batelco	10.61.11.44	255.255.255.252	Motorola Vangurd 6435	FXO/FXS	Voice
AbuDhabi-1	64k	Batelco	10.61.11.12	255.255.255.252	Motorola Vangurd 6435	Serial	Radar
						FXO/FXS	Voice
AbuDhabi-2	64k	Batelco	10.61.11.16	255.255.255.252	Motorola Vangurd 6435	Serial	CIDIN
						FXO/FXS	Voice

Remarks: ……..

……
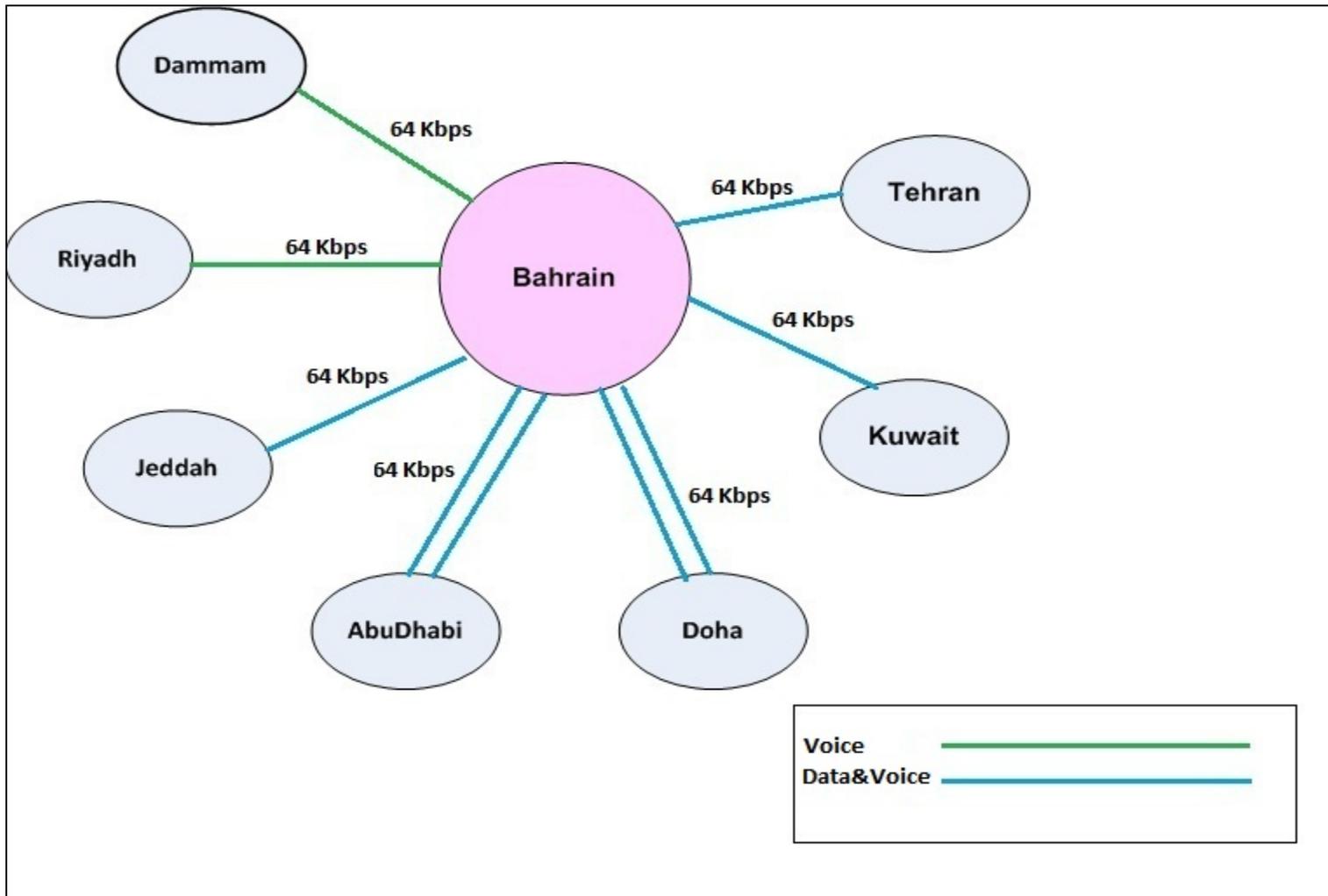
Figure 1: Bahrain Circuit Diagram

State   Egypt (Cairo)

State	Speed	ISP	IP Address	Net Mask	Router Type	Data end user interface	Applications in use
Amman	64k	Telecom Egypt (ATM)	10.10.10.2 192.168.12.7	255.255.255.0 255.255.255.0	Motorola Vangurd 6800	IP	AMHS
						FXO/FXS	Voice
Athens	64k	Telecom Egypt (ATM)	192.168.80.2	255.255.255.0	Cisco2800	FXO/FXS	Voice
Athens	64k	Telecom Egypt (ATM)	10.10.10.1	255.255.255.0	Cisco2800	Serial	CIDIN
						FXO/FXS	Voice
Jeddah	64k	Telecom Egypt (ATM)	192.168.80.2	255.255.255.0	Cisco2800	FXO/FXS	Voice
						IP	OLDI, Radar
Jeddah	128k	Telecom Egypt (ATM)	10.10.10.1	255.255.255.0	Motorola Vangurd 6455	IP	AMHS
						FXO/FXS	Voice
Riyadh	64k	Telecom Egypt (ATM)	192.168.80.2	255.255.255.0	Cisco2800	FXO/FXS	Voice
Tripoli	64k	Telecom Egypt (ATM)	10.10.10.1	255.255.255.0	Cisco1700	Serial	AFTN

Remarks: ……..

……
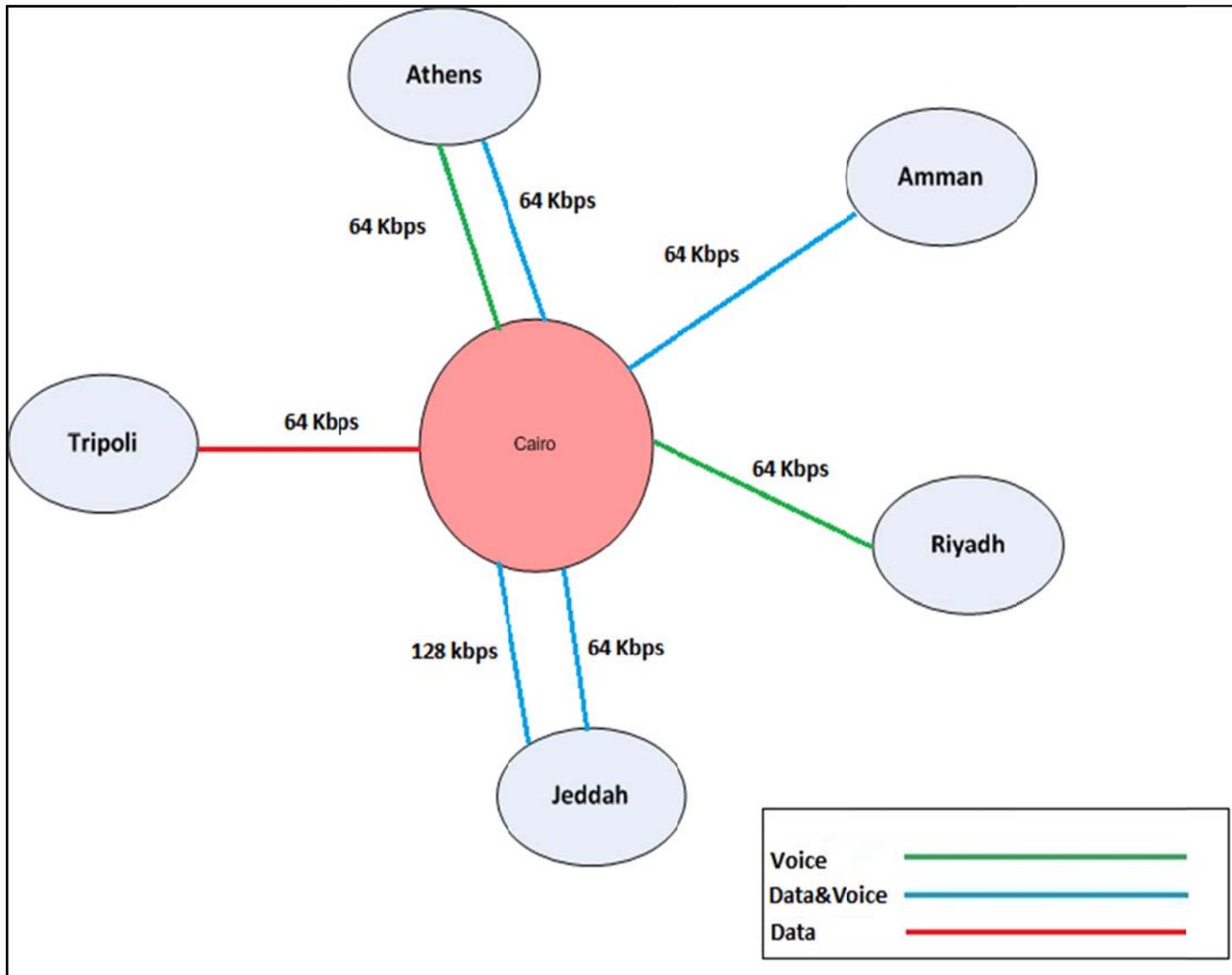
State   Saudi Arabia (Jeddah)

State	Speed	ISP	IP Address	Net Mask	Router Type	Data end user interface	Applications in use
Cairo	128k	N/A	192.168.12.0	255.255.255.0	Motorola Vangurd 6455	IP	AHHS
						FXO/FXS	Voice
Amman	64k	N/A	192.168.12.0	255.255.255.0	Motorola Vangurd 6455	IP	AHHS
						FXO/FXS	Voice
Muscat	64k	N/A	192.168.12.0	255.255.255.0	Cisco 2811	IP	AHHS
						FXO/FXS	Voice
Manama	64k	N/A	TBD	TBD	Motorola Vangurd 6435	Serial	CIDIN
						FXO/FXS	Voice

Remarks: ………..
………..
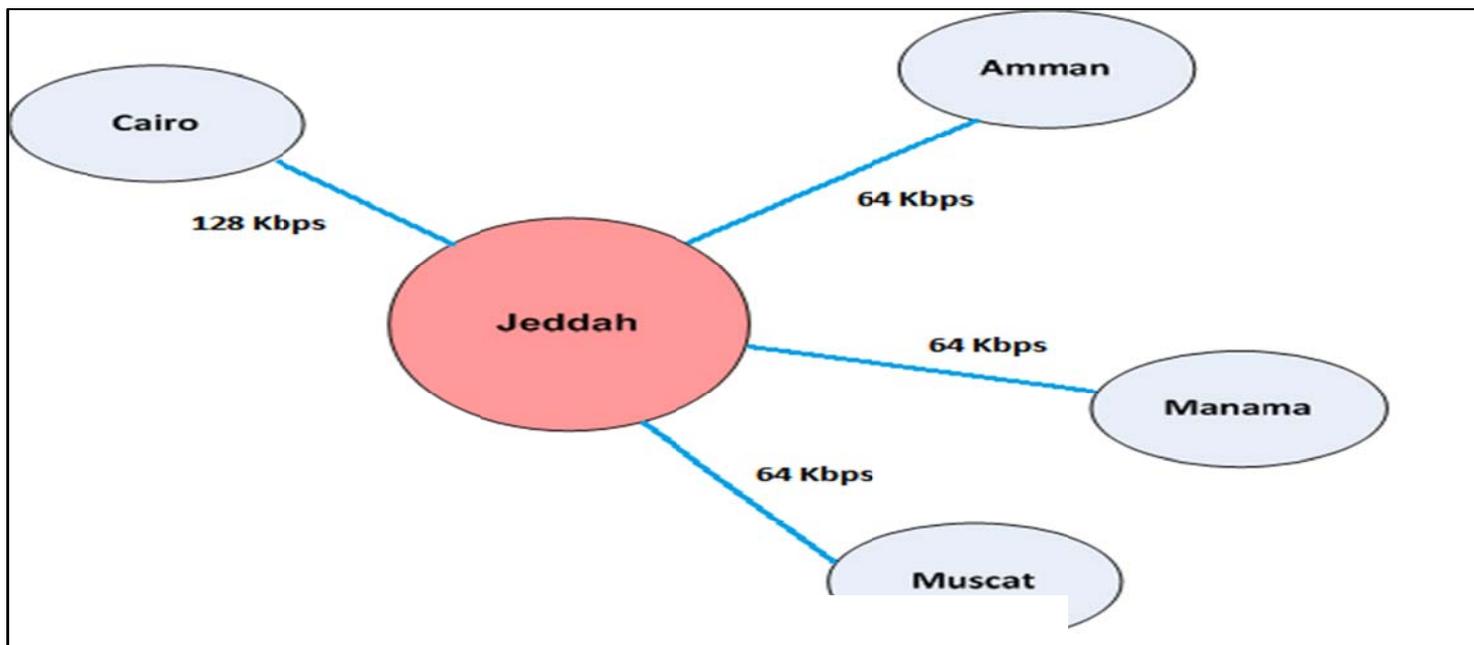
State   IRAN(Tehran)

State	Speed	ISP	IP Address	Net Mask	Router Type	Data end user interface	Applications in use
Manama	64k	Iran PPT	172.16.10.2	255.255.255.0	Cisco2811	Serial	AFTN
						FXO/FXS	Voice
Baghdad	32k	Iran PPT	192.168.191.14	255.255.255.0	Cisco2811	FXO/FXS	Voice
Ankara	64k	Iran PPT	172.16.13.0	255.255.255.0	Cisco2811	Serial	AFTN
						FXO/FXS	Voice
Kabul	32k	IATA	192.168.10.12	255.255.255.0	Cisco2811	FXO/FXS	Voice
Karachi	64k	Iran PPT	172.16.11.0	255.255.255.0	Cisco2811	Serial	AFTN
						FXO/FXS	Voice
Kuwait	64k	Iran PPT	172.16.12.0	255.255.255.0	Cisco2811	Serial	AFTN
						FXO/FXS	Voice
Bahrain	64k	Iran PPT	172.16.12.0	255.255.255.0	Cisco2811	Serial	AFTN
						FXO/FXS	Voice
Abu Dhabi *	64k	Iran PPT	To be determined	To be determined	Cisco2811	Serial	AFTN
						FXO/FXS	Voice
Muscat *	64k	Iran PPT	To be determined	To be determined	Cisco2811	Serial	AFTN
						FXO/FXS	Voice

Remarks: * The lines will be established by end of July, 2012
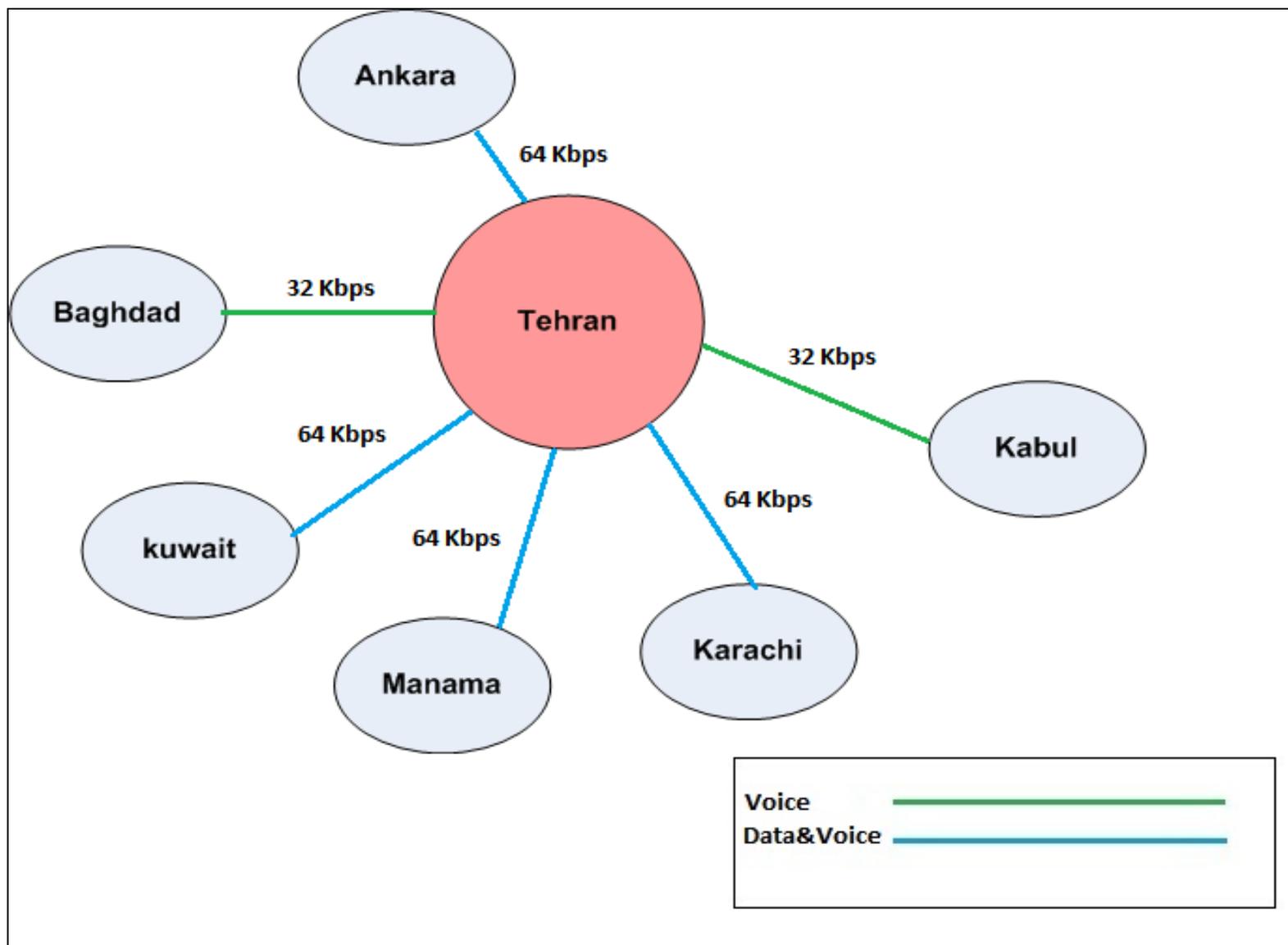
Figure 4: Tehran Circuit diagram

State   UAE (Abu Dhabi)

State	Speed	ISP	IP Address	Net Mask	Router Type	Data end user interface	Applications in use
Bahrain1	64K	Etisalat	N/A	N/A	Motorola Vangurd 6455	Radar	Serial
Bahrain2	64K	Etisalat	N/A	N/A	Motorola Vangurd 6435	AFTN/CIDIN	Serial
Oman	64K	Etisalat	192.168.130.0	255.255.255.0	Motorola Vangurd 6455	IP	AMHS
						FXO/FXS	Voice
Qatar	128K	Etisalat	192.168.131.0	255.255.255.0	Motorola Vangurd 6435	Serial	AMHS
						FXO/FXS	Voice
Amman**	N/A	Etisalat	94.56.192.202	255.255.255.0	N/A	N/A	AMHS

Remarks: * The IP addresses for Bahrain links is configured by ISP and not identified on UAE side.

** The link type between Jordan and Abu Dhabi is over public internet (VPN)
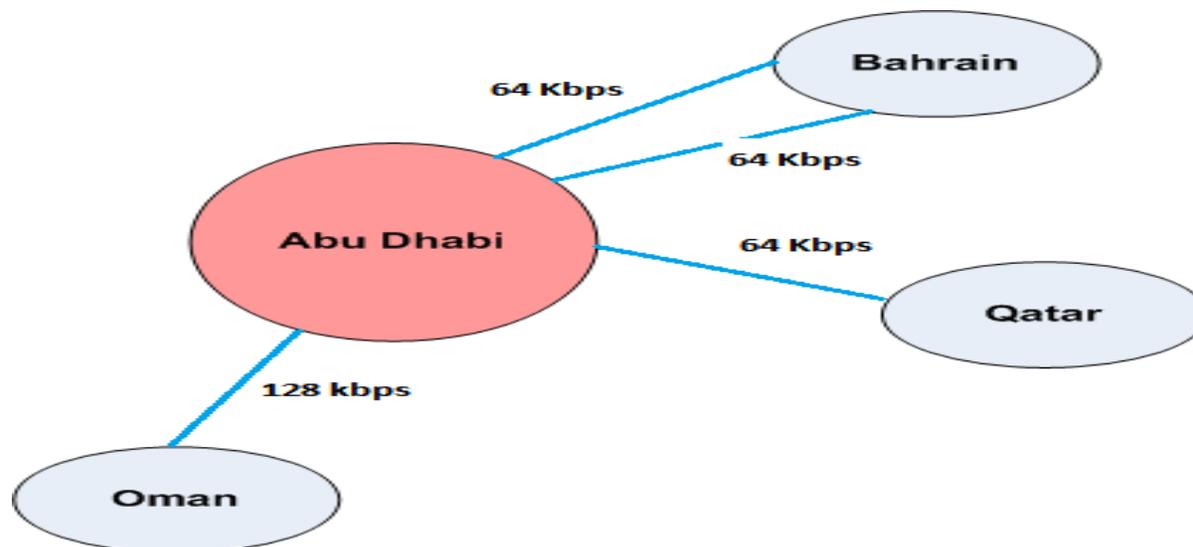
Figure 5: Abu Dhabi Circuit Diagram

State   Kuwait(Kuwait)

State	Speed	ISP	IP Address	Net Mask	Router Type	Data end user interface	Applications in use
Beirut	64K	N/A	--	--	Motorola Modem 3460	N/A	AFTN
Doha	64K	N/A	--	--	Motorola Modem 3460	N/A	AFTN
Tehran	64K	N/A	172.16.12.0	255.255.255.252	Cisco 2800	N/A	AFTN-Voice
Damascus	64K	N/A	--	--	Motorola Modem 3460	N/A	AFTN
Karachi	64K	N/A	--	--	Motorola Modem 3266	N/A	AFTN
Bahrain	128K	N/A	--	--	Motorola Vanguard 6455	N/A	AFTN, Radar& Voice
Baghdad	64K	N/A	192.168..0.160	255.255.255.0	Motorola Modem 3460	N/A	AFTN-Voice

Remarks:

- The connectivity for circuits (Beirut, Doha, Damascus, Karachi and Bahrain) is pure layer 2 there is no IP configuration on these circuits.
- For Tehran circuit there is IP configuration on the WAN side 172.16.12.2/30 (between Qualitynet and Tehran provider), but there is no IP configuration between Qualitynet and DGCA Kuwait.
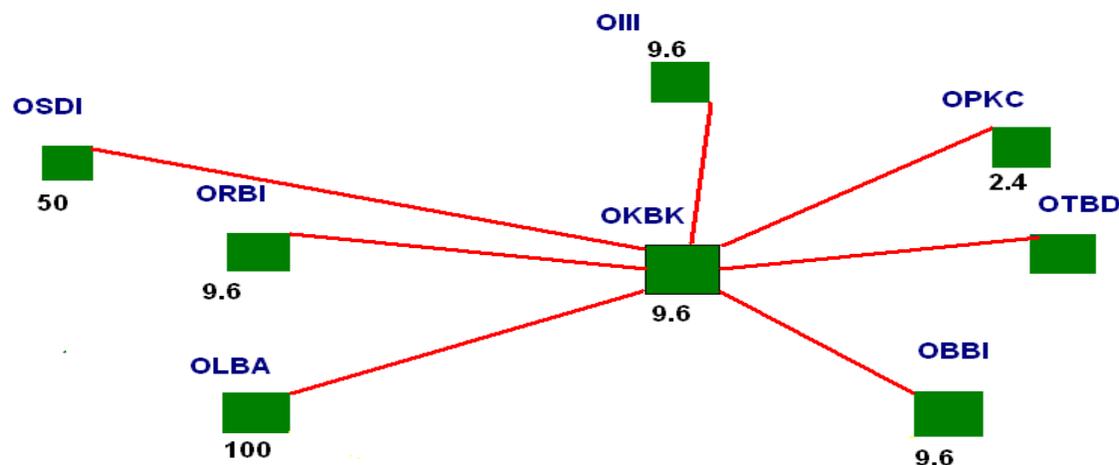

Figure 6: Kuwait Circuit Diagram

State   Jordan (Amman)

State	Speed	ISP	IP Address	Net Mask	Router Type	Data end user interface	Applications in use
Cairo	64k	N/A	10.10.10.1	255.255.255.0	Vanguard	N/A	AMHS
						FXO/FXS	Voice
Jeddah	64k	N/A	10.10.10.1	255.255.255.0	Vanguard	N/A	AMHS
						FXO/FXS	Voice
Abu Dhabi*	2M	NITC	193.188.93.19	255.255.255.0	Cisco 5510	N/A	AMHS

* *The* link type between Jordan and Abu Dhabi is over public internet (VPN)
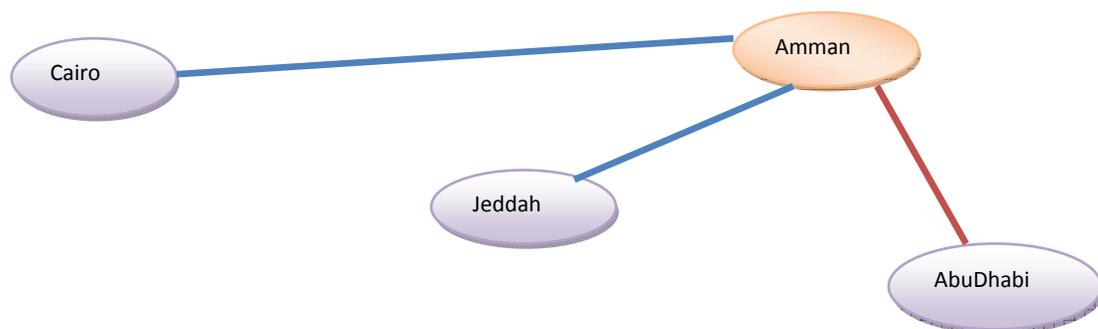
Remark: After conducting the IP network Survey, *Common infrastructure characteristics in all states have been found as follows:*

- *Security Measure: Not implemented)**
- *Voice interfaces: FXO/FXS*
- *Voice Protocol Supported: SIP,H.323*
- *All IP circuits is using IPv4*
- *Link Type: Leased Line.*
- *Router interfaces:* Async Serial, Sync Serial ,Ethernet

*Jordan has a firewall device CISCO ASA5510 for Abu Dhabi link(VPN)

State   Iraq

State	Speed		IP Address	Net Mask	Router Type	IP.V	

Iraq did not submit -IP network Survey

State   Kuwait

State	Speed		IP Address	Net Mask	Router Type	IP.V	

Kuwait did not submit -IP network Survey

State   Oman

State	Speed		IP Address	Net Mask	Router Type	IP.V	

Oman did not submit -IP network Survey

State   Qatar

State	Speed		IP Address	Net Mask	Router Type	IP.V	

Qatar did not submit -IP network Survey

State   Syria

State	Speed		IP Address	Net Mask	Router Type	IP.V	

Syria did not submit -IP network Survey

State   Yemen

State	Speed		IP Address	Net Mask	Router Type	IP.V	

Yemen did not submit -IP network Survey

APPENDIX C

**ATS INTER-FACILITY DATA COMMUNICATION (AIDC)
IMPLEMENTATION PLAN**

EXPLANATION OF THE TABLE

Column

1   State/Administration – the name of the State/Administration;

2   Location of AIDC end system – the location of the AIDC end system under the supervision of
State/Administration identified in column 1;

3   AIDC Pair – the correspondent AIDC end system;

Location – location of the correspondent AIDC end system

State/Administration – the name of the State/Administration responsible for management of the
correspondent AIDC end system

4   AIDC standard used – the AIDC standard adopted for the AIDC connection between the
corresponding AIDC pair, AFTN, AFTN/AMHS or ATN;

5   Target Date of Implementation – date of implementation of the AIDC end system;

6   Remarks – any additional information describing the AIDC end system or the AIDC service
between the corresponding AIDC pair.

State/Administration	Location of AIDC end system	AIDC Pair		AIDC standard used	Target date of Implementation	Remarks
		Correspondent location	Correspondent State/Administration			
1	2	3		4	5	6
Egypt	CANC Cairo	Cairo	Athens	CIDIN	Implemented	OLDI V… IS
		Cairo	Jeddah	AMHS	Implemented	ICD V.2.0
		Cairo	Sudan	AFTN	TBD	ICD V.2.0
	Cairo Air Navigation Center	Cairo	Riyadh	AFTN	TBD	ICD V.2.0
Bahrain						
Iran						
Iraq						
Jordan						
Kuwait						

PuntoCNS

State/Administration	Location of AIDC end system	AIDC Pair		AIDC standard used	Target date of Implementation	Remarks
		Correspondent location	Correspondent State/Administration			
1	2	3		4	5	6
Lebanon						
Libya						
Oman						
Qatar						
Saudi Arabia						
Sudan						
Syria						
UAE						
Yemen						

APPENDIX D

TASK LIST

No	Description	Deliverables	Target date	Responsibility
1	Review of implementation problems and develop coordinated solutions Coordinate/compile the regional implementation schedule	Updated the information in the ATN Router and AMHS planning tables and the implementation status maintain the AMHS Implementation Plan	Quarterly	Members Bahman (Iran), Saud (Kuwait) Khaled (Egypt)
2	Monitor Implementation	Status of impl.	ATN-IPS WG/5	ATN-IPS WG
3	Development of Interim Database for routing tables	Database	AIRAC	Mona (Jordan)
4	MID - AMC	Complete the development	August 2012	ATN-IPS Jordan
5	MID ATN AMHS will adopt IPv4 address assignment proposed by as an interim measure and will transit to IPv6 after the related implementation issues are resolved. This approach will be based on point-to-point IP network	Guidance Doc on IPv4 addressing plan to be developed		Haitham (Egypt), Abdulla (Saudi Arabia), Mona (Jordan) and Yaseen (Bahrain)
6	facilitate implementation of VoIP in MID	Develop the required guidance	Jan 2013	Mohammed (Bahrain) All
7	develop a list of the documents which are need for MID-ATN Implementation	List of documents	ATN-IPS WG/5	All
8	IP Network Survey Analysis/requirement/financial/design	Survey doc	10 June 2012	Abdulla /Mona/ Yasser/Yassin
9	Proposal from PTT for IP network for the region, Coordination for presentation from suppliers	Proposal and presentation	ATN-IPS WG./5	Mohammed (Bahrain) Khaled Egypt Abdullah (Saudi Arabia)
10	Routing directory	Updated Routing directory	30 May 2012	Hamad (UAE), Essam
11	FASID	Updated FASID	30 may 2012	Bahman/Saud/ Khaled
12	Initial draft AIDC		30 May 2012	Mahmoud (Egypt), Ahmed, Hani (Saudi Arabia)

- END -