INTERNATIONAL CIVIL AVIATION ORGANIZATION

REPORT OF THE FOURTH MEETING OF THE AERONAUTICAL TELECOMMUNICATION NETWORK/ INTERNET PROTOCOL SUITE WORKING GROUP

ATN/IPS WG/4

(Cairo, Egypt, 21-23 May 2012)

The views expressed in this Report should be taken as those of the MIDANPIRG Aeronautical Telecommunication Network/Internet Protocol Suite Working Group and not of the Organization This Report will, however, be submitted to the MIDANPIRG and any formal action taken will be published in due course as a Supplement to the Report.

Approved by the Meeting
and published by authority of the Secretary General

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PART I – HISTORY OF THE MEETING

1. PLACE AND DURATION

1.1 The Fourth Meeting of Aeronautical Telecommunication Network/Internet Protocol Suite Working Group (ATN/IPS WG/4) was convened at the ICAO MID Regional Office in Cairo, Egypt, 21-23 May 2012.

2. OPENING

2.1 The Meeting was opened by Mr. Jehad Faqir, ICAO Deputy Regional Director, Middle East Office who welcomed the delegates to Cairo. In his welcome speech he highlighted that the communication technology is advancing at an extremely rapid rate. New products and services are constantly being offered to the public with unprecedented capabilities, performance and capacity with decreasing costs. He urged the meeting to discuss the various difficulties faced in the Region for the implementation of ATN and IPS protocols to come up with solutions that will benefit the Region. Mr. Faqir, guided the meeting on the considerable benefits of the Internet protocols, where ICAO developed SARPS and guidance materials for the use of IPS and SARPS are in Annex 10. Mr. Faqir indicated that one of the main tasks for the meeting will be to develop the institutional framework for the smooth operation of the MID AMC as directed by MIDAPIRG/13 Conclusion 13/27.

3. ATTENDANCE

3.1 The meeting was attended by a total of sixteen (16) participants from six (6) States (Bahrain, Egypt, Iran, Kuwait, Saudi Arabia and UAE). The list of participants is at **Attachment A** to the Report. (Jordan participated partially through teleconference).

4. OFFICERS AND SECRETARIAT

4.1 The Rapporteur of the Group Mr. Mohamed Ali Saleh, Head, Aeronautical Communication, Civil Aviation Affairs of Bahrain, was unable to attend the meeting. Accordingly, the meeting agreed that Mr. Raza Gulam, Regional Officer, Communications, Navigation and Surveillance (RO/CNS), act as secretary and Rapporteur of the meeting.

5. LANGUAGE

5.1 The discussions were conducted in the English language and documentation was issued in English.

6. AGENDA

6.1 The following Agenda was adopted:

Agenda Item 1: Adoption of Provisional Agenda

Agenda Item 2: Follow-up on MIDANPIRG/13 and other meeting Conclusions and Decisions relevant to ATN/IPS WG TOR

Agenda Item 3: Review update of MID ATN plans and implementation issues

Agenda Item 4: Follow-up the progress of MID Region ATS Message Management Centre (MID AMC) project

Agenda Item 5: Future work programme

Agenda Item 6: Any other business

7. CONCLUSIONS AND DECISIONS – DEFINITION

7.1 The MIDANPIRG records its actions in the form of Conclusions and Decisions with the following significance:

a) **Conclusions** deal with matters that, according to the Group's terms of reference, merit directly the attention of States, or on which further action will be initiated by the Secretary in accordance with established procedures; and

b) **Decisions** relate solely to matters dealing with the internal working arrangements of the Group and its Sub-Groups.

8. LIST OF CONCLUSIONS AND DECISIONS

DRAFT CONCLUSION 4/1: *MID-AMC OPERATION*

DRAFT DECISION 4/2: *REVISED LIST OF TASKS*

PART II: REPORT ON AGENDA ITEMS

REPORT ON AGENDA ITEM 1: ADOPTION OF THE PROVISIONAL AGENDA

1.1 The meeting reviewed and adopted the provisional agenda as at paragraph 6 of the history of the meeting.

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Report on Agenda Item 2

REPORT ON AGENDA ITEM 2: FOLLOW-UP ON MIDANPIRG/13 AND OTHER MEETINGS CONCLUSIONS AND DECISIONS RELEVANT TO ATN/IPS TOR

2.1 The meeting recalled that it has been agreed by MIDANPIRG that each subsidiary body review the Conclusions and Decisions related to its terms of reference and decide whether to maintain or replace by an updated Conclusions and Decisions, in order not to have too many Conclusions and Decisions which are ongoing.

2.2 Based on the above, the meeting noted the follow-up actions taken by concerned parties as **Appendix 2A** to the Report on Agenda Item 2.

2.3 The meeting agreed in its deliberation to review the Conclusions and Decisions which are still current under the relevant Agenda Item.

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Appendix 2A to the Report on Agenda Item 2

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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Report on Agenda Item 3

REPORT ON AGENDA ITEM 3: REVIEW AND UPDATE OF MID ATN PLANS AND IMPLEMENTATION ISSUES

IP Network Survey

3.1 The 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.

3.2 The meeting supported MIDANPIRG/13 views that the complete implementation of IPv6 will take time and consequently, there will be a long period for both protocols IPv4 and IPv6 to co-exist. The meeting agreed that careful attention to the current implementation of AFTN, CIDIN and ISO/OSI based ATN is required. Accordingly, the provisions for the AFTN, CIDIN, and ISO/OSI should continue to be developed to secure these implementations. 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.

3.3 The meeting recalled that six MID States (Bahrain, Egypt, Iran, Jordan, Saudi Arabia and UAE) replied to the first IP Network Survey and noted that MIDANPIRG/13 agreed to the development of the MID IP Network. However, the MIDANPIRG/13 meeting under *Conclusion 13/23: "MID IP Network Survey"*, urged States to complete the new amended survey and agreed that further action on the establishment of MID IP Network is dependent on provision of replies to the new completed surveys from all States.

3.4 The meeting noted that no replies received from States due to the short period between MIDANPIRG/13 and the ATN/IPS WG/4 meetings. Accordingly, the meeting updated the replies from States participating in the meeting, and developed the analysis as at **Appendix 3A** to the Report on Agenda Item 3. It was also agreed that ICAO MID Regional Office send follow-up letter to States not present at the meeting.

3.5 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.

3.6 The meeting recognized the increasing important role of the public Internet that is played in the provision of MET and digital NOTAM information in lieu of dedicated circuits/links. Accordingly, 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.

3.7 The meeting was of the view that the complete SWIM concept is huge and beyond the 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. Furthermore, it was agreed that ICAO MID Regional Office will send State Letter to know if State is willing to host the event.

3.8 The meeting noted that some States had already developed domestic IP networks, while other States are in the process of developing IP network. The meeting noted that MIDANPIRG/13 was of the view that for harmonization and compatibility purposes these networks be based according to ICAO standards as outlined in Doc 9896. Accordingly, MIDANPIRG/13 meeting agreed to the following Conclusion for which the meeting agreed to include the content of the conclusion in the MID Region IP Network Strategy:

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;
1.1

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.

AFTN/CIDIN Routing Directory and update of MID FASID CNS part

3.9 The meeting recalled that a periodical data collection and publication in the MID ANP FASID for the AFTN/CIDIN/AMHS circuits and other related information is a human resource extensive task and would need to be supported by electronic tools, e.g. centralized database. In this context the meeting was apprised that AFTN/CIDIN/AMHS international connectivity information was maintained in ICAO EUR Region by EUROCONTROL in the AMC. Consequently, the meeting agreed that ICAO MID Regional Office request EUROCONTROL for the possibility to extend these tools to ICAO MID Region.

3.10 The meeting noted that, MIDANPIRG/13 agreed that States could utilize EUR-AMC to obtain some of the information electronically. Consequently, MIDNAPIRG/13 meeting urged States to access the AMC website http://www.eurocontrol.int/amc and keep all information related to their States updated. Accordingly, the meeting noted that the following States Bahrain, Egypt, Jordan, Qatar, Saudi Arabia and UAE updated the data related to their State in the AMC.

3.11 The meeting recalled MIDANPIRG/13 conclusion 13/26 MID AFTN/CIDIN directory and noted that the directory is posted on the ICAO MID Regional office website, which was reviewed and updated for the information related to (Bahrain, Egypt, Iran, Kuwait, Saudi Arabia and UAE) as at **Appendix 3B** to the Report on Agenda Item 3 and agreed that ICAO MID Regional Office replace the post directory with the new updated version 6.

3.12 The meeting noted that Asymmetric routing may cause loss of messages due to the fact that a gateway cannot map a Non-Delivery Report to a subject message and noted that Singular AMHS diversion for an area representing several Private Management Domains (PRMDs) is substantial and cannot be performed by one letter as used in AFTN, to facilitate a diversion from AFTN to AMHS and vice versa.

3.13 Based on the above, MIDANPIRG/13 meeting urged MID AMHS COM Centres to review the current routing tables and make sure of deploying symmetric routes where possible, also encouraged MID States to make use of the corresponding PRMDs table to facilitate diversion from AFTN to AMHS and vice versa. Furthermore, the meeting agreed that States start the PRMD with the first two letters for their location indicator. Accordingly, the requirement for an easy access to an updated PRMD files is necessary, in this regard the meeting noted that Jordan volunteered to keep the PRMD file updated on their website: http://www.carc.gov.jo/inner_en.php?menu=3&id=17. In this respected the meeting agreed that MID-AMC provide to ATN-IPS WG/5 meeting, the optimum routing based on the routing function in the MID-AMC.

3.14 The meeting recalled that Trilateral AMHS Tests have been performed between Amman, Cairo, and Jeddah. The meeting noted with appreciation that the AMHS triangle was put into operation, and was the first AMHS triangle world-wide that uses static routing with pre-defined routing tables.

3.15 The meeting noted that Bahrain, Egypt, Jordan, Oman, Qatar, Saudi Arabia, and United Arab Emirates installed and operated AMHS systems while other MID States are in the process of installing new AMHS systems.

3.16 Based on the above developments, the meeting reviewed and updated the information contained in the MID Regional Air Navigation Plan (Doc 9708), Volume II Facilities and Services Implementation Document (FASID) Tables related to CNS in particular the ATN part for States (Bahrain, Egypt, Iran, Kuwait, Saudi Arabia and UAE) as at **Appendix 3C** to the Report on Agenda Item 3.

3.17 The meeting was informed that MIDANPIRG/13 meeting agreed to the establishment of an Ad-hoc Working Group tasked for the development of a revised version of the MID ANP (both Basic ANP and FASID). Accordingly, the meeting agreed that the changes in **Appendix 3C** to the report on Agenda item 3, not to be formally processed until it is reviewed by the Ad-hoc Working Group.

3.18 The meeting was informed, that Iran ATN network provide Aeronautical Telecommunication for Inter and Intra points to transfer voice and data information based on Internet Protocol in accordance with ICAO Doc 9896, and noted that Tehran AFTN switching centre is operating on 93 international, domestic and airline channels.

3.19 Iran further informed, the meeting about upgrading 20 of its old analogue communication lines to IP based links and these are operational for integrated voice and data communications. Furthermore, Iran Signed contract with AVITECH AG has been signed in 06 Dec 2010, where Factory Acceptance Test of system has been done in Feb 2012 and will start Operation by the end of 2012. The meeting noted that transitioning from AFTN to AHMS applications not only requires replacing AFTN applications with the new ones both in server and client sides but also requires upgrading of the links to the necessary speeds.

3.20 The meeting was informed that the establishment of data links between Tehran, Abu Dhabi and Muscat are in progress through respective telecom authorities and it is expected that these links will be operational by the end of August 2012.

3.21 The meeting discussed the connection between Iran and Iraq and noted that the existing connection is only for voice through VSAT, and there are technical problems for the establishment of the AFTN which is due to unmatched protocols, it was recommend that Iran using protocol changer and test the circuit for the AFTN data.

MID Region operational improvements

3.22 The meeting noted that the Twelfth Air Navigation Conference (AN-Conf/12) will be held in Montreal from 19 to 30 November 2012. The purpose of the AN-Conf/12 is to gain consensus, obtain commitments and formulate recommendations to achieve a harmonized global air navigation system for international civil aviation. The objective is to optimize the opportunities in technology and maturing work programmes toward common global objectives. The Conference will consider proposed 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. The Conference would also provide stakeholders with an opportunity to coalesce around major themes, set priorities and refine the way forward.

3.23 The meeting recalled that a high-level briefing on ASBUs was held in Cairo on 30 January 2012. Furthermore, the meeting noted that CNS/ATM/IC SG/6 reviewed the operational improvements contained in the current version of ASBU Working Document and agreed to the need of identification of those operational improvements which are of relevance to the MID Region. However, it was highlighted that the whole concept of ASBU will be finalized by the AN-Conf/12 and accordingly the 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 both the ASBU workshop to be held in Cairo 30 September–04 October 2012 and the AN-Conf/12:

a) Improved Airport Accessibility
b) Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration -AIDC-
c) Service Improvement through Digital Aeronautical Information Management
d) Improved Operations through Enhanced En-Route Trajectories
e) Improved Flexibility and Efficiency in Descent Profiles (CDOs)
f) Improved Flexibility and Efficiency in Departure Profiles
g) Improved Runway Safety (A-SMGCS)
h) Improved Airport Operations through A-CDM
i) Improved access to Optimum Flight Levels through Climb/Descent Procedures using ADS-B.

3.24 The meeting agreed that ATN-IPS WG is the right WG to provide support for the implementation of the ATS Inter-Facility Data Communication (AIDC) in the Region utilizing the advanced Ground-Ground infrastructure, accordingly the meeting developed the draft structure for AIDC Implementation plan as at **Appendix 3D** to the Report on Agenda Item 3, to be reviewed by the CNS/ SG and CNS/ATM/IC SG.

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Appendix 3A to the Report on Agenda Item 3

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: ……

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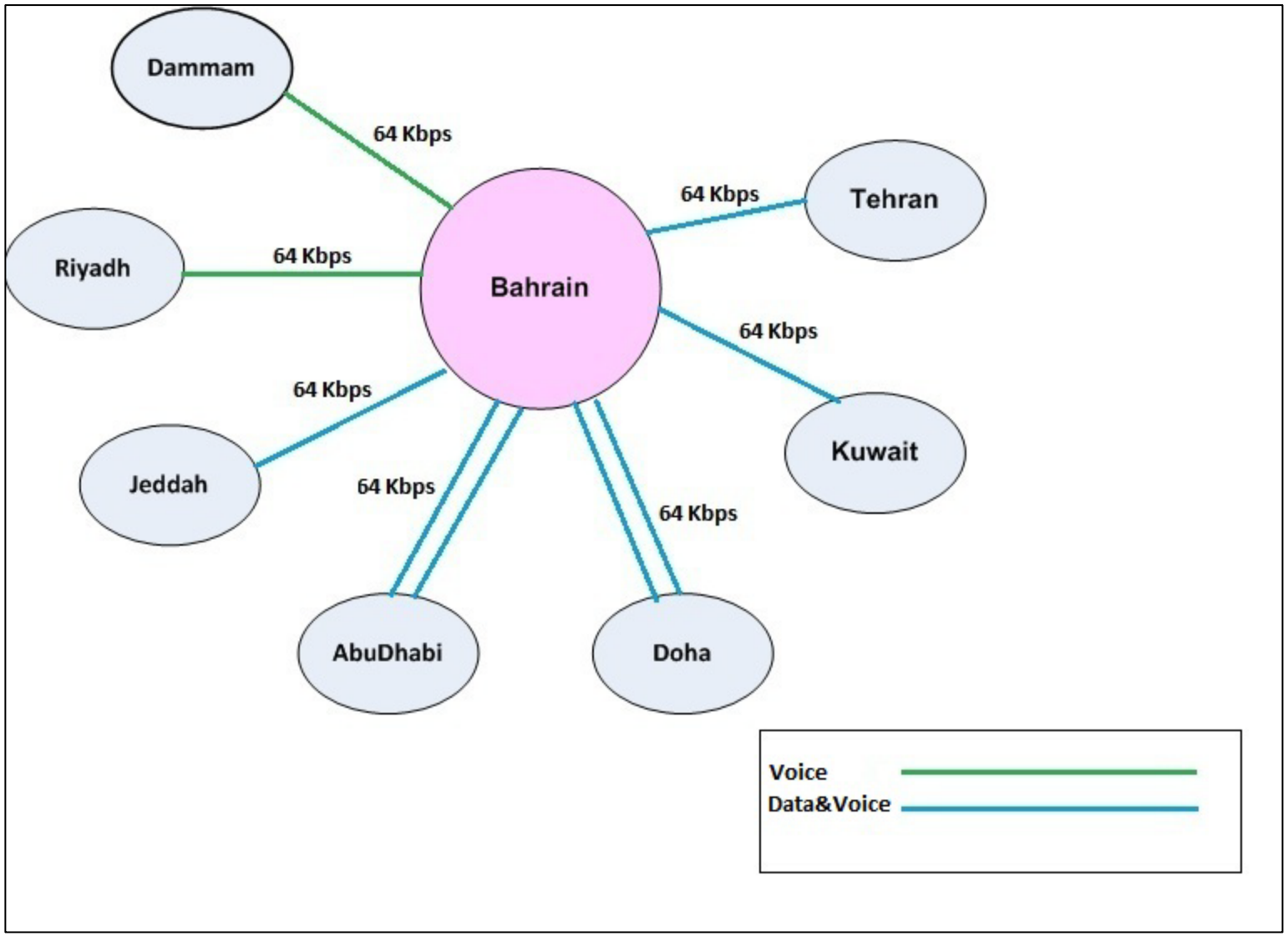

Figure 1: Bahrain Circuit Diagram

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: ……

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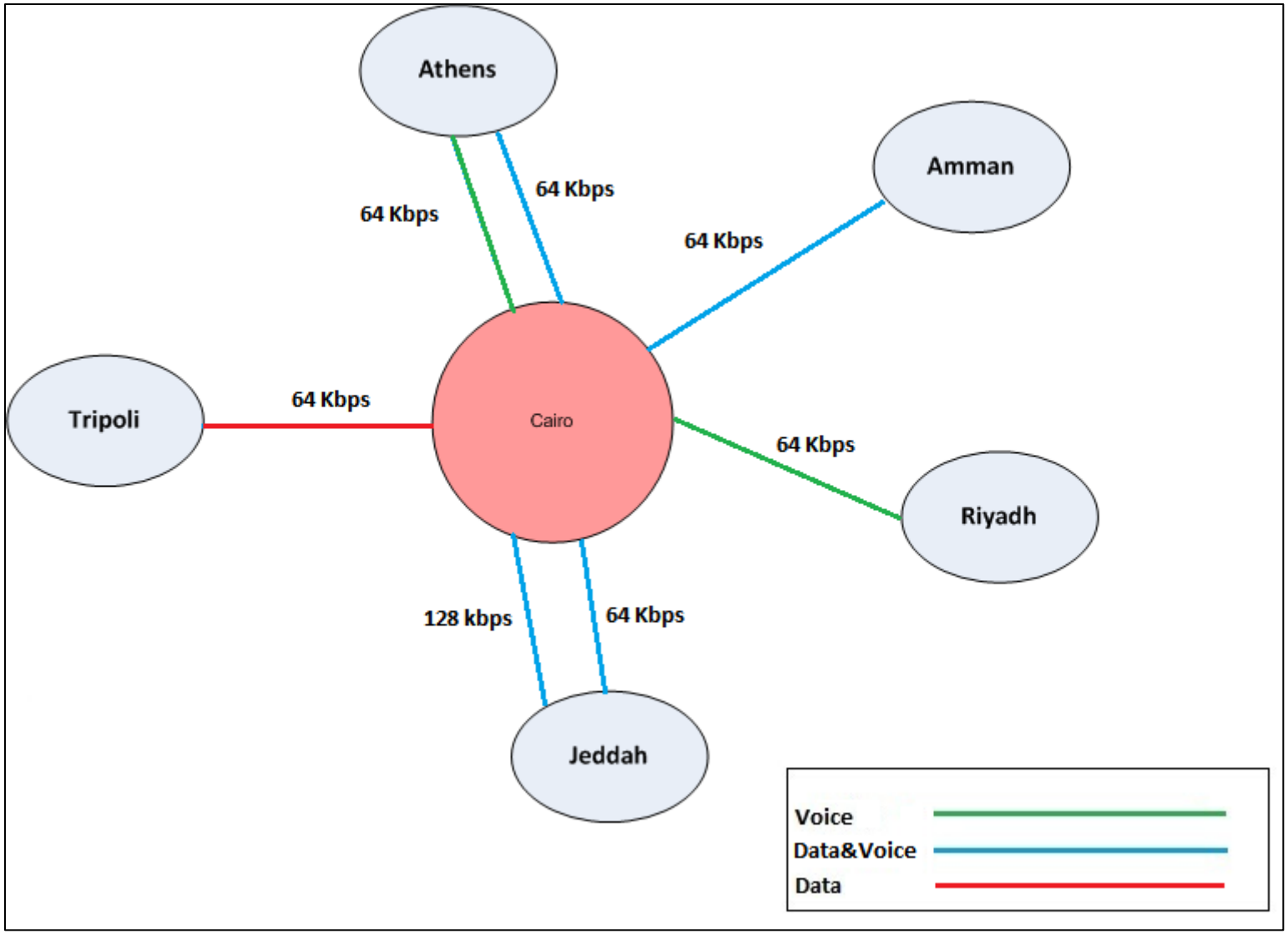

Figure 2: Cairo Circuit Diagram

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: .....

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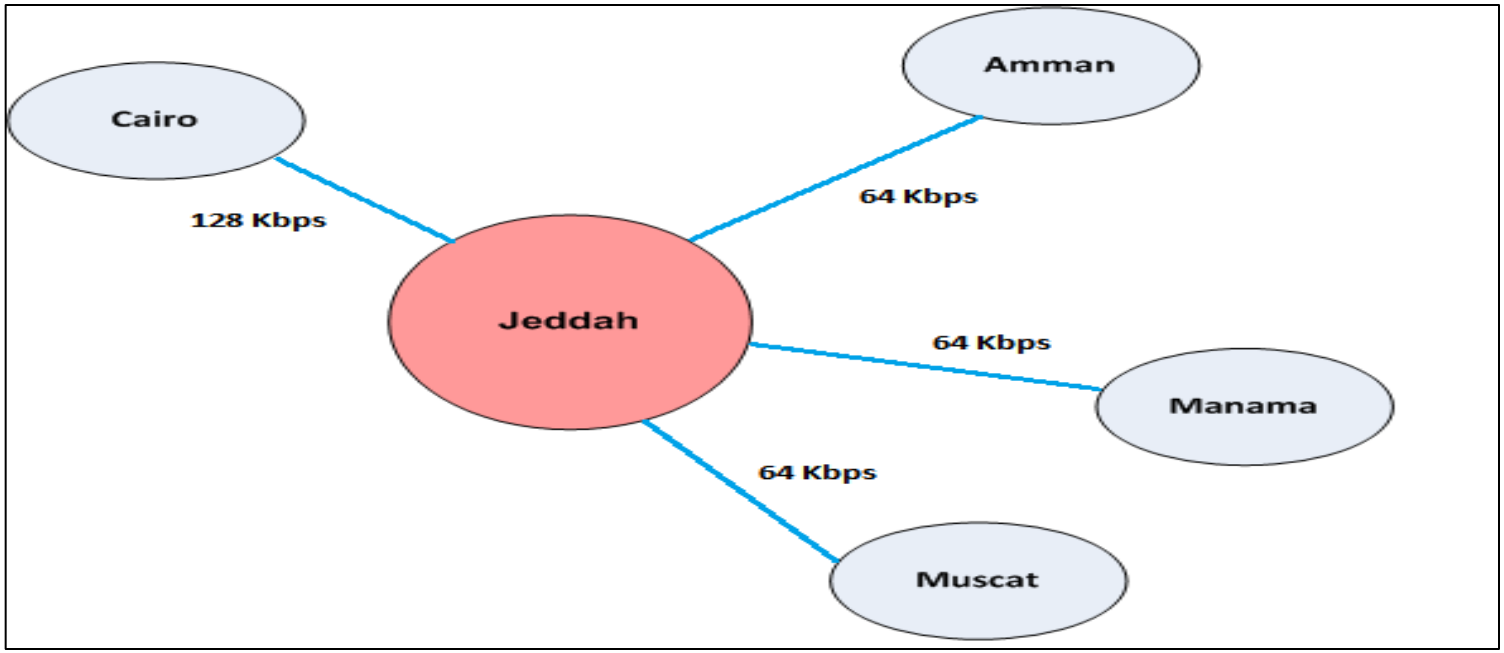


Figure 3: Jeddah Circuit Diagram

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

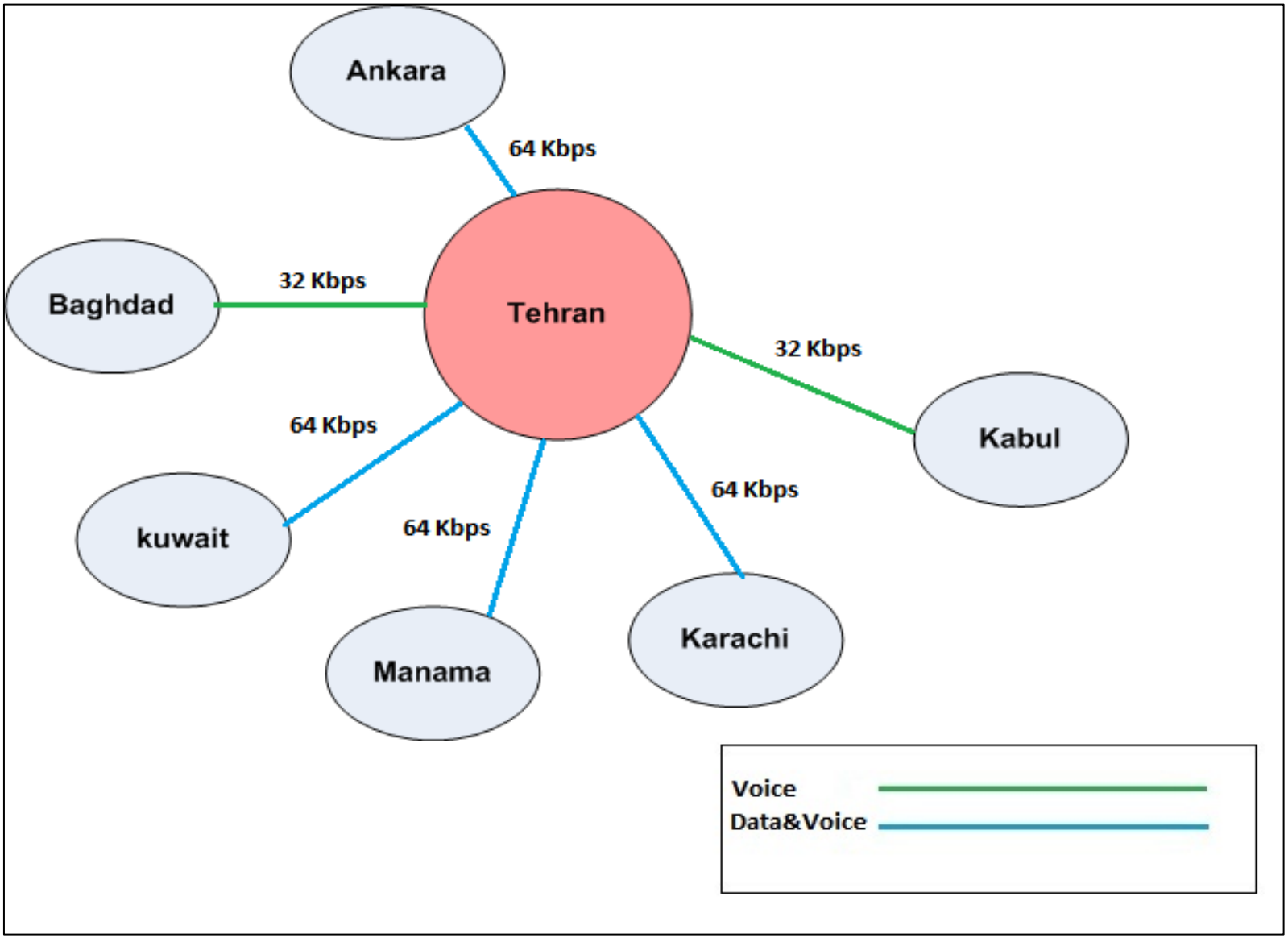


Figure 4: Tehran Circuit diagram

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)

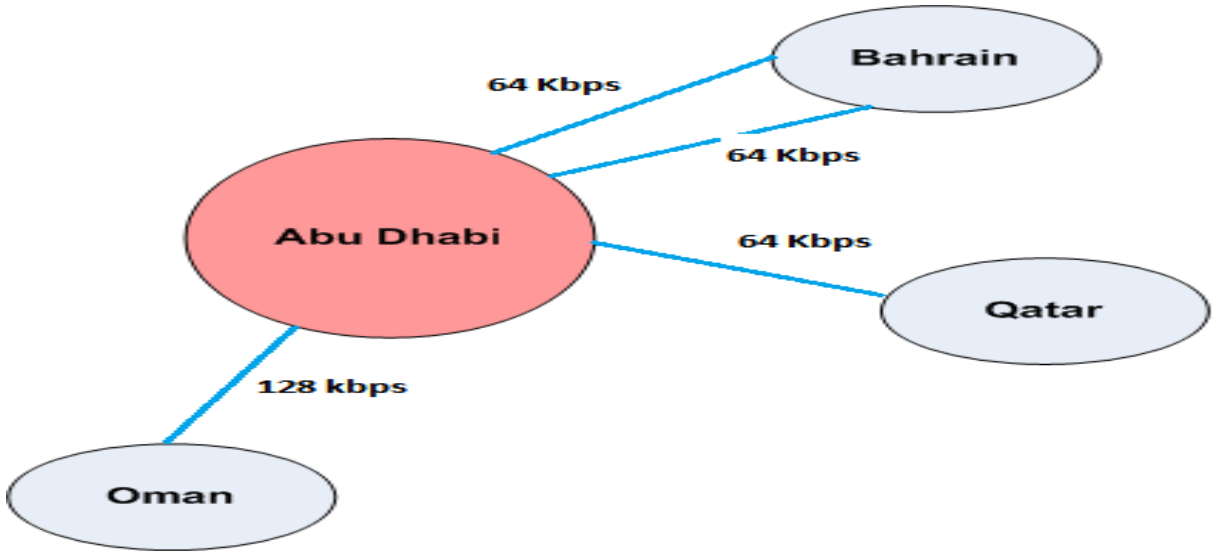


Figure 5: Abu Dhabi Circuit Diagram

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.

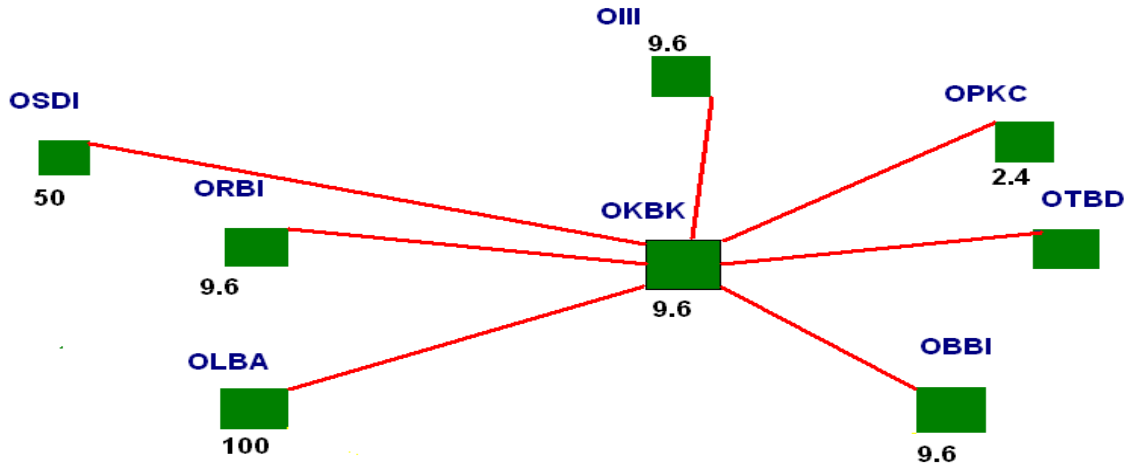
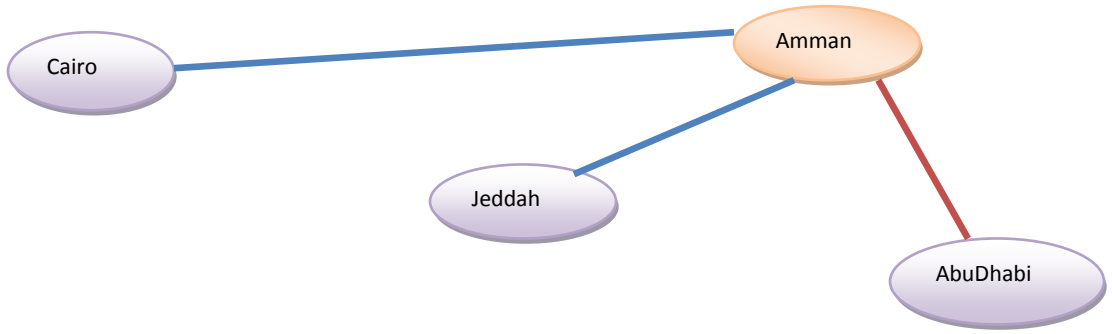


Figure 6: Kuwait Circuit Diagram

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

ATN-IPS WG/4
Appendix 3B to the Report on Agenda Item 3

INTERNATIONAL CIVIL AVIATION ORGANIZATION
MIDDLE EAST OFFICE

Routing Directory for AFTN and CIDIN Centres in the MID Region

Version 6 - May 2012

Table of COM Centres

(listed in alphabetical order by COM Centre location indicator)

Location Indicator	Located	State	Table name
HECA	Cairo	Egypt	HECA
OAKB	Kabul	Afganistan	OAKB
OBBI	Bahrain	Bahrain	OBBI
OEJD	Jeddah	Saudi Arabia	OEJD
OIII	Tehran	Iran	OIII
OJAM	Amman	Jordan	OJAM
OKBK	Kuwait	Kuwait	OKBK
OLBA	Beirut	Lebanon	OLBA
OMAE	Abu Dhabi	U.A.E.	OMAE
OOMS	Muscat	Oman	OOMS
OPKC	Karachi	Pakistan	OPKC
ORBI	Bagdad	Iraq	ORBI
OSDI	Damascus	Syria	OSDI
OTBD	Doha	Qatar	OTBD
OYSN	Sanaa	Yemen	OYSN

(listed in alphabetical order by State name)

State	Location Indicator	Located	Table name
Afganistan	OAKB	Kabul	OAKB
Bahrain	OBBI	Bahrain	OBBI
Egypt	HECA	Cairo	HECA
Iran	OIII	Tehran	OIII
Iraq	ORBI	Bagdad	ORBI
Jordan	OJAM	Amman	OJAM
Kuwait	OKBK	Kuwait	OKBK
Lebanon	OLBA	Beirut	OLBA
Oman	OOMS	Muscat	OOMS
Pakistan	OPKC	Karachi	OPKC
Qatar	OTBD	Doha	OTBD
Saudi Arabia	OEJD	Jeddah	OEJD
Syria	OSDI	Damascus	OSDI
U.A.E.	OMAE	Abu Dhabi	OMAE
Yemen	OYSN	Sanaa	OYSN

1. Explanation of the Tables

(Remark: All tables show examples and do not reflect the real situation)

1.1. Information (COM Centre Characteristic Table)

The COM Centre Characteristic Table gives an overview about operational, technical and administrative information of the COM Centre itself.

1.2. AFTN Routing table

Desti-nation	Actual Main	Actual Altn.	Planned Main	Planned Altn.
A	WS	OO		
B	LCNCA	(OE)		
C	LCNCA	(OE)		
D*	OE	OO		
DT	HE	(LCNCA)	HECAA	LCNCA

Desti-nation	Actual Main	Actual Altn.	Planned Main	Planned Altn.
OA	WS	OO		
OB	N	N		
OE*	OE	OO		
OED	OED	(OE)		
OI	OI	OM		

Desti-nation First letters of an AFTN address (8 letter address) relevant for the Routeing
D* All destination addresses starting with D except those indicated directly below (DT)
DT Destination addresses starting with DT

Actual Main Actual main outgoing AFTN circuit or CIDIN Ax for this Destination address used actual in the AFTN/CIDIN Centre
WS Represents the outgoing AFTN circuit
LCNCA Defined Exit address (Ax) for the Destination address (Ad) starting with these letters
N Represents the national Routing responsibility

Actual Altn. Alternate outgoing AFTN circuit or CIDIN Ax for this Destination address used if the Main is not available.
(OE) Represents the outgoing AFTN circuit as Alternate
(LCNCA) Defined the Exit address (Ax) as alternate for the Destination address (Ad)
N Represents the national Routing responsibility

(Terms in brackets: For the use of the Exit Address or the AFTN circuit as alternate, co-ordination is required).

Planned Main Planned to replace the Actual Main in the future on a defined date
Planned Altn. Planned to replace the Actual Alternate in the future on a defined date

1.3. CIDIN Routing Table

CIDIN Exit Address	Actual Main VCG	Actual Altn. VCG	Planned Main VCG	Planned Altn. VCG
HECA_	OLBA	LCNC	HECA	OLBA
LCNC_	LCNC	OLBA		

CIDIN Exit Address	Actual Main VCG	Actual Altn. VCG	Planned Main VCG	Planned Altn. VCG

CIDIN Exit Address First four letters of the Exit addresses (Ax) relevant for the selection of connection to be used.

Actual Main VCG Shows the first outgoing direction (main connection path to an adjacent COM Centre) used at first or reaching the Exit centre (Ax). This path is represented by a Virtual Circuit Group (VCG), see 5.4.
Actual Altn. VCG Shows the alternate outgoing direction (main connection path to an other adjacent COM Centre) used in case of unavailability of the main VCG for reaching the Exit centre (Ax). This path is represented by a Virtual Circuit Group (VCG), see 5.4.

(Terms in brackets: For the use of the Actual Alternate VCG, co-ordination is required.)

Planned Main VCG Planned to replace the Actual Main VCG in the future on a defined date.
Planned Altn. VCG Planned to replace the Actual Alternate VCG in the future on a defined date.

1.4. Virtual Circuit Groups (VCG)

Actual VCG	Actual Prim.VC	Actual Secondary VC's		
LCNC	LCNC1			
OLBA	OLBA			

Planned VCG	Planned Prim.VC	Planned Secondary VC's		
HECA	HECA1			
		OLBA		

Actual VCG A Virtual Circuit Group consists of a number of Virtual Circuits (VC) that connect two, and only two CIDIN Centres. A Primary-type VC is always present and a Secondary-type VC is optional. Within this group, the selection of the VC is local matter. VC groups form redundant connections between adjacent CIDIN Centres.

Actual Primary VC Primary Virtual Circuit, established actual either as a PVC (Permanent Virtual Circuit) or SVC (Switched Virtual Circuit). In case of SVC no Secondary Virtual Circuits are recommended.

Actual Secondary VC's Actual Secondary VC's: Secondary Virtual Circuits, established actual either as a set of PVC (Permanent Virtual Circuit) and/or a SVC (Switched Virtual Circuit). There is no maximum limit to the number of PVC's forming a VCG.

Planned Primary VC The planned Primary Virtual Circuit will replace the Actual Primary VC in the future on a planned date.

Planned Secondary VC's The planned Secondary Virtual Circuits will replace the Actual Alternate VC (see below).

1.5. Circuit Characteristics

Situation recorded in Nov 1998		
Link to	Protocol	Capacity (bps)
HECA	AFTN	2 x 2.4k
OLBA	CIDIN	1 x 9.6k
OKBK	AFTN	1 x 300
OOMS	AFTN	1 x 50
VTBB	AFTN	1 x 2.4k

Planned		
Protocol	Capacity(bps)	"O" date
CIDIN	1 x 9.6k	TBD

Link to Connection to the COM Centre represented by the location indicator.

Protocol Protocol used actual on this link (conventional AFTN, AFTN over X.25, CIDIN via PVC or CIDIN via SVC).

Capacity (bps) Actual capacity available (bit per seconds). An asterisk (*) indicates a network connection.

Planned Protocol Protocol planned to be used on the upgraded/new link.

Capacity (bps) Planned capacity of the link (bit per seconds).

"O" date Planned operational date of the upgraded/new link.

OBBI - Bahrain - Bahrain

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SITA:	BAHAPYF

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CIDIN/OPMET:	---
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CIDIN/OPMET:	---
SITA:	BAHAPYF

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CIDIN/OPMET:	---
SITA:	BAHAPYF

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CIDIN/AFTN:	OBBIM
CIDIN/OPMET:	--
SITA:	BAHAPYF

Postal Address:
CIVIL AVIATION AFFAIRS
AIR NAVIGATION DIRECTORATE
P.O.BOX: 586
MUHARRAQ
Kingdom of BAHRAIN

CIDIN Entry/Exit Addresses:	
AFTN Ae/Ax:	OBBIA
AFTN OPM/NM:	OBBIM
OPMET Ae/Ax:	
OPMET OPM/NM:	

Other:	

Functions:		
Conv. AFTN	Yes	
CIDIN/AFTN	Yes	
CIDIN/OPMET		
AIS		
MOTNE		
OPMET		
SITA	Yes	

OBBI - Bahrain - Bahrain

AFTN Routing Table

Destination	Actual Main	Actual Altn.	Planned Main	Planned Altn.
A	WS	OO		
B	LCNCA	OE	LCNCA	OLBAA
C	LCNCA	OE	LCNCA	OLBAA
D	OE	OO		
E	LCNCA	OE	LCNCA	OLBAA
F	OE	OO		
G	OE	OO		
H*	OE	OO		
HA	OE	00		
HC	OE	OO		
HD	OE	OO		
HE	OE	OO		
HH	OE	OO		
HL	OE	OO		
HS	OE	OO		
K	LCNCA	OE	LCNCA	OLBAA
L*	LCNCA	OE	LCNCA	OLBAA
LB	LT	LCNCA		
LL				
LT	LT	LCNCA		
M	LCNCA	OE	LCNCA	OLBAA
N	WS	OO		

Destination	Actual Main	Actual Altn.	Planned Main	Planned Altn.
OA	OKBK	OO		
OB	N	N		
OE*	OE	OO		
OED	OED	OE		
OI	OI	OMAEA		
OJ	OE	OLBAA		
OK	OK	OLBAA		
OL	OLBAA	OK		
OM	OMAEA	OO		
OO	OO	OE		
OP	OK	OE		
OR	OKBK			
OS	OLBAA	OK		
OT	OT	OK		
OY	OE	OO		
P	LCNCA	OE	LCNCA	OLBAA
R	WS	OO		
S	LCNCA	OLBAA	LCNCA	OLBAA
T	LCNCA	OLBAA	LCNCA	OLBAA
U	LC	OE		
V*	WS	OO		
VA	OO	OE		
VE	OO	OE		
VI	OO	OE		
VN	OO	OE		
VO	OO	OE		
W	WS	OO		
Y	WS	OO		
Z	OO	OE		

OBBI - Bahrain - Bahrain

CIDIN Routing Table

CIDIN Exit Address	Actual Main VCG	Actual Altn. VCG	Planned Main VCG	Planned Altn. VCG
HECA	OLLL	LCNC		
LCNC	LCNC	OLLL		
OBBI	LCNC	OLBA		
OLBA	OLLL	LCNC		
OMAE	OMAE			
OEJN	OEJN	LCNC		

CIDIN Exit Address	Actual Main VCG	Actual Altn. VCG	Planned Main VCG	Planned Altn. VCG

CIDIN Virtual Circuit Group

Actual VCG	Actual Prim.VC	Actual Secondary VC's		
LCNC	LCNC1			
OLLL	OLLL1			
OMAE	OMAE1			

Planned VCG	Planned Prim.VC	Planned Secondary VC's		

OBBI - Bahrain - Bahrain

Circuit Characteristics

Situation recorded in October 2011			Planned		
Link	Protocol	Capacity (bps)	Protocol	Capacity (bps)	"O" date
LCNC	CIDIN	1 x 9.6K			
LTAA	AFTN	1 x 64K			
OEDF	AFTN	1 x 64K			
OEJD	CIDIN	1 x 64K	AMHS		3QTR 2012
OIII	AFTN	1 x 64K			
OKBK	AFTN	1 x 64K			
OLBA	CIDIN	1 x 64K			
OMAE	CIDIN	1 x 64K	AMHS		3QTR 2012
OOMS	AFTN	1 x 300	AFTN + AMHS	1 X 64K	3QTR 2012
OTBD	AFTN	1 x 64K			
WSSS	AFTN	1 x 64K	AMHS		4QTR 2012

HECA - Cairo - Egypt

Information

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CIDIN/OPMET:	
SITA:	CAIXYYF

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Telex:	
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CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Supervisor:	
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CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Management:	
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CIDIN/AFTN:	HECAM
CIDIN/OPMET:	
SITA:	CAIXYYT

Postal Address:
National Air Navigation Services
Company
Cairo Air Navigation Centre
Cairo Airport Road
Cairo, Egypt

CIDIN Entry/Exit Addresses:	
AFTN Ae/Ax:	HECAA
AFTN OPM/NM:	HECAM
OPMET Ae/Ax:	
OPMET OPM/NM:	

Other:	

Functions:		
Conv. AFTN	Yes	
CIDIN/AFTN	Yes	
CIDIN/OPMET		
AIS		
MOTNE		
OPMET		
SITA	Yes	
AMHS	yes	

HECA - Cairo - Egypt

AFTN Routing Table

Destination	Actual Main	Actual Altn.	Planned Main	Planned Altn.
A	OEJNA	LGGGA		
B	LGGGA	OLBAA		
C	LGGGA	OLBAA		
D	DT	LGGGA		
EB	LGGGA	OLBAA		
ED	LGGGA	OLBAA		
EE	LGGGA	OLBAA		
EF	LGGGA	OLBAA		
EG	LGGGA	OLBAA		
EH	LGGGA	OLBAA		
EI	LGGGA	OLBAA		
EK	LGGGA	OLBAA		
EL	LGGGA	OLBAA		
EN	LGGGA	OLBAA		
EP	LGGGA	OLBAA		
ES	LGGGA	OLBAA		
ET	LGGGA	OLBAA		
EV	LGGGA	OLBAA		
EY	LGGGA	OLBAA		
F*	HK	OEJN		
FH	LGGGA	OLBAA		
FJ	LGGGA	OLBAA		
G	DT	LGGGA		
H*	HK	OEJN		
HA	OEJNA	HK		
HC	HK	OEJN		
HD	OEJNA	HK		
HE	N	N		
HH	HHAS	HK		
HL	HL	DT		
HS	HS	OEJN		
K	LGGGA	OLBAA		

Destination	Actual Main	Actual Altn.	Planned Main	Planned Altn.
L*	LGGGA	OLBAA		
LA	LGGGA	OLBAA		
LI	LGGGA	OLBAA		
LL	LL	LGGGA		
LM	LGGGA	OLBAA		
M	LGGGA	OLBAA		
N	OEJN	OLBAA		
OA	OLBAA	LGGGA	OBBIA	
OB	OEJN	OLBAA	OBBIA	
OE	OEJN	OJ		
OJ	OJ	OE		
OI	OLBAA	LGGGA	OBBIA	
OK	OLBAA	LGGGA		
OL	OLBAA	LGGGA		
OM	OLBAA	LGGGA		
OO	OEJN	LGGGA		
OP	OLBAA	LGGGA		
OR				
OS	OS	OJ		
OT	OLBAA	LGGGA	OBBIA	
OY	OE	LGGGA		
P	OLBAA	LGGGA		
R	OEJN	LGGGA	OBBIA	
S	LGGGA	OLBAA		
T	LGGGA	OLBAA		
U	LGGGA	OLBAA		
V	OLBAA	LGGGA	OBBIA	
W	OEJN	LGGGA	OBBIA	
Y	OEJN	LGGGA	OBBIA	
Z	OLBAA	LGGGA	OBBIA	

HECA - Cairo - Egypt

CIDIN Routing Table

CIDIN Exit Address	Actual Main VCG	Actual Altn. VCG	Planned Main VCG	Planned Altn. VCG
HECA_				
LGGG_	LGGG	OLBA		
OLBA_	OLBA	LGGG		

CIDIN Exit Address	Actual Main VCG	Actual Altn. VCG	Planned Main VCG	Planned Altn. VCG

CIDIN Virtual Circuit Group

Actual VCG	Actual Prim.VC	Actual Secondary VC's		
LGGG	LGGG1			
OLBA	OLBA1			
OEJN	OEJN1			

Planned VCG	Planned Prim.VC	Planned Secondary VC's		

HECA - Cairo - Egypt

Circuit Characteristics

Situation recorded in October 2011			Planned		
Link	**Protocol**	**Capacity (bps)**	**Protocol**	**Capacity (bps)**	**"O" date**
DTTC	AFTN	1 x 64/9.6 kbps			
HKNA	AFTN	1 x 9.6 K			
HLLT	AFTN	1 x 9.6 K			
HSSS	AFTN	1 x 9.6 K			
LGGG	CIDIN	1 x 64/9.6 kbps			
LLBG	AFTN	1 x 64/9.6 kbps			
OEJD	AMHS	1 x 128/9.6 kbps			
OJAM	AMHS	1 x 64/9.6 kbps			
OLBA	CIDIN	1 x 9.6 K			
OSDI	AFTN	1 x 64/9.6 kbps			
HHAS	AFTN	1 x 9.6 K			

OIII - Tehran - Iran

Information

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CIDIN/OPMET:	
SITA:	THRXTYF

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- -	
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CIDIN/OPMET:	
SITA:	THRXTYF

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CIDIN/OPMET:	
SITA:	THRXTYF

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CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	THRXTYF

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Islamic Republic of Iran

CIDIN Entry/Exit Addresses:	
AFTN Ae/Ax:	
AFTN OPM/NM:	
OPMET Ae/Ax:	
OPMET OPM/NM:	

Other:	

Functions:		
Conv. AFTN	Yes	
CIDIN/AFTN		
CIDIN/OPMET		
AIS		
MOTNE		
OPMET	Yes	
SITA	Yes	

OIII - Tehran - Iran

AFTN Routing Table

Destination	Actual Main	Actual Altn.	Planned Main	Planned Altn.
A	OB	OP	OB	OP
B	LT	OB	LT	OB
C	LT	OB	LT	OB
D	OK	OB	OB	OK
E	LT	OB	LT	OB
F	OB	OK	OB	OK
G	OK	OB	OB	OK
H	OK	OB	OB	OK
K	LT	OB	LT	OB
L	LT	OB	LT	OB
LC	OB	OK	OB	OK
M	LT	OB	LT	OB
N	OP	OB	OP	OB

Destination	Actual Main	Actual Altn.	Planned Main	Planned Altn.
OA	OP	OK	OP	OK
OB	OB	OK	OB	Ok
OE	OB	OM	OB	OM
OI	N	N	N	N
OJ	OS	OB	OS	OB
OK	OK	OB	OK	OB
OL	OK	OB	OK	OB
OM	OM	OB	OM	OB
OO	OM	OB	OM	OB
OP	OP	OK	OP	OK
OR	OK	OB	OK	OB
OS	OS	OK	OS	OK
OT	OB	OK	OB	OK
OY	OB	OM	OB	OM
P	OP	OB	OP	OB
R	OP	OK	OP	OK
S	LT	OB	LT	OB
T	LT	OB	LT	OB
U	LT	OB	LT	OB
V	OB	OK	OB	OK
VA	OP	OB	OP	OB
VI	OP	OB	OP	OB
VN	OP	OB	OP	OB
VO	OP	OB	OP	OB
W	OB	OK	OB	OK
Y	OB	OK	OB	OK
Z	OP	OK	OP	OK

OIII - Tehran - Iran

Circuit Characteristics

Situation recorded in May 2012			Planned		
Link	Protocol	Capacity (bps)	Protocol	Capacity (bps)	"O" date
LTAA	AFTN	1 x 9.6			
OBBI	AFTN	1 x 9.6			
OKBK	AFTN	1 x 9.6			
OMAE	AFTN	1 x 100		1 x 9.6	On going
OPKC	AFTN	1 x 9.6			
OSDI	AFTN	1 x 50			
OOMS	AFTN	---		1 x 9.6	On going

ORBI - Bagdad - Iraq

Information

Operator: Ali Hussain Naser	
Phone:	+ 964 7901380661
- -	
Fax:	
Telex:	
Email:	
AFTN:	ORBIYFYX
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Technical operator: Basema Jaleel	
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- -	
Fax:	
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CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Supervisor:	
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AFTN:	ORBIYTYX
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Technical supervisor:	
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Email:	imzen29@yahoo.com
AFTN:	
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Management:	
Name:	
Phone:	
Fax:	
Telex:	
Email:	
AFTN:	
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Postal Address:

CIDIN Entry/Exit Addresses:	
AFTN Ae/Ax:	Yes
AFTN OPM/NM:	
OPMET Ae/Ax:	
OPMET OPM/NM:	

Other:	

Functions:		
Conv. AFTN	Yes	
CIDIN/AFTN		
CIDIN/OPMET		
AIS		
MOTNE		
OPMET		
SITA		

ORBI - Bagdad - Iraq

AFTN Routing Table

Destination	Actual Main	Actual Altn.	Planned Main	Planned Altn.
A	OK			OI
B	OK			OI
C	OK			OI
D	OK			OI
E	OK			OI
F	OK			OI
G	OK			OI
H	OK			OI
K	OK			OI
L*	OK			OI
LL				
M	OK			OI
N	OK			OI

Destination	Actual Main	Actual Altn.	Planned Main	Planned Altn.
OA	OK			OI
OB	OK			OI
OE	OK			OI
OI	OK			OI
OJ	OK			OI
OK	OK			OI
OL	OK			OI
OM	OK			OI
OO	OK			OI
OP	OK			OI
OR	OK			OI
OS	OK			OI
OT	OK			OI
OY	OK			OI
P	OK			OI
R	OK			OI
S	OK			OI
T	OK			OI
U	OK			OI
V	OK			OI
W	OK			OI
Y	OK			OI
Z	OK			OI

ORBI - Bagdad - Iraq

Circuit Characteristics

Situation recorded in October 2011		
Link	**Protocol**	**Capacity (bps)**
OKBK	AFTN	64k / 9.6K
OJAM	AFTN	1 X 50
OLBA	AFTN	1 X 9.6K
OSDI	AFTN	1 X 50

Planned		
Protocol	**Capacity (bps)**	**"O" date**
AMHS	64K	3 QTR 2012

OJAM - Amman - Jordan

Information

Operator:	Mona al - Nadaf
Phone:	+9626 4891401/3261
- -	
Fax:	
Telex:	
Email:	ALNADAF@YAHOO.COM
AFTN:	OJAMYFYX
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	AMMXYYA

Technical operato	Targrred Ghazi
Phone:	+962 6 4891401/3263
- -	
Fax:	
Telex:	
Email:	
AFTN:	OJAMYFYX
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Supervisc	Marwan A. Qadome
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Telex:	
Email:	mar-aftn@yahoo.com
AFTN:	OJAMYTYX
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	AMMXYYA

Technical supervi	Marwan Badawi
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Email:	
AFTN:	OJAMYFYX
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Management:	Nader A. Kaled
Name:	Nader A.Kaled
Phone:	4891401133260
Fax:	
Telex:	
Email:	aftn_am@yahoo.com
AFTN:	OJAMYTYX
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Postal Address:
Civil Aviation Authority
P.O.Box 7547
Amman -Jordan

CIDIN Entry/Exit Addresses:	
AFTN Ae/Ax:	Yes
AFTN OPM/NM:	
OPMET Ae/Ax:	
OPMET OPM/NM:	

Other:	

Functions:		
Conv. AFTN	Yes	
CIDIN/AFTN		
CIDIN/OPMET		
AIS		
MOTNE		
OPMET		
SITA		

OJAM - Amman - Jordan

AFTN Routing Table

Destination	Actual Main	Actual Altn.	Planned Main	Planned Altn.
A	OE	HE		
B	OS	HE		
C	OS	HE		
D	HE	OS		
E	OS	HE		
F	HE	OS		
G	HE	OS		
H*	HE	OL		
HE	HE	OS		
HL	HE	OS		
HS	HE	OE		
K	OS	HE		
L*	OS	HE		
LC	OS	HE		
LL	HE	HE		
LT	OS	HE		
M	OS	HE		
N	OE	HE		

Destination	Actual Main	Actual Altn.	Planned Main	Planned Altn.
OA	OE	HE		
OB	OE	HE		
OE	OE	HE		
OI	OS	OE		
OJ	N	N		
OK	OE	HE		
OL	HE	OS		
OM	OE	HE		
OO	OE	HE		
OP	OE	HE		
OR	OR	OS		
OS	OS	HE		
OT	OE	HE		
OY	OE	HE		
P	OS	HE		
R	OE	HE		
S	OS	HE		
T	OS	HE		
U	OS	HE		
V*	OE	HE		
VA	OE	HE		
VE	OE	HE		
VI	OE	HE		
VN	OE	HE		
VO	OE	HE		
W	OE	HE		
Y	OE	HE		
Z	HE	OS		

OJAM - Amman - Jordan

Circuit Characteristics

Situation recorded in October 2011			Planned		
Link	**Protocol**	**Capacity (bps)**	**Protocol**	**Capacity (bps)**	**"O" date**
HECA	AMHS	1 x 64 K			
OEJD	AMHS	1 x 64 K			
ORBI	AFTN	1 x 50	AMHS	9600	2012
OSDI	AFTN	1 x 19.2 K			
LLBG	AFTN	1 X 19.2K	AMHS	64	2012
OMAE	AMHS	2 MB (VPN)			
LCCC	AFTN	1 x 64 K	AMHS		2012

CCT OJAM TO OMAE IS USING VPN LINK OVER THE PUBLIC INTERNET

OKBK - Kuwait - Kuwait

Information

Operator:	
Phone:	+ (965) 24711054
- -	
Fax:	+ (965) 24310981
Telex:	
Email:	
AFTN:	OKBKYFYX
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Technical operator:	
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- -	
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Email:	
AFTN:	OKBKYFYX
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Supervisor:	
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Email:	
AFTN:	OKBKYFYX
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Technical supervisor:	
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CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Management:	
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Email:	sa.almutairi@dgca.gov.kw
AFTN:	OKBKYFYX
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Postal Address:

CIDIN Entry/Exit Addresses:	
AFTN Ae/Ax:	
AFTN OPM/NM:	
OPMET Ae/Ax:	
OPMET OPM/NM:	

Other:	

Functions:		
Conv. AFTN	Yes	
CIDIN/AFTN		
CIDIN/OPMET		
AIS	YES	
MOTNE		
OPMET		
SITA		

OKBK - Kuwait - Kuwait

AFTN Routing Table

Destination	Actual Main	Actual Altn.	Planned Main	Planned Altn.
A	OP	OB		
B	LI	OL		
C	LI	OL		
D	OL	OB		
E	LI	OL		
F	OB	OL		
G	OL	OB		
H*	OL	OB		
HE	OL	OB		
HL	OL	OB		
HS	OL	OB		
K	LI	OL		
L*	LI	OL		
LC	OL	LI		
LL				
LT	LI	OL		
M	LI	OL		
N	OP	OB		

Destination	Actual Main	Actual Altn.	Planned Main	Planned Altn.
OA	OP	OB		
OB	OB	OL		
OE	OB	OL		
OI	OI	OB		
OJ	OL	OB		
OK	N	N		
OL	OL	OB		
OM	OB	OL		
OO	OB	OL		
OP	OP	OB		
OR	OR	TBD		
OS	OS	OL		
OT	OT	OB		
OY	OB	OL		
P	LI	OL		
R	OP	OB		
S	LI	OL		
T	LI	OL		
U	LI	OL		
V*	OP	OB		
VA	OP	OB		
VE	OP	OB		
VI	OP	OB		
VN	OP	OB		
VO	OP	OB		
W	OP	OB		
Y	OP	OB		
Z	OP	OB		

OKBK - Kuwait - Kuwait

Circuit Characteristics

Situation recorded in October 2011			Planned		
Link	Protocol	Capacity (bps)	Protocol	Capacity (bps)	"O" date
LIII	AFTN	1 x 100			
OBBI	AFTN	1 X 64 K			
OIII	AFTN	1 X 64 K			
OLBA	AFTN	1 X 64 K			
OPKC	AFTN	1 x 2.4k			
OSDI	AFTN	1 X 64 K			
OTBD	AFTN	1 x 64 K			
ORBI	AFTN	1 X 64 K			

OLBA - Beirut - Lebanon

Information

Operator:	
Phone:	+ 961 1 628161
- -	
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Telex:	
Email:	hatemh@beirutairport.gov.lb
AFTN:	OLBAYFYX
CIDIN/AFTN:	OLBAM
CIDIN/OPMET:	OLBAYMYX
SITA:	

Technical operator:	
Phone:	
- -	
Fax:	
Telex:	
Email:	
AFTN:	
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Supervisor:	
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Fax:	+961 1 629035
Telex:	
Email:	
AFTN:	OLBAYFYX
CIDIN/AFTN:	OLBAM
CIDIN/OPMET:	OLBAYMYX
SITA:	

Technical supervisor:	
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Telex:	
Email:	msaad@beirutairport.gov.lb
AFTN: OLBAYTYX	
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Management:	
Name:	Chawki Hatem
Phone:	+961 1 628150
Fax:	+961 1 629035
Telex:	
Email:	
AFTN:	OLBAYTYX
CIDIN/AFTN:	OLBAM
CIDIN/OPMET:	OLBAYMYX
SITA:	

Postal Address:
Beirut International Airport
Telecom Department
Beirut-Lebanon

CIDIN Entry/Exit Addresses:	
AFTN Ae/Ax:	OLBAA
AFTN OPM/NM:	OLBAM
OPMET Ae/Ax:	
OPMET OPM/NM:	

Other:	

Functions:		
Conv. AFTN	Yes	
CIDIN/AFTN	Yes	
CIDIN/OPMET		
AIS	Yes	
MOTNE		
OPMET	Yes	
SITA	Yes	

OLBA - Beirut - Lebanon

AFTN Routing Table

Destination	Actual Main	Actual Altn.	Planned Main	Planned Altn.
A	OBBIA	OE		
B	LCNCA	HECAA		
C	LCNCA	HECAA		
D	HECAA	LCNCA		
E	LCNCA	HECAA		
F	OE	HECAA		
G	HECAA	OE		
H	HECAA	OE		
K	LCNCA	HECAA		
L*	LCNCA	HECAA		
LL				
LT	LCNCA	HECAA		
M	LCNCA	HECAA		
N	OK	OE		

Destination	Actual Main	Actual Altn.	Planned Main	Planned Altn.
OA	OK	OE		
OB	OBBIA	OE		
OE	OE	OBBIA		
OI	OBBIA	OK		
OJ	HECAA	OE		
OK	OK	OBBIA		
OL	N	N		
OM	OBBIA	OE		
OO	OBBIA	OE		
OP	OK	OBBIA		
OR	OR	OS		
OS	OS	HECAA		
OT	OBBIA	OK		
OY	OE	OBBIA		
P	LCNCA	HECAA		
R	OBBIA	OE		
S	LCNCA	HECAA		
T	LCNCA	HECAA		
U	LCNCA	HECAA		
V*	OK	OBBIA		
VA	OK	OBBIA		
VE	OK	OBBIA		
VI	OK	OBBIA		
VN	OK	OBBIA		
VO	OK	OBBIA		
W	OBBIA	OK		
Y	OBBIA	OE		
Z	OK	OE		

OLBA - Beirut - Lebanon

Circuit Characteristics

Situation recorded in October 2011			Planned		
Link	**Protocol**	**Capacity (bps)**	**Protocol**	**Capacity (bps)**	**"O" date**
HECA	CIDIN	1 x 9.6 K			
LCNC	CIDIN	1 x 9.6 K			
OBBI	CIDIN	1 x 9.6 K			
OEJD	AFTN	1 x 19.2 K			
OKBK	AFTN	1 x 100	AFTN	1 x 9.6K	3 QTR 2012
OSDI	AFTN	2 x 50			
ORBI	AFTN	1 x 9.6 K			

OLBA - Beirut - Lebanon

CIDIN Routing Table

CIDIN Exit Address	Actual Main VCG	Actual Altn. VCG	Planned Main VCG	Planned Altn. VCG
OLBA_	OLBA	(LCNC)		
LCNC_	OLBA	(OBBI)		
OBBI_	OLBA	HECA		

CIDIN Exit Address	Actual Main VCG	Actual Altn. VCG	Planned Main VCG	Planned Altn. VCG

CIDIN Virtual Circuit Group

Actual VCG	Actual Prim.VC	Actual Secondary VC's		
HECA	HECA1			
LCNC	LCNC1			
OBBI	OBBI1			

Planned VCG	Planned Prim.VC	Planned Secondary VC's		

OOMS - Muscat - Oman

Information

Operator:	Mushal Abdul Aziz
Phone:	968 519209/332
- -	
Fax:	968 510617
Telex:	5418 DGCAOMAN ON
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AFTN:	OOMSYFYX
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Technical operato	Abdullah Salim Al-Shuaili
Phone:	968 519492
- -	
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CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Supervisor:	
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AFTN:	OOMSYTYX
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Technical supervisor:	
Name:	Ahmed Hamood Al-Alawi
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Telex:	5418 DGCAOMAN ON
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AFTN:	OOMSYTYX
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Management:	
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AFTN:	OOMSYTYX
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Postal Address:
P.O. BOX 1
Postal Code 111
Seeb Int. Airport
Sultanate of Oman

CIDIN Entry/Exit Addresses:	
AFTN Ae/Ax:	
AFTN OPM/NM:	
OPMET Ae/Ax:	
OPMET OPM/NM:	

Other:	

Functions:		
Conv. AFTN	Yes	
CIDIN/AFTN		
CIDIN/OPMET		
AIS	Yes	
MOTNE		
OPMET		
SITA		

OOMS - Muscat - Oman

AFTN Routing Table

Destination	Actual Main	Actual Altn.	Planned Main	Planned Altn.
A	OB	VA		
B	OB	OE		
C	OB	OE		
D	OE	OB		
E	OB	OE		
F	OE	VA		
G	OE	OB		
H	OE	VA		
K	OB	OE		
L* EX. LL	OB	OE		
M	OB	OE		
N	OB	VA		
OA	OB	OMA		
OB	OB	OMA		
OE	OE	OB		
0I	OB	OMA		
OJ	OE	OB		
OK	OB	OE		
OL	OB	OE		
OM	OMA	OB		
OO	N	N		
OP	VA	OB		
OR	OB	OE		
OS	OE	OB		
OT	OB	OMA		
OY	OY	OE		
P	OB	VA		
R	OB	VA		
S	OB	OE		
T	OB	OE		
U	VA	OE		
V*	OB	VA		
VA	VA	OB		
VE	VA	OB		
VI	VA	OB		
VN	VA	OB		
VO	VA	OB		
W	OB	VA		
Y	OB	VA		
Z	VA	OB		

Destination	Actual Main	Actual Altn.	Planned Main	Planned Altn.

OOMS - Muscat - Oman

Circuit Characteristics

Situation recorded in May 2010				Planned		
Link		Protocol	Capacity (bps)	Protocol	Capacity (bps)	"O" date
OBBI		AFTN	1 x 9600	AMHS		3 QTR 2012
OEJD		AFTN	1 x 9600	AMHS		3 QTR 2012
OMAE		AMHS	1 x 64 K			
OYSN		AFTN	1 x 100		9.6k	3 QTR 2012
VABB		AFTN	1 x 9600			

OPKC - Karachi - Pakistan

Information

Operator:	
Phone:	92-21-45791943
- -	45797232
Fax:	92-21-9218216
Telex:	29336 CAA PK
Email:	
AFTN:	OPKCYFYX
CIDIN/AFTN:	
CIDIN/OPMET:	OPKCYZYX
SITA:	

Technical operator:	
Phone:	92-21-45791944
- -	45797519
Fax:	
Telex:	29336 CAA PK
Email:	
AFTN:	OPKCYFYT
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Supervisor:	
Name:	Mr. Fasihuzzaman
Phone:	92-21-9218242
Fax:	92-21-9218216
Telex:	29336 CAA PK
Email:	
AFTN:	OPKCYTYX
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Technical supervisor:	
Name:	Mr. Nadeem Sharif Pasha
Phone:	92-21-9218174
Fax:	
Telex:	29336 CAA PK
Email:	Ctoqiap@sat.net.pk
AFTN:	OPKCYTYX
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Management:	
Name:	Air Cdre Qamaruddin
Phone:	92-21-9218732
Fax:	92-21-9218733
Telex:	29534 DG CAA PK
Email:	q-uddin@yahoo.Com
AFTN:	OPHQZXCM
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Postal Address:
Comm-Ops branch, HQ.CAA
Technical Devision
Terminal-1
QIAP, Karachi-75200
Pakistan

CIDIN Entry/Exit Addresses:	
AFTN Ae/Ax:	
AFTN OPM/NM:	
OPMET Ae/Ax:	
OPMET OPM/NM:	

Other:	

Functions:		
Conv. AFTN	Yes	
CIDIN/AFTN		
CIDIN/OPMET		
AIS	Yes	
MOTNE		
OPMET	Yes	
SITA		

OPKC - Karachi - Pakistan

AFTN Routing Table

Destination	Actual Main	Actual Altn.	Planned Main	Planned Altn.
A	VA	-		
B	OK	-		
C	OK	OI		
D	OK	-		
E	OK	OI		
F	OK	-		
G	OK	-		
H	OK	-		
K	OK	OI		
L*	OK	0I		
LL				
LT	OI	OK		
M	OK	OI		
N	VA	OI		

Destination	Actual Main	Actual Altn.	Planned Main	Planned Altn.
OA	OA	-		
OB	OK	OI		
OE	OK	-		
OI	OI	-		
OJ	OK	OI		
OK	OK	-		
OL	OK	-		
OM	OK	OI		
OO	OK	OI		
OP	N	N		
OR	OK	-		
OS	OI	-		
OT	OK	OI		
OY	OK	OI		
P	VA	-		
R	VA	-		
S	OK	OI		
T	OK	OI		
U	OI	OK		
V*	VA	-		
VN	ZB	VA		
W	VA	-		
Y	VA	-		
Z	ZB	VA		

OPKC - Karachi - Pakistan

Circuit Characteristics

Situation recorded in October 2004		
Link	**Protocol**	**Capacity (bps)**
OIII	AFTN	1 x 200
OKBK	AFTN	2.4K
ZBBB	AFTN	1 x 50
VABB	AFTN	1 x 200
OAKB	AFTN (VSAT)	1 x 2400

Planned		
Protocol	**Capacity (bps)**	**"O" date**
AFTN	2.4K	End 2004
AFTN	2.4K	End 2004

OTBD - Doha - Qatar

Information

Operator:	
Phone:	00974 4656220/268
- -	00974 4622510
Fax:	00974 4621052
Telex:	
Email:	
AFTN:	OTBDYFYX
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	DOHXYYF

Technical operator:	
Phone:	
- -	
Fax:	
Telex:	
Email:	
AFTN:	
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Supervisor:	
Name:	Mr. Ahmed Al-Mannai
Phone:	00974 4622510
Fax:	00974 4622052
Telex:	
Email:	ahmedalmannai@caa.gov.qa
AFTN:	
CIDIN/AFTN:	OTBDYTYX
CIDIN/OPMET:	
SITA:	DOHXYYF

Technical supervisor:	
Name:	Mr.Said Othman Baywazir
Phone:	00974 465500
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Telex:	
Email:	saeed@caa.gov.qa
AFTN:	
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Management:	
Name:	
Phone:	
Fax:	
Telex:	
Email:	
AFTN:	
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Postal Address:
Civil Aviation Authority
P.O.Box 3000
Doha Qatar

CIDIN Entry/Exit Addresses:	
AFTN Ae/Ax:	
AFTN OPM/NM:	
OPMET Ae/Ax:	
OPMET OPM/NM:	

Other:	

Functions:		
Conv. AFTN	Yes	
CIDIN/AFTN		
CIDIN/OPMET		
AIS		
MOTNE		
OPMET		
SITA		

OTBD - Doha - Qatar

AFTN Routing Table

Destination	Actual Main	Actual Altn.	Planned Main	Planned Altn.
A	OB	OK		
B	OB	OK		
C	OB	OK		
D	OB	OK		
E	OB	OK		
F	OB	OK		
G	OB	OK		
H	OB	OK		
K	OB	OK		
L*	OB	OK		
LL				
M	OB	OK		
N	OB	OK		

Destination	Actual Main	Actual Altn.	Planned Main	Planned Altn.
OA	OB	OK		
OB	OB	OK		
OE	OB	OK		
OI	OK	OB		
OJ	OB	OK		
OK	OB	OK		
OL	OB	OK		
OM	OB	OK		
OO	OB	OK		
OP	OK	OB		
OR	OK	OB		
OS	OB	OK		
OT	N	N		
OY	OB	OK		
P	OB	OK		
R	OB	OK		
S	OB	OK		
T	OB	OK		
U	OB	OK		
V	OB	OK		
W	OB	OK		
Y	OB	OK		
Z	OB	OK		

OTBD - Doha - Qatar

Circuit Characteristics

Situation recorded in October 2011		
Link	**Protocol**	**Capacity (bps)**
OBBI	AFTN/CIDIN	1 x 64 K
OKBK	AFTN	1 x 64 K
OMAE	AMHS	1 x 64 K

Planned		
Protocol	**Capacity (bps)**	**"O" date**
AMHS	1 x 64 K	3 QTR 2012

OEJD - Jeddah - Saudi Arabia

Information

Operator:	
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- -	+966 2 685 4576
Fax:	+966 2 685 4016
Telex:	
Email:	
AFTN:	OEJNYFYX
CIDIN/AFTN:	OEJNYFYX
CIDIN/OPMET:	
SITA:	

Technical operator:	
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- -	+966 2 685 5039
Fax:	+966 2 685 5718
Telex:	
Email:	
AFTN:	OEJNYFYX
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Supervisor:	
Name:	Fahad Alsubhi(Manager)
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Telex:	
Email:	fahadms@gmail.com
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CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Technical supervisor:	
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Fax:	+966 2 6719041
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Email:	wmokhtar@gaca.gov.sa
AFTN:	
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Management:	
Name:	Abdulkareem Alharbi
Phone:	+966 2 6717717 ext: 1835
Fax:	+966 2 6717717 ext: 1839
Telex:	601093 CIVAIR SJ
Email:	harbi_abd@yahoo.com
AFTN:	OEJDYTYX
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Postal Address:
Manager
ATM Comm. Ops and Procedures
General Authority of Civil Aviation (GACA)
P.O. Box 15441
JEDDAH 21444
SAUDI ARABIA

CIDIN Entry/Exit Addresses:	
AFTN Ae/Ax:	OEJNA
AFTN OPM/NM:	OEJNM
OPMET Ae/Ax:	
OPMET OPM/NM:	

Other:	

Functions:		
Conv. AFTN	Yes	
CIDIN/AFTN	Yes	
CIDIN/OPMET	No	
AIS	No	
MOTNE	No	
OPMET	No	
SITA	No	

OEJD - Jeddah - Saudi Arabia

AFTN Routing Table

Destination	Actual Main	Actual Altn.	Planned Main	Planned Altn.
A	OBBIA	OO		
B	LCNCA	OBBIA		
C	LCNCA	OBBIA		
D	HECAA	LCNCA		
E	LCNCA	OBBIA		
F	HA	HECAA		
G	HECAA	LCNCA		
H*	HA	HECAA		
HECAA	HECAA	LCNCA		
HL	HECAA	LCNCA		
HS	HS	HECAA		
K	LCNCA	OBBIA		
L*	HECAA	LCNCA		
LCNCA	LCNCA	OBBIA		
LK	LCNCA	OBBIA		
LL				
LT	OBBIA	OO		
M	HECAA	LCNCA		
N	OBBIA	OO		

Destination	Actual Main	Actual Altn.	Planned Main	Planned Altn.
OA	OBBIA	OO		
OBBIA	OBBIA	OO		
OE	N	N		
OI	OBBIA	OO		
OJ	OJ	HECAA		
OK	OBBIA	OO		
OL	OL	HECAA		
OM	OBBIA	OO		
OO	OO	OBBIA		
OP	OO	OBBIA		
OR	OL	HECAA		
OS	OL	HECAA		
OT	OBBIA	OO		
OY	OYS	OO		
P	OBBIA	OO		
R	OBBIA	00		
S	HECAA	LCNCA		
T	HECAA	LCNCA		
U	LCNCA	OBBIA		
V*	OBBIA	OO		
VA	OO	OBBIA		
VE	OO	OBBIA		
VI	OO	OBBIA		
VN	OO	OBBIA		
VO	OO	OBBIA		
W	OBBIA	OO		
Y	OBBIA	OO		
Z	OO	OBBIA		

OEJD - Jeddah - Saudi Arabia

Circuit Characteristics

Situation recorded in October 2011		
Link	**Protocol**	**Capacity (bps)**
HAAB	AFTN	1 x 9.6 K
OJAM	AMHS	1 x 64 K
OBBI	AFTN/CIDIN	1 x 64 K
OLBA	AFTN	1 x 19.2 K
HECA	AMHS	1 x 64 K
HSSS	AFTN	1 x 9.6 K
OOMS	AFTN	1 x 300
LCNC	CIDIN	1 x 64 K
OYSN	AFTN	1 x 9.6 K

Planned		
Protocol	**Capacity (bps)**	**"O" date**

OEJD - Jeddah - Saudi Arabia

CIDIN Routing Table

CIDIN Exit Address	Actual Main VCG	Actual Altn. VCG	Planned Main VCG	Planned Altn. VCG
LCNC_	LCNC	OBBI		
OBBI_	OBBI	LCNC		

CIDIN Exit Address	Actual Main VCG	Actual Altn. VCG	Planned Main VCG	Planned Altn. VCG

CIDIN Virtual Circuit Group

Actual VCG	Actual Prim.VC	Actual Secondary VC's		
HECA	HECA1			
LCNC	LCNC1			
OBBI	OBBI1			

Planned VCG	Planned Prim.VC	Planned Secondary VC's		

OSDI - Damascus - Syria

Information

Operator:	
Phone:	011-5400985-9/4165
- -	
Fax:	
Telex:	
Email:	dgca@net.sy
AFTN:	
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Technical operator:	
Phone:	011-5400985-9/4106
- -	
Fax:	
Telex:	
Email:	
AFTN:	
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Supervisor:	
Name:	Ayda Ashkar
Phone:	011-5400985-9/4164
Fax:	
Telex:	
Email:	Planned
AFTN:	OSDIYTYX
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Technical supervisor:	
Name:	Samir Abou Chameh
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Telex:	
Email:	
AFTN:	
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Management:	
Name:	Eng. Arkan Zahr-din
Phone:	011-5400985-9/4160
Fax:	
Telex:	
Email:	dgca@net.sy
AFTN:	OSDIYTYX
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Postal Address:

CIDIN Entry/Exit Addresses:	
AFTN Ae/Ax:	
AFTN OPM/NM:	
OPMET Ae/Ax:	
OPMET OPM/NM:	

Other:	

Functions:		
Conv. AFTN	Yes	
CIDIN/AFTN		
CIDIN/OPMET		
AIS		
MOTNE		
OPMET		
SITA		

OSDI - Damascus - Syria

AFTN Routing Table

Destination	Actual Main	Actual Altn.	Planned Main	Planned Altn.
A	OI	HE		
B	LG	HE		
C	LG	HE		
D	HE	LG		
E	LG	HE		
F	HE	LG		
G	HE	LG		
H	HE	LG		
K	LG	HE		
L*	LG	HE		
LL				
M	LG	HE		
N	HE	LG		

Destination	Actual Main	Actual Altn.	Planned Main	Planned Altn.
OA	OI	HE	OI	OH
OB	OI	OK		
OE	OJ	OK	OJ	HE
OI	OI	OK	OI	OK
OJ	OJ	HE		
OK	OK	OI		
OL	OL	HE		
OM	OI	OK		
OO	OI	OK		
OP	OI	OK		
OR	OR	OJ	OR	OJ
OS	N	N	N	N
OT	OI	OK	OI	OK
OY	OJ	HE		
P	LG	HE		
R	HE	LG	OK	OL
S	LG	HE		
T	LG	HE		
U	LG	HE		
V	OI	OK		
W	HE	OI	OK	OI
Y	OI	OK		
Z	HE	LG	OK	OI

OSDI - Damascus - Syria

Circuit Characteristics

Situation recorded in October 2011		
Link	**Protocol**	**Capacity (bps)**
HECA	AFTN	1 x 50
LGGG	AFTN	2 x 50
OIII	AFTN	1 x 50
OJAM	AFTN	1 x 19.2 K
OKBK	AFTN	1 x 50
OLBA	AFTN	2 x 50
ORBI	AFTN	1 x 50
SITA	AFTN	1 X 50

Planned		
Protocol	**Capacity (bps)**	**"O" date**
AFTN	9.6 K	3 QTR 2012
AFTN	9.6 K	3 QTR 2012
AFTN	9.6 K	3 QTR 2012
AFTN	9.6 K	3 QTR 2012
AFTN	9.6 K	3 QTR 2012
AFTN	9.6 K	3 QTR 2012

OMAE - Abu Dhabi - U.A.E.

Information

Operator:	
Phone:	00971 2 599 6851
- -	
Fax:	00971 2 599 6852
Telex:	
Email:	aftncomms@szc.gcaa.ae
AFTN:	OMAEYFYX
CIDIN/AFTN:	OMAEM
CIDIN/OPMET:	
SITA:	

Technical operator:	
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- -	
Fax:	00971 2 599 6872
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Email:	engineering@szc.gcaa.ae
AFTN:	OMAECNSX
CIDIN/AFTN:	OMAEM
CIDIN/OPMET:	
SITA:	

Supervisor:	
Name:	V. Koshy
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Email:	vkoshy@szc.gcaa.ae
AFTN:	OMAEYFYX
CIDIN/AFTN:	OMAEM
CIDIN/OPMET:	
SITA:	

Technical supervisor:	
Name:	Waleed Al Hameeri
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AFTN:	OMAECNSX
CIDIN/AFTN:	OMAEM
CIDIN/OPMET:	
SITA:	

Management:	
Name:	Abdullah Al Hashimi
Phone:	00971 2 599 6830
Fax:	00971 2 599 6836
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Email:	ahashimi@szc.gcaa.ae
AFTN:	OMAEYTSC
CIDIN/AFTN:	OMAEM
CIDIN/OPMET:	
SITA:	

Postal Address:
GCAA
P.O. Box 666
Abu Dhabi
United Arab Emirates

CIDIN Entry/Exit Addresses:	
AFTN Ae/Ax:	OMAEA
AFTN OPM/NM:	OMAEYPYX
OPMET Ae/Ax:	
OPMET OPM/NM:	

Other:	

Functions:		
Conv. AFTN	Yes	
CIDIN/AFTN	Yes	
CIDIN/OPMET		
AIS		
MOTNE		
OPMET		
SITA		

OMAE - Abu Dhabi - U.A.E.

AFTN Routing Table

Destination	Actual Main	Actual Altn.	Planned Main	Planned Altn.
A	OBBIA	OO		
B	OBBIA	OO		
C	OBBIA	OO		
D	OBBIA	OO		
E	OBBIA	OO		
F	OBBIA	OO		
G	OBBIA	OO		
H	OBBIA	OO		
K	OBBIA	OO		
L*	OBBIA	OO		
LL				
LT	OBBIA	OO		
M	OBBIA	OO		
N	OBBIA	OO		

Destination	Actual Main	Actual Altn.	Planned Main	Planned Altn.
OA	OBBIA	OO		
OB	OBBIA	OO		
OE	OBBIA	OO		
OI	OI	OBBIA		
OJ	OJ	OBBIA		
OK	OBBIA	OI		
OL	OBBIA	OO		
OM	N	N		
OO	OO	OBBIA		
OP	OO	OBBIA		
OR	OBBIA	OI		
OS	OBBIA	OI		
OT	OT	OBBIA		
OY	OBBIA	OO		
P	OBBIA	OO		
R	OBBIA	OO		
S	OBBIA	OO		
T	OBBIA	OO		
U	OBBIA	OO		
V*	OBBIA	OO		
VA	OO	OBBIA		
VE	OO	OBBIA		
VI	OO	OBBIA		
VN	OO	OBBIA		
VO	OO	OBBIA		
W	OBBIA	OO		
Y	OBBIA	OO		
Z	OO	OBBIA		

OMAE - Abu Dhabi - U.A.E.

Circuit Characteristics

Situation recorded in October 2011		
Link	**Protocol**	**Capacity (bps)**
OBBI	CIDIN	1 x 9.6K
OIII	AFTN	1 x 100
OOMS	AMHS	1 X 64K
OJAM	AMHS	1 X (VPN 2 MB)
OTBD	AMHS	1 X 64K

Planned		
Protocol	**Capacity (bps)**	**"O" date**
AMHS	64K	3 QTR 2012
	64K	3 QTR 2012

CCT OJAM TO OMAE IS USING VPN LINK OVER THE PUBLIC INTERNET

OYSN - Sanaa - Yemen

Information

Operator:	
Phone:	00967-1-345289-326
- -	
Fax:	00967-1-345527
Telex:	
Email:	ans1san@y.net.ye
AFTN:	
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Technical operator:	
Phone:	
- -	
Fax:	
Telex:	
Email:	
AFTN:	
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Supervisor:	
Name:	Mr.Ali Dhafer
Phone:	00967-1-345289-326
Fax:	00957-1-344047
Telex:	
Email:	aabutalib@yahoo.com
AFTN:	
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Technical supervisor:	
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AFTN:	
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Management:	
Name:	
Phone:	
Fax:	
Telex:	
Email:	
AFTN:	
CIDIN/AFTN:	
CIDIN/OPMET:	
SITA:	

Postal Address:
AIR TRAFFIC SERVICES
P.O.BOX 3437
SANA'A
REPUBLIC OF YEMEN

CIDIN Entry/Exit Addresses:	
AFTN Ae/Ax:	
AFTN OPM/NM:	
OPMET Ae/Ax:	
OPMET OPM/NM:	

Other:	

Functions:		
Conv. AFTN	Yes	
CIDIN/AFTN		
CIDIN/OPMET		
AIS		
MOTNE		
OPMET		
SITA		

OYSN - Sanaa - Yemen

AFTN Routing Table

Destination	Actual Main	Actual Altn.	Planned Main	Planned Altn.
A	OO	OE		
B	OO	OE		
C	OO	OE		
D	OO	OE		
E	OO	OE		
F	OE	OO		
G	OE	OO		
H	OE	OO		
K	OO	OE		
L*	OO	OE		
LL				
M	OO	OE		
N	OO	OE		

Destination	Actual Main	Actual Altn.	Planned Main	Planned Altn.
OA	OO	OE	same	same
OB	OO	OE		
OE	OE	OO		
OI	OO	OE		
OJ	OO	OE		
OK	OO	OE		
OL	OE	OO		
OM	OO	OE		
OO	OO	OE		
OP	OO	OE		
OR	OO	OE		
OS	OO	OE		
OT	OO	OE		
OY	N	N		
P	OO	OE		
R	OO	OE		
S	OO	OE		
T	OO	OE		
U	OO	OE		
V	OO	OE		
W	OO	OE		
Y	OO	OE		
Z	OO	OE		

OYSN - Sanaa - Yemen

Circuit Characteristics

Situation recorded in October 2011			Planned		
Link	Protocol	Capacity (bps)	Protocol	Capacity (bps)	"O" date
OEJD	AFTN	1 x 9.6 K			
OOMS	AFTN	1 x 100		64 K	3 QTR 2012

Table CNS 1A – AFTN Plan

State/Station	Cat	Current				Planned				Target date of implementation	Remarks
		Type	Signaling Speed	Protocol	Code	Type	Signaling Speed	Protocol	Code		
1	2	3	4	5	6	7	8	9	10	11	12
BAHRAIN											
BAHRAIN	~~M~~										
ABU DHABI	M		64 – 96 bps	CIDIN	IA-5			AMHS	CBI	~~1~~st 3rd QTR 2010	
BEIRUT	T		9600 bps	CIDIN	IA-5	SAT/d					Bahrain ready
DOHA	M		64 – 96 bps	None	IA-5						
JEDDAH	T		64 – 96 bps	None	IA-5			AMHS	CBI	~~1~~st 3rd QTR 2010	
KABUL	M		--	CIDIN							
KUWAIT	M		64 – 96 bps		IA-5						
MUSCAT/~~SEEB~~	M		300 baud	None	IA-5		64k bps	AMHS		**~~1~~st 3rd QTR 2012**	
SINGAPORE	M		9600 bps	None	IA-5		64k bps	AMHS	CBI	~~1~~st 3rd QTR 2012	
TEHRAN	M		64 – 96 bps	None	IA-5		64kbs			~~1~~st 3rd QTR 2012~~1~~st	
ANKARA	M		50 baud	None			64kbs			3rd QTR 2012	
EGYPT											
CAIRO	M										
AMMAN	M		64/9.6	AMHS	IA-5					2010	
ATHENS	T		64/9.6	CIDIN	IA-5			AMHS		2015	
BEN GURION	M		64/9.6	AFTN	IA-5					2010	
BEIRUT	M		9600	CIDIN	IA-5			AMHS		2015	
JEDDAH	T		128/9.6	AMHS	IA-5		128 K			2010	
KHARTOUM	M		9600	AFTN	IA-5					2010	
NAIROBI	M		9600	AFTN	IA-5					2010	
TUNIS	M		64/9.6	AFTN	IA-5					2010	
TRIPOLI	M		9600	AFTN	IA-5						
TRIPOL2	M		19.2	AFTN	IA-5					2010	backup
DAMASCUS	M		64/9.6	AFTN	IA-5						

State/Station	Cat	Current				Planned				Target date of implementation	Remarks
		Type	Signaling Speed	Protocol	Code	Type	Signaling Speed	Protocol	Code		
1	2	3	4	5	6	7	8	9	10	11	12
IRAN											
TEHRAN											Bahrain ready
BAHRAIN	M	LDD/d	64 – 96k bps	AFTN	IA-5			AMHS	IA-5	2013	
KABUL	T		VPN	None		SAT/d					
KUWAIT	M	LDD/d	64 – 96k bps	AFTN	IA-5			AMHS	IA-5	2013	
ABU-DHABI	M	LDD/d	64 – 96k bps	AFTN			64 Kbps	AMHS	IA-5	-	
KERACHI	M	LDD/d	64 – 96k bps	AFTN	IA-5			AMHS	IA-5	2013	
BAGHDAD	T		None	None	IA-5	SAT/d				2013	
MUSCAT	M	LDD/d	64 – 96k bps	AFTN	IA-5		64 Kbps	AMHS	IA-5	2013	
IRAQ											
BAGHDAD											
AMMAN	T		-	None	IA-5						
BEIRUT	T		-	None	IA-5						

State/Station	Cat	Current				Planned				Target date of implementation	Remarks
		Type	Signaling Speed	Protocol	Code	Type	Signaling Speed	Protocol	Code		
1	2	3	4	5	6	7	8	9	10	11	12
JORDAN AMMAN BAGHDAD BEIRUT BEN GURION CAIRO DAMASCUS ~~JERUSALEM~~ JEDDAH **Cyprus** **Abu Dhabi**	T M T M T S T **T** **M**		- - 1200 **64 K** 64 K/9.6 **64 K** **64 K** **2 MHz**	- - None **AMHS** None **AMHS** None **AMHS**	- - IA-5 - IA-5 IA-5		- -			Circuit not operational	**Circuit with Baghdad is not operational**
KUWAIT KUWAIT BAHRAIN DAMASCUS BEIRUT DOHA (EUR) KARACHI TEHRAN BAGHDAD	M T M M - M M T	LDD/d LDD/a LDD/a LDD/a LDD/d LDD/d SAT/ad	64/9.6 bps 64/9.6 kbs 64/9.6 kbs 64/9.6 bps 2.4 K 64/9.6 baud 9.6 bps	None None None None None None None	ITA-5 ITA-2 ITA-2 ITA-5 ITA-2 ITA-2 ITA-2	LDD/d LDD/d	64/9.6 kbps 64/9.6 kbps		IA-5 IA-5		

State/Station	Cat	Current				Planned				Target date of implementation	Remarks
		Type	Signaling Speed	Protocol	Code	Type	Signaling Speed	Protocol	Code		
1	2	3	4	5	6	7	8	9	10	11	12
LEBANON BEIRUT AMMAN BAGHDAD BAHRAIN CAIRO DAMASCUS JEDDAH KUWAIT NICOSIA	 M T M M T M M M		 - - 9600 9600 2 x 50 bd 9600 100 BD 9600	 - None CIDIN CIDIN None CIDIN None CIDIN	 - - IA-5 IA-5 ITA-2 ~~ITA-2~~ ITA-2 IA-5					2010	
OMAN MUSCAT/~~SEEB~~ ABU DHABI BAHRAIN MUMBAI JEDDAH SANA'A	 T M M M T		 ~~50 BD~~ 9600 300 BD ~~300 BD~~ 9600 300 BD 100 BD	 ~~None~~ AMHS ~~AMHS~~ None None None None	 ~~ITA-2~~ ~~ITA-2~~ IA-5 ITA-2 ITA-2 ITA-2						
QATAR DOHA BAHRAIN KUWAIT ABU DHABI	 M M T		 9600 100 BD 9600	 None None AMHS	 IA-5 ITA-2						

State/Station	Cat	Current				Planned				Target date of implementation	Remarks
		Type	Signaling Speed	Protocol	Code	Type	Signaling Speed	Protocol	Code		
1	2	3	4	5	6	7	8	9	10	11	12
SAUDI ARABIA											
JEDDAH											
ADDIS-ABABA	M		9600	None	IA-5						
BAHRAIN	M		64 /9.6	CIDIN	IA-5						
BEIRUT	M		9600	CIDIN	IA-5						
CAIRO	M		128/9.6	CIDIN	IA-5						
MUSCAT	M		300	None	ITA-2		9600			2010	
SANA'A	T		9600	None	IA-5						
AMMAN	M		9600	CIDIN	IA-5						
SYRIA											
DAMASCUS											
ATHENS	M		2 X 50	None	ITA-2		9600 bps			2010	
AMMAN	T		64/9.6	None	~~ITA-2~~		9600 bps			2009	
BEIRUT	M		2 X 50	None	ITA-2		9600 bps			2010	
CAIRO	M		50 BD	None	ITA-2		9600 bps			2009	
KUWAIT	M		50BD	None	ITA-2		9600 bps			2009	
TEHRAN	T		50BD	None	ITA-2		9600 bps			2010	

State/Station	Cat	Current				Planned				Target date of implementation	Remarks
		Type	Signaling Speed	Protocol	Code	Type	Signaling Speed	Protocol	Code		
1	2	3	4	5	6	7	8	9	10	11	12
UAE											
ABU DHABI											Secured VPN
BAHRAIN	M	LDD/d	64 – 9.6K bps	CIDIN	IA-5			AMHS	CBI		
AMMAN	T	LDD/d	2 MG bps	AMHS	IA-5						
MUSCAT	M	LDD/d		AMHS	IA-5						
QATAR	T	LDD/d	9600 bps	AMHS	IA-5						
TEHRAN	M	LTT/a	100buad	AFTN None	ITA-2	LDD/d	9.6kb/s	AMHS/AFTN	CBI IA-5		
YEMEN											
SANA'A											
JEDDAH	M		9600	None	IA-5						
MUSCAT	M		9600	None	IA-5						

TABLE CNS 1B

MID Aeronautical Message Handling System (AHMS) Implementation Plan

EXPLANATION OF THE TABLE

Column

1 *Name of State*

2 *Date of installation of AMHS – Aeronautical Message Handling System*

3 *Date of operation of AMHS – Aeronautical Message Handling System*

4 *MTA- Message Transfer Agent application*

5 *AFTN/AMHS Gateway*

6 *ATS Message UA-User Agent*

7 *ATS service level*
Basic
Extended

8 *Protocol (IPS, ATN)*
Dual Stack
IPS
OSI

9 *Remarks*

EXPLICATION DU TABLEAU

(To be completed by HQ)

Notes:
- *The MID Region shall use the Europe EUR AMHS Manual EUR Doc 020 and all its Appendices for the implementation of AMHS*
- *Gateways and Interregional connection will be as agreed.*

State	Installation	Operation	MTA Name	AFTN/AMHS Gateway	ATS Message UA	ATS service level	Protocol (IPS, ATN)	Remarks
1	2	3	4	5	6	7	8	9
Bahrain		-	MTA-OB-1	Y	Y	Extended	Dual Stack	Support IPv4 only
Egypt	2008	-	MTA-HE-1	Y	N	Extended	Dual Stack	Support IPv4 only
Iran	2012	2012	MTA-OI-1	Y	Y	Extended	Dual Stack	- Support both IPv4 &IPv6
Iraq	-	-	-	-	-	-	-	-
Israel	-	-	-	-	-	-	-	-
Jordan	2008	2010	MTA-OJ-1	Y	Y	Extended	Dual Stack	Support IPv4 only
Kuwait		-	MTA-OK-1	Y	Y	Extended		Support IPv4 only
Lebanon	-	-	-	-	-	-	-	-
Oman	2008	2009	MTA-OO-1	Y	Y	Extended		Support IPv4 only
Qatar		-	MTA-OT-1	Y	Y			Support IPv4 only
Saudi	2008	-	MTA-OE-1	Y	Y	Extended	Dual Stack	Support IPv4 only
Syria	-	-	-	-	-	-	-	-
UAE	2006	2009	MTA-OM-1	Y	Y	Basic		Support IPv4 only
Yemen	-	-	-	-	-	-	-	-

Appendix A to CNS 1B MID Region AMHS addresses

State	**AMHS Address Specification**							
State Name	**Nationality Letters or Designator**	**Country-name attribute**	**ADMD-name attribute**	**PRMD-name attribute**	**Addressing scheme**	**ATN Directory naming-context**	**Organization-name (for CAAS only) single value or reference to the CAAS Table**	**Comments**
Bahrain	OB	XX	ICAO	OB	CAAS		see Table OB	confirmed by SL
Egypt	HE	XX	ICAO	HE	CAAS		HECA	confirmed by SL
Iran (Islamic Republic of)	OI	XX	ICAO	OI	XF			confirmed by SL
Iraq	OR	XX	ICAO	OR	XF			
Israel	LL	XX	ICAO	LL	XF			
Jordan	OJ	XX	ICAO	OJ	CAAS		OJAC	confirmed by SL
Kuwait	OK	XX	ICAO	OK	XF			
Lebanon	OL	XX	ICAO	OL	XF			
Oman	OO	XX	ICAO	OO	XF			
Qatar	OT	XX	ICAO	OT	XF			
Saudi Arabia	OE	XX	ICAO	OE	XF			confirmed by SL
Syrian Arab Republic	OS	XX	ICAO	OS	XF			
UAE	OM	XX	ICAO	OM	XF			confirmed by SL
Yemen	OY	XX	ICAO	OY	XF			

TABLE CNS 1C - AERONAUTICAL TELECOMMUNICATION NETWORK

EXPLANATION OF THE TABLE

Column :

1 Name of the States/stations or locations of an ATN Routing Domain

2 ATN applications in end systems (ES) of the State shown in column **1**

AIDC – ATS Inter-facility Data Communication

AMHS – Aeronautical Message Handling System

Note : AMHS/S denotes an AMHS server

3 ATN router type to be implemented at the location shown in Column **1**
BBIS – Backbone Boundary Intermediate System
BIS -- Boundary Intermediate System (router) performing Inter Domain Routing Protocol (IDRP)
IS -- Intermediate System (router) without IDRP

4 ATN Routing Domain Address Prefix

5 AFTN/AMHS gateway to be implemented at the location shown in column **1**

6 List of States routers to be connected with router of column **3**

7 The means of connecting the routers of columns **6** and **3**
DIR- Leased direct circuit

8 Date of implementation of the ATN facilities and applications, listed in columns **2**, **3** and **5**

9 Remarks

EXPLICATION DU TABLEAU
(To be completed by HQ)

STATE/CENTERS	ATN APPLICATIONS	ATN ROUTER TYPE	ATN RD ADDRESS PREFIX	AFTN/AMHS GATEWAY	CONNECTED WITH ROUTER OF	VIA	IMPLEMENTATION DATE	REMARKS
1	2	3	4	5	6	7	8	9
Bahrain **Bahrain**	AMHS/S AIDC	**BIS**		**X**	**ASIA/PAC** Oman,Saudi Arabia Kuwait,Lebanon Iran, Afganistan Qatar,UAE			
EGYPT **Cairo**	AMHS/S AIDC	**BIS**		**X**	**AFI, EUR** Israel, Jordan, Lebanon, Athena Saudi Arabia			
IRAN **Tehran**	AMHS/S AIDC	**BIS**			Kuwait, Bahrain Kerachi			
IRAQ **Baghdad**	AMHS	IS			Jordan, Lebanon			
ISRAEL **Ben Gurion**	AMHS	IS			Jordan, Egypt			
JORDAN **Amman**	AMHS/S AIDC	**BIS**		**X**	Egypt,Israel Lebanon,Iraq,Syria			
KUWAIT **Kuwait**	AMHS/S AIDC	**BIS**		**X**	**EUR**, Pakistan, Iran,Qatar,Bahrain, Lebanon			
LEBANON **Beirut**	AMHS/S AIDC	**BIS**		**X**	**EUR** Jordan,Syria Iraq,Kuwait,Bahrain Saudi Arabia,Egypt			
OMAN **Muscat**	AMHS/S AIDC	**BIS**		**X**	**ASIA/PAC** Yemen, Bahrain, UAE, Saudi Arabia			
QATAR **Doha**	AMHS AIDC	IS			Kuwait, Bahrain			
SAUDI ARABIA **Jeddah**	AMHS/S AIDC	**BIS**		**X**	**AFI** Egypt, Lebanon			

STATE/CENTERS	ATN APPLICATIONS	ATN ROUTER TYPE	ATN RD ADDRESS PREFIX	AFTN/AMHS GATEWAY	CONNECTED WITH ROUTER OF	VIA	IMPLEMENTATION DATE	REMARKS
1	2	3	4	5	6	7	8	9
SYRIA **Damascus**	AMHS	IS			Jordan, Lebanon			
U.A.E **Abu Dhabi**	AMHS/SAIDC	**BIS**		**X**	Bahrain,Oman, Qatar Iran			
YEMEN **Sana'a**	AMHS	IS			Oman, Saudi Arabia			

TABLE CNS1C-new

ATN/IPS WG/4
Appendix 3D to the Report on Agenda Item 3

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						

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						

REPORT ON AGENDA ITEM 4: FOLLOW UP THE PROGRESS OF MID REGION ATS MESSAGE MANAGEMENT CENTRE (MID-AMC) PROJECT

4.1 The meeting noted that state-of-the-art ATS Messaging Handling system (AMHS) has been installed and commissioned in most of the States, and new international AMHS links replaced AFTN/CIDIN connections.

4.2 The Introduction of AMHS and the implementation of new circuits make the manual maintenance of the routing directory difficult and complicated. The meeting recalled that in Europe this function is done by AMC operator with the aid of routing software where the AMC operator would have a complete view of the network; in addition AMC has a function utilized to create an optimum routing table, however this function has not been provided to the External com centre.

4.3 Based on the above, MIDANPIRG/12 tasked ICAO MID Regional office to request Authorization from EUROCONTOL to provide routing functions and additional function available in the EUR-AMC to the MID Region, it was indicated that additional workload on EUR-AMC operator will be required and as a result of the meeting, between EUROCONTROL and Jordan, three options were identified for supporting the MID Region.

4.4 The meeting recalled the discussion and analysis by the ATN/IPS WG/3, for the three options indicated that most appropriate way forward for the MID Region will be that ICAO MID Region establishes its own MID ATS Messaging Management centre.

4.5 Based on the above, MIDANPIRG/12 agreed to establish a similar regional project MID ATS Messaging Management centre (MID-AMC), to be hosted and led by Jordan, to fulfill the following goals:

– To facilitate transition from AFTN/CIDIN to AMHS.
– To support States with AMHS in operation or on their way to implement.
– To provide Routing management function that can ensure optimum consistent routes.
– To provide an electronic tool to keep related ANP FASID data up-to-date.

4.6 The meeting noted that Jordan had started the MID-AMC project. The activities of the project are divided into two phases which correspond to the goals of the project, the first is the development of AMF-I and some AMF-O functions (network inventory, address management), and Phase two will focus on the Routing function development to fulfill the main objective of the project. Jordan informed that Phase one development was successfully completed.

4.7 The meeting noted that, in order to formalize the process of MID-AMC project, and the eventual use of the MIS-AMC, MIDANPIRG/13 meeting agreed on the following Conclusion 13/27:

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) MID States be encouraged to use the MID-AMC on trial basis for one year.

4.8 Based on above, the meeting reviewed and updated the legal model to be signed by all participating States in the MID-AMC Project. The meeting agreed that the Memorandum of Agreement (MOA) as at **Appendix 4A** to the Report on Agenda Item 4 be signed by all MID state as soon as possible. In this regard, the meeting was delighted to note that the following States are ready to sign and use the MID-AMC (Bahrain, Egypt, Iran, Jordan, Saudi Arabia, and UAE). The signed MOA will be sent to ICAO MID Regional office by the 30 June 2012. Furthermore, the meeting agreed that for the other States ICAO MID Regional office send the MOA with State Letter requesting them to Sign the MOA to allow them the access to use the MID-AMC.

4.9 The meeting agreed that for the smooth operation of the MID-AMC a board be established and be composed of a member and alternate member from all participating States. The meeting agreed on Terms of Reference for the MID AMC board as at **Appendix 4B** to the report on Agenda Item 4.

4.10 The meeting noted that MID-AMC operator in Jordan had two days training, while for the MID States Jordan confirmed that they will conduct training in Jordan when MID States sign the MOA and start using the system.

4.11 Based on all the above, the meeting developed the following Draft Conclusion:

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** 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** to the Report on Agenda Item 4.*

4.12 The 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).

ATN/IPS WG/4
Appendix 4A to the Report on Agenda Item 4

Middle East Regional ATS Messaging Management Center

(MID AMC)

MEMORANDUM

OF AGREEMENT

Jordan - May, 2012

MEMORANDUM OF
AGREEMENT
On the establishment, operation and management of the
Middle East Regional ATS Messaging Management
Center (MID AMC) fully funded by Jordan

1. PARTIES

1.1 The Parties to this memorandum of agreement are: Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, UAE and Yemen. and any other ICAO MID Region States

2. AGREEMENT

- CONSIDERING the urgent need to institute a programme, on a regional basis, for a high quality AFS network and efficient data exchange.

- CONSIDERING the Parties' earlier decision that the Middle East Regional ATS Messaging Management Center (MID AMC) will be funded by Jordan.

The Parties have agreed as follows:

1. The Preamble, MIDANPIRG/13 Conclusion 13/27 and CARC's Letter No. 22/1000/11/2926 dated 3/August/2011 hereto shall constitute an integral part of this Memorandum of Agreement.

2. The Parties to this memorandum of agreement, referred to hereunder as Participating States agree to establish the Middle East Regional ATS Messaging Management Center (MID AMC) and undertake to become its members;

3. The MID AMC shall be managed as a Regional programme; shall have legal personality and shall act through the MID AMC Board;

4. The overall objective of the MID AMC is the promotion of efficiency and safety of air navigation in the Middle East Region through the operation and management, on a sound and efficient basis, of a permanent MID Regional ATS Messaging Management Center;

5. The MID AMC Board, in which each Participating State is entitled to appoint one member (technical), shall retain overall direction and responsibility for the supervision and operation of the MID AMC in accordance with the relevant obligations of the Participating States. The Board shall elect its chairman. It shall inter-alia, supervise and direct the MID AMC, follow-up its activities and reports and assign its priorities;

6. The MID AMC's scope, duties and responsibilities will be those agreed by the Board's first meeting and could be revised by the Board. The MID AMC will be assigned clear tasks in a step-by-step approach starting with MID AMC establishment. The MID AMC duties and responsibilities will include, but will not be limited to the following:

   Collecting and analyzing ATS Messaging data received from MID States as well as from European AMC;

   Establishing a consistency among data from EUROPEAN AMC to the MID AMC and vice versa;

   Ensuring the continuous harmonization of data over an AIRAC cycle

Propose optimum routing based one regional change

Create access accounts and authorization according to regional procedure

Create necessary reports and documents

Submit a report to each Board meeting on MID AMC activities;

7. The Participating States have accepted Jordan's offer to host the MID AMC in Jordan to enable the early establishment and functioning of the MID AMC; for which participating States will not be charged

8. Jordan will provide the offices, software, equipment and local personnel needed for the MID AMC operations and pay for the set up of the MID AMC; at no charge to MID States

9. In case of the need for the MID AMC enhancement or addition for any service it will be decided by the board for the requirement and cost which may be borne by Participating States on equal basis ;

10. The MID AMC staff shall be composed of and provided and funded by Jordan:

1.	MID AMC Project Manager	(Full Time)
2.	MID AMC Project Assistant	(Full Time)
3.	Five MID AMC operators	(Full Time)

11. The MID AMC Project Manager shall manage the project on day-to-day basis and effect coordination with the Chairman of the MID AMC Board. He/She shall submit the MID AMC reports to the Board with copies to the ICAO Regional Office in Cairo;

12. This Memorandum of Agreement shall come into effect on the date it has been signed by the Participating States;

13. Any amendment to this Memorandum of Agreement, shall be carried out by the parties to this Memorandum of Agreement;

14. Any dispute arising out of or relating to this Memorandum of Agreement, shall be settled by direct consultation between the Participating States concerned; and within the framework of MIDANPIRG

15. Any Participating State may withdraw from this Memorandum of Agreement by giving a prior written notice of six (6) months to the MID AMC Board. The obligations assumed by the Participating States under this Memorandum of Agreement shall continue to exist after the withdrawal from this Memorandum of Agreement to the extent necessary to permit the orderly finalization of activities, the withdrawal of personnel, the distribution of funds and assets and the settlement of contractual obligations. Additional funds, if necessary, to cover the above mentioned expenditures shall be provided by the Participating States.

16. The hosting of the MID AMC by Jordan may be terminated at the request of Jordan, with two years advance written notification to the MID AMC Board to allow sufficient time for selection of an alternative location and necessary arrangements for setting up a new MID AMC.

17. All correspondence relating to the implementation of this Agreement shall be addressed to:

MID AMC
Chairman of the MID AMC
Civil Aviation Regulatory
Commission P.O. Box 7547
Amman Jordan

With copy to the:

ICAO Regional Director
ICAO Middle East Regional Office
Egyptian Civil Aviation Complex, Airport Road
P.O Box 85, Airport Post office, Terminal One
11776, Cairo, Egypt

Agreed on behalf of participating States

State	**Signature**	**Title**	**date**
Bahrain			
Egypt			
Iran			
Iraq			
Jordan			
Kuwait			
Lebanon			
Oman			
Qatar			
Saudi Arabia			
Syria			
UAE			
Yemen			

ATN/IPS WG/4
Appendix 4B to the Report on Agenda Item 4

MID-AMC Board TOR

1. Terms of Reference (TOR)

1.1 The Terms of Reference of the MID AMC board are:

a) To promote the efficiency and safety of aeronautical fixed services in the MID Region through the operation and management, on a sound and efficient basis, of a permanent MID Regional ATS Messaging Management Center (MID-AMC);

b) Foster the implementation of the Air traffic service Message handling service in the MID Region through provision of the guidance materials and running facilitation tools, utilizing the MID-AMC

1.2 In order to meet the Terms of reference, the MID-AMC board in coordination with ATN-IPS WG shall:

a) Develop a credential procedure for all users on the MID-AMC.

b) Develop and maintain guidance materials for MID-AMC users.

c) Discuss and identify solution for operational problems may be arising.

d) Provide support/guidance to states for AMHS Implementation, and monitor the AMHS testing activities.

e) Assist and encourage states to conduct trial on Implementation of the ATS extended services, and identify operational requirements.

f) Identify the need for any enhancement for the MID AMC and prepare functional and technical specifications.

g) Follow-up and review the work of similar groups in other ICAO Regions.

2. Composition

All MID States; and

Other representatives, who could contribute to the activity of the board, could be invited to participate as observers.

REPORT ON AGENDA ITEM 5: FUTURE WORK PROGRAMME

5.1 The meeting noted that MIDANPIRG/13 under Decision 13/28 approved the Terms of Reference (TOR) of the ATN-IPS Working Group. The meeting reviewed and updated the list of tasks based on the outcome of discussion, global and regional developments, as at **Appendix 5A** to the Report on Agenda Item 5, 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.*

5.2 The 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.

5.3 The meeting agreed that the ATN-IPS WG/5 meeting be held in first quarter of 2013. The venue will be Cairo, unless a State would be willing to host the meeting.

ATN/IPS WG/4
Appendix 5A to the Report on Agenda Item 5

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)

REPORT ON AGENDA ITEM 6: ANY OTHER BUSINESS

6.1 Nothing has been discussed under this Agenda Item.

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- END -