International Civil Aviation Organization

MID ATS Message Management Center Steering Group

Third Meeting (MIDAMC STG/3)
(Cairo, Egypt 26 - 28 January 2016)

Agenda Item 3: MIDAMC and AMHS Implementation in the MID Region

PROGRESS IN THE MID AMHS IMPLEMENTATION AND AFS REQUIREMENTS FOR ROC

(Presented by Secretariat)

SUMMARY

This paper presents the progress achieved in the implementation of the AFS Requirements for the establishment of the MID Regional OPMET Centre (ROC) and the update to the MID AN Strategy targets related to B0-FICE.

Action by the meeting is at paragraph 3.

REFERENCES

- EUR AFSG/19 Report
- MIDANPIRG/15 Report

1. INTRODUCTION

1.1 The Nineteenth meeting of the EUR Aeronautical Fixed Service Group (AFSG/19) was held in Paris, 20-24 April 2015.

1.2 The Fifteenth meeting of the Middle East Air Navigation Planning and Implementation Regional Group (MIDANPIRG/15) was held in Bahrain, 8-11 June 2015.

2. DISCUSSION

2.1 The MIDANPIRG/15 meeting noted that the MIDAMC STG developed the plan to implement AMHS communication paths between Jeddah-Vienna, and Bahrain-Vienna, to enable the exchange of OPMET data in digital format between the MID and EUR Regions. It was noted that Athens and Nicosia, which are the entry/exit points between the MID and EUR Regions, had not yet implemented AMHS.

2.2 The meeting recalled that, both Bahrain and Jeddah have CIDIN traffic and the transition from CIDIN to AMHS will require a significant amendment in AFTN, CIDIN and AMHS routing tables not only in the State itself but also in adjacent COM Centres and others in the Network. Therefore, the meeting agreed that concerned COM Centres and the MIDAMC should identify all

dependencies when the CIDIN relay traffic is taken off a dedicated CIDIN connection in normal routing situations and in all alternate routing cases as well.

2.3 The meeting noted that Tunis have already implemented the AMHS system and will be migrating the link with Rome to AMHS by December 2015. Tunis will also implement direct link Tunis-Vienna by December 2016. Furthermore, Egypt and Tunis will migrate to AMHS by September 2015. Accordingly, the meeting supported the proposal to consider Tunis as a back-up plan for the connection of MID ROC Centres. Furthermore, Tunis will present a working paper to the next EUR AFS Group meeting on the subject.

2.4 The meeting may wish to note that Tunis presented two papers, one to EUR-AFSG/19 held in Paris, 20-24 April 2015 and one to AFS Operations Group held in Krakow, 30 June-02 July 2015. The papers are at **Appendices A** and **B** respectively.

2.5 The plan to implement AMHS communication paths between Jeddah-Vienna, and Bahrain-Vienna as at including the updates from Tunis is at **Appendix C**.

2.6 The meeting may wish to recall that MIDANPIRG/15 agreed to the following Conclusion:

CONCLUSION 15/10: MID REGION AIR NAVIGATION STRATEGY

That,

a) the revised MID Region Air Navigation Strategy:

i. is endorsed as the framework identifying the regional air navigation priorities, performance indicators and targets; and

ii. be published as MID Doc 002

b) MID States be urged to:

i. develop their National Air Navigation Performance Framework, ensuring the alignment with and support to the MID Region Air Navigation Strategy; and

ii. provide the ICAO MID Regional Office, on an annual basis (by the end of November), with relevant data necessary for regional air navigation planning, reporting and monitoring.

2.7 The meeting may wish to recall that MIDANPIRG/15 endorsed the MID Air Navigation Plan Volume III, which contains dynamic/flexible plan elements related to the implementation of the air navigation system and its modernization in line with the ICAO Aviation System Block Upgrades (ASBUs) and associated technology roadmaps described in the Global Air Navigation Plan (GANP). **Appendix D** is an extract for the monitoring of B0-FICE.

3. ACTION BY THE MEETING

3.1 The meeting is invited to :

a. review/update the plan at **Appendix C** and take action as appropriate; and

b. review/update **Appendix D.**

European and North Atlantic Office

AERONAUTICAL FIXED SERVICES GROUP (AFSG)

of the European Air Navigation Planning Group (EANPG)

NINETEENTH MEETING

(Paris, 20 – 24 April 2015)

Agenda Item 2: Operational Network Matters

Status of Tunisia in the ICAO EUR Region and the AMC

(Presented by Tunisia)

SUMMARY

Although Tunisia is a member State of the ICAO EUR Region this membership is not yet fully reflected in the AMC. This WP proposes changes of Tunisia's status in the AMC and draws a conclusion for the integration of the COM Centre DTTC into the EUR AMHS Network.

1. Introduction

1.1 Due to a decision by the 12th Air Navigation Conference in Montreal, 19-30 November 2012, the FIRs Alger, Canarias, Casablanca and Tunis were transferred from the AFI to the EUR ANP.

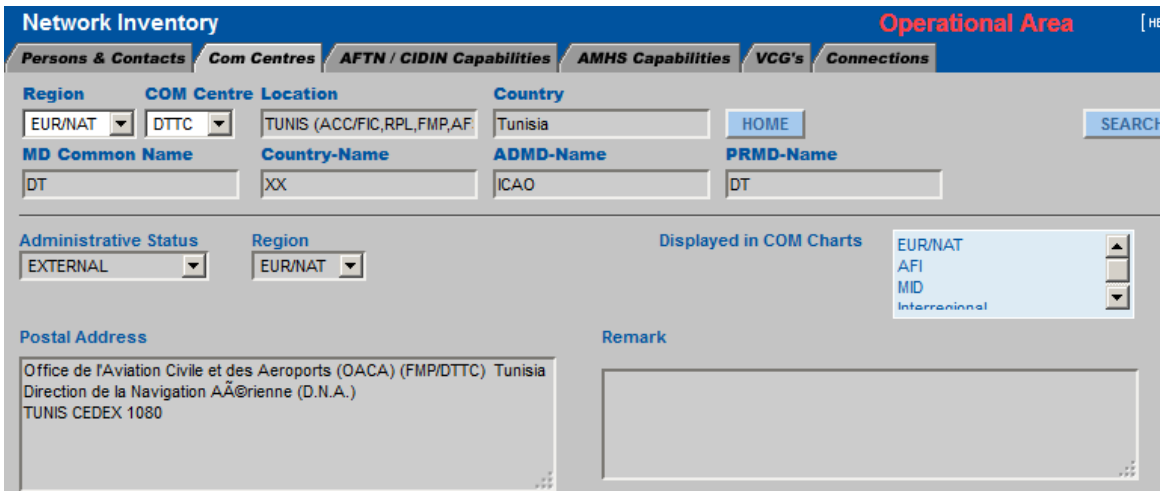
1.2 Aligned with this transfer Algeria, Morocco and Tunisia became Member States of the ICAO EUR Region, please cf. http://www.icao.int/EURNAT/Pages/member_states.aspx.

1.3 This membership is currently only partially reflected in the AMC.

2. Discussion

Current Status in the AMC

2.1 The Network Inventory includes DTTC (but not DAAA, GMMM) as a COM Centre of the EUR/NAT Regions. The Administrative Status of the COM Centre DTTC, however, is yet "EXTERNAL".



2.2 In Persons & Contacts accredited Tunisian staff have yet the status "External COM Operator".

2.3 The Routing Directory does not yet provide the Routing Tables of the COM Centre DTTC.

2.4 In the AFI and the EUR/NAT COM Charts the COM Centres DTTC, DAAA and GMMM are yet located "South" of the dotted line separating the AFI Region and the EUR Region.

Proposed Changes

2.5 According to the ATS Messaging Management Manual, para. 2.4.2, COM Centres in the EUR/NAT Regions which participate in ATS Messaging Management activities are called "Co-operating COM Centres" (CCC). COM Centres external to the EUR/NAT Regions which participate in ATS Messaging Management activities are called "External COM Centres". Based on the fact that the COM Centre DTTC is in the EUR/NAT Region, Tunisia proposes to assign the Administrative Status INTERNAL to the COM Centre DTTC.

2.6 According to the ATS Messaging Management Manual, para. 2.5.1.2, the person representing a CCC for purposes of ATS Messaging Management is the CCC Operator. "External COM Operators" are operators of External COM Centres (para. 2.5.1.3). Therefore Tunisia proposes to replace the role "External COM Operator" of accredited Tunisian persons by "CCC Operator".

2.7 Tunisia proposes to publish the AFTN Routing Table and AMHS Routing Table of the COM Centre DTTC in the Routing Directory. The data in CSV format are provided to the AMC Operator.

2.8 Tunisia proposes to rearrange the position of the COM Centre DTTC in the AFI and EUR/NAT COM Charts so that it is located "North" of the dotted line separating the AFI and the EUR Region.

Integration into the EUR AMHS Network, Connection with the MID AMHS Network

2.9 The COM Centre DTTC operates an integrated AFTN/AMHS message switch. Currently international AFTN links to DAAA, HECA, HLLT and LIII are established. As already indicated earlier, the COM Centre DTTC is ready for AMHS Operations.

2.10 As a conclusion of Tunisia's membership in the ICAO EUR Region, traffic between COM Centre DTTC and AFS users in the EUR/NAT Regions may be exchanged "directly" without being relayed by interregional boundary gateways.

2.11 In order to enable the exchange of OPMET data in digital format between the MID and EUR Regions the MIDAMC STG is tasked to develop a plan to implement AMHS Communication Paths Jeddah - Vienna and Bahrain – Vienna. The MIDAMC STG considers Tunis as a backup node for the connection of MID Regional OPMET Centres (ROC) to EUR. (Report of MIDAMC STG/2).

2.12 Tunisia and Egypt informed the MIDAMC STG that the existing AFTN link between the COM Centres DTTC and HECA will be migrated to AMHS by September 2015.

2.13 Tunisia is currently investigating conditions to join the PENS.

2.14 Before PENS is available in Tunis, the existing link to Rome will be upgraded to a digital link with a bandwidth of 64 Kbit/s, and AMHS will be operationally introduced on this link until end of 2015.

2.15 Furthermore, Tunisia proposes to establish a direct AMHS link between Tunis and Vienna until 2016.

3. Action by the Meeting

3.1 The AFSG is invited to

a) note the content of this paper;

b) to discuss and to approve the changes proposed for Tunisia’s status in the AMC;

c) to support Tunisia’s integration into the EUR AMHS network.

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AFSG/19 WP/10
OG-19-01 24/06/2015

AFSG OPERATIONS GROUP

Working Group of the Aeronautical Fixed Service Group (AFSG)

First MEETING

(Krakow, 30Juin – 02July 2015)

Agenda Item 5.10: Integration of new States

Status of Tunisia in the ICAO EUR Region and the AMC

(Presented by Tunisia)

SUMMARY

Although Tunisia is a member State of the ICAO EUR Region this membership is not yet fully reflected in the AMC. This WP proposes changes of Tunisia's status in the AMC and draws a conclusion for updating the integration of the COM Centre DTTC into the EUR AMHS Network and update interregional boundary in the ICAO EUR Region.

1. Introduction

1.1 Due to a decision by the 12th Air Navigation Conference in Montreal, 19-30 November 2012, the FIRs Alger, Canarias, Casablanca and Tunis were transferred from the AFI to the EUR ANP.

1.2 Aligned with this transfer, Algeria, Morocco and Tunisia became Member States of the ICAO EUR Region, please cf. http://www.icao.int/EURNAT/Pages/member_states.aspx.

1.3 This membership is currently only partially reflected in the AMC.

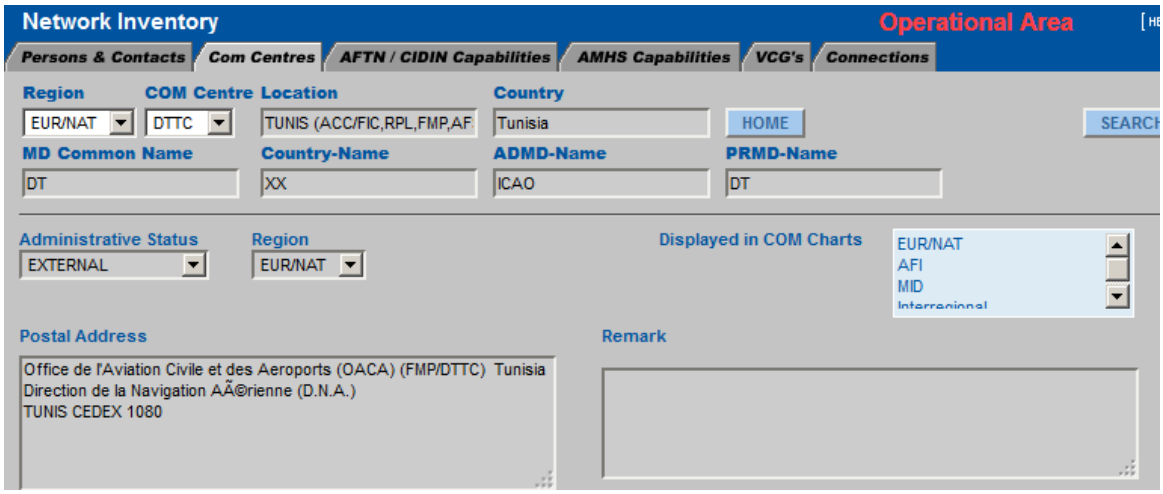
1.4 The AFSG decided to assign to the AFSG Operations Group the task to prepare the integration of the COM Centres concerned in the EUR AFS network and report accordingly to AFSG/20

1.5 This integration reflected in interregional gateway EUR/NAT .

2. Discussion

Current Status in the AMC

2.1 The Network Inventory includes DTTC (but not DAAA, GMMM) as a COM Centre of the EUR/NAT Regions. The Administrative Status of the COM Centre DTTC, however, is yet "EXTERNAL".

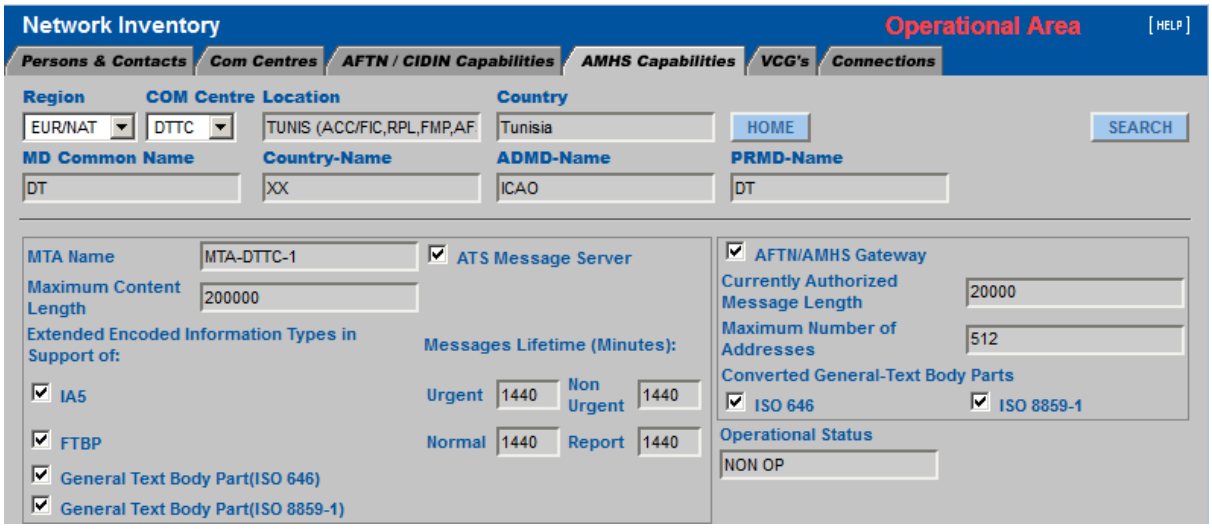


In Persons & Contacts accredited Tunisian staff have yet the status "External COM Operator".

2.2 The Routing Directory does not yet provide the Routing Tables of the COM Centre DTTC. Furthermore, the Routing Directory does not yet contain Tunisian tables. According to AMMM, para. 4.3.4, the capability to edit Routing Tables is reserved to the AMC Operator. Tunisia does not use CIDIN. An AMHS Routing Table will be provided as soon as Tunisia starts operational use of an AMHS link with a neighborhood or a EUR State. Alternatively, you could initially publish an AMHS Routing Table which maps all destinations to the MTCU.

2.3 In the AFI and the EUR/NAT COM Charts the COM Centres DTTC, DAAA and GMMM are yet located "South" of the dotted line separating the AFI Region and the EUR Region.

2.4 The Operational Status of the COM Centre DTTC NOP



Proposed Changes

2.5 According to the ATS Messaging Management Manual, para. 2.4.2, COM Centres in the EUR/NAT Regions which participate in ATS Messaging Management activities are called "Co-operating COM Centres" (CCC). COM Centres external to the EUR/NAT Regions which participate in ATS Messaging Management activities are called "External COM Centres". Based on the fact that the COM Centre DTTC is in the EUR/NAT Region, Tunisia proposes to assign the Administrative Status INTERNAL to the COM Centre DTTC.

2.6 According to the ATS Messaging Management Manual, para. 2.5.1.2, the person representing a CCC for purposes of ATS Messaging Management is the CCC Operator. "External COM Operators" are operators of External COM Centres (para. 2.5.1.3). Therefore Tunisia proposes to replace the role "External COM Operator" of accredited Tunisian persons by "CCC Operator".

2.7 Tunisia proposes to publish the AFTN Routing Table and AMHS Routing Table of the COM Centre DTTC in the Routing Directory. The data in CSV format are provided to the AMC Operator.

2.8 Tunisia proposes to rearrange the position of the COM Centre DTTC in the AFI and EUR/NAT COM Charts so that it is located "North" of the dotted line separating the AFI and the EUR Region.

2.9 Tunisia propose to change AMHS system capability OP.

Integration into the EUR AMHS Network, Connection with the MID AMHS Network

2.10 The COM Centre DTTC operates an integrated AFTN/AMHS message switch. Currently international AFTN links to DAAA, HECA, HLLT and LIII are established. As already indicated earlier, the COM Centre DTTC is ready for AMHS Operations.

2.11 As a conclusion of Tunisia's membership in the ICAO EUR Region, traffic between COM Centre DTTC and AFS users in the EUR/NAT Regions may be exchanged "directly" without being relayed by interregional boundary gateways and Tunisia proposes to change boundary EUR/NAT in order to integrate Tunisia in the Interregional Gateways and their responsibility for connectivity to AFI and MID region according parg 3.18 EANPG/AFSG19.

Région	*Com Centre*
MID	Athens Nicosia and *Tunisia*
NAM	London and Lisbon
NAT	London and Bergen
CAR	London and Madrid
SAM	Madrid and London
ASIA/PAC	London, Rome and Moscow
AFI	*Bordeaux, Athens, Rome* , Madrid *Algeria, Morroco and Tunisia*

2.12 In order to enable the exchange of OPMET data in digital format between the MID and EUR Regions the MIDAMC STG is tasked to develop a plan to implement AMHS Communication Paths Jeddah - Vienna and Bahrain – Vienna. The MIDAMC STG considers Tunis as a backup node for the connection of MID Regional OPMET Centres (ROC) to EUR. (Report of MIDAMC STG/2).

2.13 Tunisia and Egypt informed the MIDAMC STG that the existing AFTN link between the COM Centres DTTC and HECA will be migrated to AMHS by September 2015.

2.14 Furthermore, Tunisia proposes to establish a direct AMHS link between Tunis and Vienna in first phase in order to integrate EURNAT Network.

2.15 in second phase Tunisia is currently investigating conditions to join the PENS.

2.16 Before PENS is available in Tunis, the existing link to Rome will be upgraded to a digital link with a bandwidth of 64 Kbit/s, and AMHS will be operationally introduced on this link until end of 2015.

2.17 Tunisia planned new AMHS connection to AFI Region via Dakar until 2016.

2.18 Tunisia repeats the invitation to EUR COM Centres for AMHS Interoperability and Pre-operational Tests with the objective to start AMHS Operations.

3. Action by the Meeting

3.1 The AFSG19/OG is invited to

a) note the content of this paper;

b) discuss and to approve the changes proposed for Tunisia’s status in the AMC;

c) support Tunisia’s integration into the EUR AMHS network.

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APPENDIX C

AMHS Plan for ROC in Jeddah and Bahrain					
	Task	**Timeframe**	**Assigned to**	**Champion**	**Status**
	AMHS Intra-regional Trunk Connections				
1	Establish Jeddah – Beirut IP Network	Jul 2015	Saudi Lebanon	IM MS	
2	Establish Bahrain – Beirut IP Network	Jul 2015	Bahrain Lebanon	YH MS	Already in progress
3	Establish Cairo – Beirut IP Network	Aug 2015	Egypt Lebanon	AF/TZ/MR MS	
4	Establish Bahrain – Jeddah IP Network	Aug 2015	Bahrain Saudi	IM YH	
5	Perform the Interoperability test between Jeddah and Beirut COM centers	Aug 2015	Saudi Lebanon	IB MS	
6	Perform the Interoperability test between Bahrain and Beirut COM centers	Sep 2015	Bahrain Lebanon	MS YH	
7	Perform the Interoperability test between Cairo and Beirut COM centers	Nov 2015	Egypt Lebanon	AF/TZ/MR MS/EK	Depends on IP network availability
8	Perform the Interoperability test between Bahrain and Jeddah COM centers	Dec 2015	Bahrain Saudi	YH IM	
9	Perform the Pre-operational test between Jeddah and Beirut COM centers	Aug 2015	Saudi Lebanon	IM MS	Proposed to be for 14 Days
10	Perform the Pre-operational test between Bahrain and Beirut COM centers	Oct 2015	Bahrain Lebanon	YH MS	
11	Perform the Pre-operational test between Cairo and Beirut COM centers	Dec 2015	Egypt Lebanon	AF/TZ/MR MS/EK	
12	Perform the Pre-operational test between Bahrain and Saudi COM centers	Nov 2015	Bahrain Saudi	YH IM	
13	Place the AMHS link into operation between Jeddah and Beirut COM centers, and updating the Routing tables	Sep 2015	Saudi Lebanon MID AMC	IM MS/EK MN	
14	Place the AMHS link into operation between Bahrain and Beirut COM centers , and updating the Routing tables	Nov 2015	Bahrain Lebanon MID AMC	YH MS/EK MN	
15	Place the AMHS link into operation between Cairo and Beirut COM centers, and updating the Routing tables	Dec 2015	Egypt Lebanon MID AMC	AF/TZ/MR MS/EK MN	
16	Evaluate the Trunks connections bandwidth and increase it if required between (Bahrain, Beirut, Cairo and Jeddah)	Jun 2016	Bahrain Beirut Cairo Jeddah	YH MS/EK AF/TZ IM	Depends on testing of digital data exchanged

	The AMHS Interconnection with EUR Region Depends on Nicosia and Athens				
17	Establish Cairo – Tunis IP Network	*March2016*		AF/TZ/MR IB/MA	Tunisia Ready and still waiting
18	Establish Nicosia – Beirut IP Network	*Awaiting reply from EUR*		MS/EK	Lebanon ready
19	Establish Nicosia – Jeddah IP Network			IM	Saudi Arabia ready
20	Establish Bahrain – Nicosia IP Network			YH	
21	Establish Cairo – Athens IP Network			AF/TZ/MR	Egypt Ready
22	Perform the Interoperability test between Cairo and Tunis COM centers	*April 2016*		AF/TZ/MR IB/MA	
23	Perform the pre operational test between Cairo and Tunis COM centers	*Mai 2016*		AF/TZ/MR IB/MA	
24	Place the AMHS link into operation between Cairo and Tunis COM centers, and updating the Routing tables	*Mai 2016*		AF/TZ/MR IB/MA	
25	Perform the Interoperability test between Athens and Cairo COM centers			AF/TZ/MR IB/MA	
26	Perform the Interoperability test between Bahrain and Nicosia COM centers			YH	
27	Perform the Interoperability test between Nicosia and Jeddah COM centers			IM	
28	Perform the Interoperability test between Nicosia and Beirut COM centers			MS/EK	
29	Perform the Pre-operational test between Athens and Cairo COM centers			AF/TZ/MR	
30	Perform the Pre-operational test between Bahrain and Nicosia COM centers			YH	
31	Perform the Pre-operational test between Nicosia and Beirut COM centers			MS/EK	
32	Perform the Pre-operational test between Nicosia and Jeddah COM centers			IM	
33	Place the AMHS link into operation between Athens and Cairo COM centers, and updating the Routing tables			MID AMC AF/TZ/MR	

34	Place the AMHS link into operation between Bahrain and Nicosia COM centers , and updating the Routing tables			MID AMC YH	
35	Place the AMHS link into operation between Nicosia and Jeddah COM centers, and updating the Routing tables			MID AMC IM	
36	Place the AMHS link into operation between Nicosia and Beirut COM centers, and updating the Routing tables			MS/EK	
37	Evaluate the inter-region connections bandwidth and increase it if required			MID AMC	
38	Transition of all regional AFTN/CIDIN Connections to AMHS	Q1, 2017	All MID States		

Champions:
Bahrain: (YH: Yaseen Hasan)
Egypt: (AF:Ahmed Farghally/TZ:Tarek Zaki/MR: Mohamed Ramzi/Essam Helmi: EH)
Lebanon: (MS: Mohamad Saad / EK: Elias El-Khoury)
Saudi Arabia: (IM: Mr. Ibraheem Mohamed Basheikh)
Tunis: IB: Issam Bouzid / MA: Mr. Mohamed Ali)
MID AMC/Jordan: MN: Muna Ribhi Alnadaf

APPENDIX D

B0 – FICE: Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration

Description and purpose

To improve coordination between air traffic service units (ATSUs) by using ATS Interfacility Data Communication (AIDC) defined by the ICAO *Manual of Air Traffic Services Data Link Applications* (Doc 9694). The transfer of communication in a data link environment improves the efficiency of this process particularly for oceanic ATSUs.

Main performance impact:

KPA- 01 – Access and Equity	KPA-02 – Capacity	KPA-04 – Efficiency	KPA-05 – Environment	KPA-10 – Safety
N	Y	Y	N	Y

Applicability consideration:

Applicable to at least two area control centres (ACCs) dealing with enroute and/or terminal control area (TMA) airspace. A greater number of consecutive participating ACCs will increase the benefits.

B0 – FICE: Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration			
Elements	***Applicability***	***Performance Indicators/Supporting Metrics***	***Targets***
AMHS capability	*All States*	Indicator: % of States with AMHS capability Supporting metric: Number of States with AMHS capability	70% of States with AMHS capability by Dec. 2017
AMHS implementation /interconnection	*All States*	Indicator: % of States with AMHS implemented (interconnected with other States AMHS) Supporting metric: Number of States with AMHS implemented (interconnections with other States AMHS)	60% of States with AMHS interconnected by Dec. 2017
Implementation of AIDC/OLDI between adjacent ACCs	*All ACCs*	Indicator: % of FIRs within which all applicable ACCs have implemented at least one interface to use AIDC/OLDI with neighboring ACCs Supporting metric: Number of AIDC/OLDI interconnections implemented between adjacent ACCs	70% by Dec. 2017

TABLE B0-FICE

EXPLANATION OF THE TABLE

Column

1 Name of the State

2, 3, 4 Status of AMHS Capability and Interconnection and AIDC/OLDI Capability, where:
Y – Fully Implemented
N – Not Implemented

5 Status of AIDC/OLDI Implementation, where:
Y – If AIDC/OLDI is implemented at least with one neighbouring ACC
N – Not Implemented

6 Action plan — short description of the State's Action Plan with regard to the implementation of B0-FICE.

7 Remarks

State	AMHS Capability	AMHS Interconnection	AIDC/OLDI Capability	AIDC/OLDI Implementation	Action Plan	Remarks
1	*2*	*3*	*4*	*5*	*6*	*7*
Bahrain	Y	N	Y	N	Sep 2015 for AMHS Int.	
Egypt	Y	Y	Y	Y		
Iran	N	N	Y	N		Contract signed for AMHS
Iraq	N	N	N	N		
Jordan	Y	Y	Y	N		
Kuwait	Y	N	Y	N	Dec 2015 for AMHS Int.	
Lebanon	Y	N	Y	Y		
Libya	Y	N	Y	N		
Oman	Y	Y	Y	N		
Qatar	Y	Y	Y	Y		local implementation for OLDI
Saudi Arabia	Y	Y	Y	Y		local implementation for AIDC
Sudan	Y	Y	Y	N		AMHS Int. Feb 2015
Syria	N	N	N	N		
UAE	Y	Y	Y	Y	Q2-2016	Local implementation for OLDI
Yemen	N	N	N	N	Dec 2015 for AMHS	Contract signed for AMHS
Total Percentage	**73%**	**47%**	**80%**	**33%**		

-END-