INTERNATIONAL CIVIL AVIATION ORGANIZATION

**REPORT OF THE THIRD MEETING OF
THE COMMUNICATION NAVIGATION
AND SURVEILLANCE SUB-GROUP**

CNS SG/3

(Cairo, Egypt, 10 – 12 May 2010)

The views expressed in this Report should be taken as those of the MIDANPIRG Communication Navigation and Surveillance Sub-Group and not of the Organization. This Report will, however, be submitted to the MIDANPIRG and any formal action taken will be included in the Report of the MIDANPIRG.

Approved by the Meeting

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PART I - HISTORY OF THE MEETING

1. PLACE AND DURATION

1.1   The Third Meeting of the MIDANPIRG Communication Navigation and Surveillance Sub-Group (CNS SG/3) was held at ICAO Middle East Regional Office, Cairo, Egypt, 10 - 12 May 2010.

2. OPENING

Mr. Jehad Faqir ICAO Deputy Regional Director, welcomed all the delegates to ICAO MID Regional Office and to Cairo, highlighting the important topics that the meeting will address especially the outcome of the two successful meetings of the IPS Working Group and the development in the MID Region concerning the implementation of the AMHS for which the ICAO MID Regional office organized AMC training in coordination with EUROCONTROL, and congratulated the States for the achievements implementation using the state of art technologies, and highlighted that the meeting will address MID AMC creation for the future network management for the MID region. He reminded the delegates about their role in the meeting, as experts. To this end, he urged the participants to work in the interest of the Region to utilize the latest developments in the CNS field to support the Region improvements towards the seamless transition to Global ATM. Finally he wished the meeting every success in its deliberations

3. ATTENDANCE

3.1   The meeting was attended by a total of twenty-eight (28) participants, which included delegates from eight (8) States and one (1) organization. The list of participants is as at **Attachment A** to the report.

4. OFFICERS AND SECRETARIAT

4.1   The meeting was chaired by Mr. Ali Ahmed Mohamed Director Air Navigation, Civil Aviation Affairs, from Kingdom of Bahrain. Mr. Raza Ali Gulam, Regional Officer, Communications Navigation and Surveillance (CNS) from the ICAO Middle East Cairo Office, was Secretary of the meeting.

5. LANGUAGE

5.1   The discussions were conducted in English. Documentation was issued in English.

6. AGENDA

6.1   The following Agenda was adopted:

Agenda Item 1:   Adoption of the Provisional Agenda

Agenda Item 2:   Follow-up the MIDANPIRG and other meetings Conclusions and Decisions relevant to CNS field

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Agenda Item 3:   Review and update of AFTN CIDIN Directory and CNS part of MID ANP and
FASID (Doc 9708)

Agenda Item 4:   Review IPS Working Group reports

Agenda Item 5:   Developments in CNS

Agenda Item 6:   Review of Air Navigation Deficiencies in the CNS field

Agenda Item 7:   CNS Performance Objective for MID Region

Agenda Item 8:   Future Work Programme

Agenda Item 9:   Any other business

7.   CONCLUSIONS AND DECISIONS – DEFINITION

7.1   The Sub-Group records its actions in the form of Draft Conclusions and Draft Decisions for
further action and adoption by the MIDANPIRG as its Conclusions and Decisions with the following
significance:

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

   b)   **Decisions** deal with matters of concern only to the MIDANPIRG and its contributory
bodies.

7.2   In the same context, the Sub-Group can record its actions in the form of Conclusions and
Decisions where no further action is required by the MIDANPIRG or already authorized by MIDANPIRG.

8.   LIST OF DRAFT CONCLUSIONS AND DECISIONS

DRAFT CONCLUSION 3/1:   UPDATING THE AFTN/CIDIN DIRECTORY

DRAFT CONCLUSION 3/2:   DRAFT PROPOSALS FOR AMENDMENT TO THE MID BASIC AND FASID-DOC
9708, PART IV (CNS AND CNS 1,2,3,4 TABLES)

DRAFT CONCLUSION 3/3:   MID IP NETWORK SURVEY

DRAFT CONCLUSION 3/4:   POSTING OF AMHS PLANS IN AMC

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DRAFT CONCLUSION 3/5:   USE OF PUBLIC INTERNET IN THE MID REGION

DRAFT DECISION 3/6:   REVISED TITLE AND TOR OF THE IPS WG

DRAFT DECISION 3/7:   DISSOLVE THE AD-HOC ACTION FOR THE SUPPORT OF AERONAUTICAL
                          FREQUENCY BANDS

DRAFT CONCLUSION 3/8:   SUPPORT OF ICAO POSITION FOR WRC-12

DRAFT CONCLUSION 3/9:   MID SURVEILLANCE WORKSHOP

DRAFT DECISION 3/10:   REVISED TOR OF THE CNS SUB-GROUP

PART II: REPORT ON AGENDA ITEMS

REPORT ON AGENDA ITEM 1:   ADOPTION OF THE PROVISIONAL AGENDA

1.1   The meeting reviewed the Provisional Agenda, and adopted it as at Para 6 of the History of the Meeting.

CNS SG/3
Report on Agenda Item 2

REPORT ON AGENDA ITEM 2:   FOLLOW-UP ON MIDANPIRG AND OTHER MEETINGS CONCLUSION AND DECISION RELEVANT TO CNS FIELD

2.1   The meeting recalled that MIDANPIRG/11 re-iterated the need for each MIDANPIRG subsidiary body to review the MIDANPIRG Conclusions/Decisions related to its Terms of Reference (TOR) and decide whether to maintain, remove or replace these Conclusions/Decisions with more up-to-date ones.

2.2   The meeting recalled that with a view to improve the efficiency of the process of follow-up of MIDANPIRG Conclusions and Decisions, MIDANPIRG/11 agreed to the following Conclusion:

CONCLUSION 11/1:   FOLLOW-UP ON MIDANPIRG CONCLUSIONS AND DECISIONS

That:

a) *States send their updates related to the MIDANPIRG follow up action plan to the ICAO MID Regional Office on regular basis (at least once every six months);*

b) *the MIDANPIRG subsidiary bodies review the appropriate actions/tasks of the MIDANPIRG follow up action plan and undertake necessary updates based on the feedback from States; and*

c) *ICAO MID Regional Office post the MIDANPIRG follow up action plan on the ICAO MID website and ensure that it is maintained up-to-date.*

2.3   While reviewing the conclusions and decision it was noted that participants of the meeting where not fully updated. Accordingly the meeting was of the view that States should designate Members for the CNS Sub-Group. Furthermore, the meeting was updated that MSG/2 meeting with a view to maintain the continuity in the activity of the MIDANPIRG subsidiary bodies and increase their efficiency, agreed that Members should be designated for the different MIDANPIRG subsidiary bodies. Accordingly, MSG/2 meeting agreed to the following Draft Conclusion:

DRAFT CONCLUSION 2/1:   INCREASING THE EFFICIENCY OF THE MIDANPIRG SUBSIDIARY BODIES

That, with a view to maintain the continuity in the activity of the MIDANPIRG subsidiary bodies and increase their efficiency:

a) *States be invited to nominate for each MIDANPIRG subsidiary body Experts/Specialists as Members of the body concerned to fully contribute to the work of this body; and*

b) *the specialists nominated for membership in a MIDANPIRG subsidiary body, act as focal points within their Civil Aviation Administration for all issues and follow-up activities related to the Work Programme of that body.*

2.4   The meeting noted the status of MIDANPIRG/11 Conclusions and Decisions relevant to the CNS field and the follow up actions taken by ANC, States, the secretariat and other parties concerned as at **Appendix 2A** to the Report on Agenda Item 2. The meeting agreed also to review the Conclusions and Decisions, which are still current, under the associated Agenda Items with a view to propose to MIDANPIRG/12 appropriate follow-up action (re-iterate, remove or replace these Conclusions/Decisions with more up-to-date ones or issue appropriate Proposals for Amendments to the MID ANP/FASID to reflect their content, etc).

2.5   As with regards to Conclusion 11/57 DIGITAL HIGH SPEED LINKS, the meeting agreed that this is to be included in the introduction text part of the MID FASID, so as to be used as guidance for the States while implementing the links.

2.6   The meeting while reviewing conclusions 11/62, 11/63 and 11/64 noted that States responses to ICAO State letter for the establishment of FANS Implementation Team (FIT) was very low and agreed that State to advise their position and support to the FIT before the CNS/ATM/IC SG/5 meeting   since   this meeting will be analyzing the FITS activities and achievements in implementation of FANS. In this regard it was proposed that instead of the FANS Implementation Team, Data link Implementation Group to be established and Bahrain, Egypt and Saudi Arabia form the nucleus working group to progress the implementation and present the outcome in first available opportunity.

2.7   The meeting noted that in accordance with the ICAO Business Plan and the requirements for performance monitoring, the MIDANPIRG Conclusions/Decisions and associated follow-up action plan should be formulated with clear tasks, specific deliverables and defined target dates. Accordingly, MSG/2 meeting agreed that each Draft Conclusion and Decision formulated by MIDANPIRG and its subsidiary bodies should respond clearly to the following four Questions (Why, What, Who and When "4-Ws"). The meeting agreed that all Conclusion and Decision will comply with 4-Ws requirement.

CNS SG/3
Appendix 2A to the Report on Agenda Item 2

EXTRACT OF FOLLOW-UP ACTION PLAN ON MIDANPIRG/11 CONCLUSIONS AND DECISIONS

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/1: **FOLLOW UP ON MIDANPIRG CONCLUSIONS AND DECISIONS** That, a) States send their updates related to the MIDANPIRG follow up action plan to the ICAO MID Regional Office on regular basis (at least once every six months); b) the MIDANPIRG subsidiary bodies review the appropriate actions/tasks of the MIDANPIRG follow up action plan and undertake necessary updates based on the feedback from States; and c) ICAO MID Regional Office post the MIDANPIRG follow up action plan on the ICAO MID website and ensure that it is maintained up-to-date.	Implement Conclusion	ICAO States Subsidiary Bodies ICAO	State Letter Updated Action Plan Updated Action Plan Updated follow up Action Plan posted on web	Every six months Every six months Every six months	Ongoing (To be closed)
DEC. 11/2: **REVISED MIDANPIRG ORGANIZATIONAL STRUCTURE** That, with a view to increase MIDANPIRG efficiency, MIDANPIRG Organizational Structure be updated as at **Appendix 4B** to the Report on Agenda Item 4.	Update the Procedural Hand Book and conduct the meetings of MIDANPIRG subsidiary bodies in accordance with the revised Structure	ICAO	Updated Procedural Handbook	Feb. 2009	Closed

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS

CONC. 11/3: **INCREASING THE EFFICIENCY OF MIDANPIRG**
 	
That, with a view to increase the efficiency of MIDANPIRG:
 	
a) States appoint an ICAO Focal Point Person(s) (ICAO-FPP) using the form at **Appendix 4E** to the Report on Agenda Item 4; who would:
 	
   i) ensure the internal distribution of all ICAO MID Office correspondences related to MIDANPIRG activities and the follow-up within civil aviation administration;
 	
   ii) follow up the ICAO MID Office postings of tentative schedule of meetings, MIDANPIRG follow up action plan, State Letters, working/information papers, reports of meetings, etc, on both the ICAO MID website and the MID Forum; and
 	
   iii) ensure that required action and replies are communicated to ICAO MID Regional Office by the specified target dates.
 	
b) ICAO MID Regional Office copy all correspondences related to MIDANPIRG activities to the designated ICAO-FPP as appropriate.
	Implement the Conclusion	ICAO States	State Letter (Reminder)
			
			List of ICAO FPP
				Apr. 2009
				
				Jun. 2009
					Actioned
					
					SL. 4 Sept.08 1st Reminder 20 Jan.09 2nd Reminder 22 Sept.09 Input received from 11 States (WP/4)
					
					(To be closed)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS

CONC. 11/4: **IMPROVING THE EFFICIENCY OF THE ICAO MID FORUM**
 	
That,
 	
a) Bahrain in coordination with ICAO:
 	
  i) explore ways and means for improving the efficiency of the ICAO MID Forum; and
 	
  ii) investigate the possibility of using the ICAO MID Forum for the posting of AIS publications by States
 	
b) States are urged to make use and take full benefit of the ICAO MID Forum
	Implement the Conclusion	ICAO
		 Bahrain
			Draft Feasibility Study
			
			 Improved MID Forum with new Functionalities
				Dec. 2009
				
				 Jun. 2010
					Ongoing
					
					 (To be closed)

CONC. 11/13: MID BASIC ANP AND FASID (DOC 9708) That, a) further to the approval of the Proposal for amendment of the MID Basic ANP 08/05-AOP, the ICAO MID Regional Office, on behalf of MIDANPIRG, initiate all necessary Amendment Proposals to the MID Basic ANP and FASID, prior to MIDANPIRG/12, in order to update the AIS, AOP, ATM, CNS and MET tables; and b) ICAO is to allocate sufficient resources and give high priority for the publication of Doc 9708 in English and Arabic languages, incorporating all approved Amendments.	Process Amendments Proposals to the MID Basic ANP and FASID Finalize and publish the approved version of Doc 9708	ICAO	Amendment Proposal issued Amendment Proposal approved and incorporated in the final version of Doc 9708 Final Version of Doc 9708 published	Mar. 2010 TBD	Ongoing
DEC. 11/23: **ESTABLISHMENT OF THE BAGHDAD FIR RVSM IMPLEMENTATION WORKING GROUP (BFRI WG)** That, the Baghdad FIR RVSM Implementation Working Group is established with Terms of Reference as at **Appendix 5.2G** to the Report on Agenda Item 5.2	Conduct the BFRI WG meetings	ICAO	Reports of the BFRI WG meetings	Aug. 2009	Actioned (To be closed)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
DEC. 11/24: MID REGION SSR CODE ALLOCATION STUDY GROUP (SSRCA SG) That, the MID Region SSR Code Allocation Study Group revised Terms of Reference are adopted as at **Appendix 5.2H** to the Report on Agenda Item 5.2.	Convene Study Group Meetings and discussions through correspondence	ICAO, SSCASG	Revised MID SSR Code Allocation system	May 2009	Actioned (To be closed)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/26: ADOPTION OF THE ORIGINATING REGION CODE ASSIGNMENT METHOD (ORCAM) IN THE MID REGION That, in order to improve the MID SSR Code Allocation System: a) the MID Region adopts the Originating Region Code Assignment Method (ORCAM). The MID Region will consider three ORCAM Participating Areas (PA); the number of PAs to be finalised based on studies of Regional traffic patterns and volume data, and coordination with adjacent ICAO Regions; b) the ICAO MID Regional Office take necessary action to obtain data from States and other ICAO Regions for the Study Group to complete its work; and c) in order to facilitate an effective analysis of the traffic statistics required for decision on PAs, MID FIRs provide traffic data in accordance with the format provided by the MID Regional Office.	Follow-up Collection of Data	ICAO, States	Adoption of the MID ORCAM Compilation of Data Study Group Report Electronic Communication Follow-up State Input	May 2009 Feb. 2009 Mar. 2009 Feb. 2009	Replaced and superseded by Draft Conclusion 3/2 of SSRCA SG/3
CONC. 11/27: SSR CODES SHARING IN THE MID REGION That, in order to increase the availability of SSR codes in the MID SSR code allocation system: a) the MID Region adopt the approach of "code sharing" between FIRs that are geographically adequately disparate and where directional assignment of SSR codes makes "code sharing" practical; b) the "code sharing" be implemented after an amendment of the MID ANP FASID to this effect has been approved, appropriate safety assessments have been carried out, and the concerned FIRs signed the relevant Letters of Agreement (LOA), except where a Regional arrangement obviates such action; and	Follow-up on aspects of the Draft Conclusion	States, ICAO	MIDANPIRG/11 Report FASID Amendment CNS SG Reports	Feb. 2009 May 2009 Nov. 2009	Replaced and superseded by Draft Conclusion 3/2 of SSRCA SG/3 Analysis completed

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
c) the CNS Sub-Group be requested to consider the feasibility of FDPS upgrades in the MID Region to further support SSR code sharing approach.					
CONC. 11/50: ESTABLISHMENT OF AN AIS AUTOMATION ACTION GROUP That, the AIS Automation Action Group is established with Terms of Reference as at **Appendix 5.3H** to the Report on Agenda Item 5.3.	Follow-up the activities of the Action Group	AIS/MAP TF ICAO	Feedback from the Action Group reported to the AIS/MAP TF/5	May 2009	Ongoing (proposed to be replaced by ATM/SAR/AIS SG/11 Draft Dec. 11/18)
CONC. 11/55: COMPLETION OF THE MID VSAT PROJECT That, following the successful implementation of Phase I of the MID VSAT project and in order to avoid the proliferation of the VSAT networks; MID States requiring VSAT connections may join the NAFISAT network project and participate in its steering Group.	Implement the Conclusion	ICAO States	Project closed	Feb. 2009	Actioned

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/56: UPDATE ADHOC ACTION GROUP MEMBERS AND PARTICIPATE IN NATIONAL AND REGIONAL ACTIVITIES RELATED TO WRC-11 That, a) MID States that have not nominated experts to the Adhoc Action Group are requested to do so as soon as possible; b) the Terms of Reference (TOR) of the Adhoc Action Group be revised as in **Appendix 5.4C** to the report on Agenda Item 5.4; and c) Civil Aviation Authorities, aviation spectrum experts to participate in the national and regional level activities related to WRC-11 in order to support ICAO Position for WRC-11.	State letter States assign members Communication and sharing of information between members	ICAO States	State Letter (Reminder) Updated list of members CNS SG Report	Jun. 2009 Nov. 2009	Replaced and superseded by Draft Conclusion 3/7 and 3/8 of CNS SG/3
CONC. 11/57: DIGITAL HIGH SPEED LINKS That, in support of ATN implementation, MID States are urged to continue with the implementation of digital high speed links.	Implement high speed links	States	CNS SG Report	Nov. 2009	Completed
DEC. 11/58: ESTABLISHMENT OF AN INTERNET PROTOCOL SUITE (IPS) WORKING GROUP That, an IPS Working Group is established with Terms of Reference as at **Appendix 5.4E** to the Report on Agenda Item 5.4.	Group Established Implement the work programme of the IPS working Group	ICAO States	State Letter List of WG members WG Report CNS SG Report	Jun. 2009 Nov. 2009	Replaced and superseded by Draft Conclusion 3/6 of CNS SG/3

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/59: FOLLOW-UP SPECIAL BAGHDAD FIR CO-ORDINATION MEETING (SBFCM) That, Iraq take the lead and assign resources for the implementation of the SBFCM follow-up action plan in full coordination the ICAO MID Regional Office and concerned MID States	Implement Conclusion	Iraq	Focal point Identification of resources Update of follow-up action plan	Mar. 2009 Apr. 2009 Every six months	Closed follow up by BFRI
CONC. 11/60: IMPLEMENTATION OF THE NEW ICAO MODEL FLIGHT PLAN FORM That, MID States: a) in order to comply with Amendment No. 1 to the 15th Edition of the PANS-ATM (Doc 4444), establish a Study Group to develop the technical audit guidance material and prepare a Regional Strategy for the transition; - the Study Group to follow the ICAO guidance for the implementation of Flight plan and Implementation check list in **Appendices 5.5B** and **5.5C** to the Report on Agenda Item 5.5; and b) implement the new ICAO model Flight Plan form by applicability date.	State Letter Study Group Established Follow-up with States	ICAO States Study group	State Letter Members of the Group Report of CNS and CNS/ATM/IC SG New FPL Implemented	Mar. 2009 Jun. 2009 Jan. 2010 Nov. 2012	Actioned (-SL AN 7/33 – 09/254; -INFL SG*/1 meeting held in Cairo 15-17 Feb.10) (To be closed)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/61: IFPS PROJECT SUPPORT That, a) MID State that have not yet designated focal points to do so and send their contact details to ICAO MID Regional Office prior to 30 June 2009; b) the IFPS focal points participate in the finalization of the feasibility study led by Bahrain for the implementation of an IFPS in the MID Region; and a) ICAO MID Regional Office request additional support from EUROCONTROL with view to benefit from their experience and expertise in the establishment of an IFPS, including development of a regulatory framework.	Designate focal points Follow up the progress on the finalization of the Study Coordination with EUROCONTROL	States ICAO Bahrain CNS SG CNS/ATM/IC SG	State Letter Updated list of focal points Report of CNS and CNS/ATM/IC SG Regulatory framework definition Final Study finalized	Mar. 2009 May 2009 Jan. 2010 TBD TBD	Actioned Eurocontrol provided information during the ATFM Seminar Bahrain will update during CNS/ATM/IC SG/5
DEC. 11/62: ESTABLISHMENT OF MID-FANS IMPLEMENTATION TEAM (FIT) That, MID-FIT is established with TOR as in **Appendix 5.5E** to the report on Agenda Item 5.5.	Notify States Conduct of MID-FIT	ICAO States and Organizations	State Letter MID-FIT members Report of CNS and CNS/ATM/IC SG	Mar. 2009 Jun. 2009 Jan. 2010	Ongoing (-SL AN 7/24 – 09/252; -Follow up action to be taken by CNS/ATM/IC SG/5)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/63: INTRODUCTION OF FANS 1/A CAPABILITIES IN THE MID REGION STABLISHMENT OF MID-FANS IMPLEMENTATION TEAM That, MID States, in coordination with users, are encouraged to consider implementing FANS 1/A (ADS-C/CPDLC) as appropriate to the desired operational outcome.	Follow-up on implementations activities	States Users Data link service providers	FANS 1/A implementation Feed Back from States and users CNS/ATM/IC SG Report	Jan 2010	Ongoing (Follow up action to be taken by CNS/ATM/IC SG/5)
DEC. 11/64: MID-FIT IMMEDIATE TASKS That, MID-FIT, reschedule the tasks that are essential for the implementation of FANS1/A in the MID Region, in coordination with AFIG.	Task rescheduled	MID-FIT CNS/ATM/IC SG	Task identified and rescheduled	Jan. 2010	Ongoing (Follow up action to be taken by CNS/ATM/IC SG/5)
CONC. 11/65: PROTECTION OF GNSS SIGNAL That, MID States with their names listed in the footnotes 5.362B and 5.362C are urged to take necessary measures to delete their names from these footnote as soon as possible in order to protect the GNSS signal.	State Letter State CAA Follow up with regulators	ICAO State	State Letter CNS SG Report Deletion of State Name from FN	Nov. 2009 On going	Closed

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
DEC. 11/66: **DISSOLUTION OF THE RVSM/PBN AND GNSS TASK FORCES AND ESTABLISHMENT OF THE PBN/GNSS TASK FORCE** That, taking into consideration the status of implementation of RVSM and PBN in the MID Region and the close inter-relationship between the PBN goals and GNSS implementation, and with in order to enhance the efficiency of MIDANPIRG, the RVSM/PBN and the GNSS Task Forces are dissolved and the PBN/GNSS Task Force is established with TOR as at **Appendix 5.5F** to the Report on Agenda Item 5.5.	Implement the PBN/GNSS TF Work Programme	ICAO States	PBN/GNSS TF Reports	Oct. 2009	Closed
CONC. 11/67: **STRATEGY FOR THE IMPLEMENTATION OF GNSS IN THE MID REGION** That, the Revised Strategy for implementation of GNSS in the MID Region is adopted as at **Appendix 5.5G** to the Report on Agenda Item 5.5.	Implement Strategy	PBN/GNSS TF State	PBN/GNSS 2 Report	Oct. 2009	Ongoing (To be replaced by PBN/GNSS TF/2 Draft Conc. 2/7)
CONC. 11/68: **GNSS STUDIES IN MID REGION** That, a) ICAO MID Regional Office Communicate with GSA/ESA for the provision of support and detailed studies on EGNOS Extension to the MID Region; b) MID States that are in position to support the cost benefit analysis to provide their experience through PBN/GNSS TF to MID Region; and c) MID States share experience gained during the GNSS implementation.	Follow-up State Letter Support to CB Sharing Exp.	ICAO MID States Lead by Saudi Arabia MID States	State Letter PBN/GNSS TF Report Experience from States and CBA Report WP/IP	Mar. 2009 Oct. 2009 Ongoing	Actioned (To be closed)

Conclusions and Decisions	Follow-up	To be initiated by	Deliverable	Target date	Remarks
CONC. 11/69: MID REGION STRATEGY FOR THE IMPLEMENTATION OF ADS-B That the MID Region Strategy for the implementation of ADS-B to be amended as at **Appendix 5.5H** to the Report on Agenda Item 5.5.	Implement Strategy	States, Users	CNS/ATM/IC SG Report	Jan 2010	Ongoing (Follow up action to be taken by CNS/ATM/IC SG)
CONC. 11/70: REGIONAL PERFORMANCE FRAMEWORK That, a) a regional performance framework be adopted on the basis of and alignment with the Global Air Navigation Plan, the Global ATM Operational Concept, and ICAO guidance material and planning tools. The performance framework should include the identification of regional performance objectives and completion of regional performance framework forms; and b) ALLPIRG/5 Conclusion 5/2: Implementation of Global Plan Initiatives (GPIs, be incorporated into the terms of reference of the MIDANPIRG subsidiary bodies	Follow up on Conclusion Update Regional performance objectives	ICAO, CNS/ATM IC SG MIDANPIRG	Adoption of Performance Framework approach and Regional Performance Objectives Updated Regional performance objectives	Feb. 2009 Ongoing	Actioned (National Performance Framework Workshop, held in Cairo, 1-5 Nov 09) (Follow up action to be taken by CNS/ATM/IC SG)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/71: NATIONAL PERFORMANCE FRAMEWORK That, MID States be invited to adopt a national performance framework on the basis of ICAO guidance material and ensure their alignment with the regional performance objectives, the Regional Air Navigation Plan and the Global ATM Operational Concept. The performance framework should include identification of national performance objectives and completion of national performance framework forms.	Follow up on Conclusion Update National performance objectives	ICAO, MIDANPIRG, States	Adoption of National performance framework approach Development of State Performance Objectives Updated Regional performance objectives	Feb. 2009 Nov. 2009 Ongoing	Actioned (National Performance Framework Workshop, held in Cairo, 1-5 Nov 09) (Follow up action to be taken by CNS/ATM/IC SG)
CONC. 11/72: PBN IMPLEMENTATION SUPPORT That, in order to address challenges in PBN implementation, stakeholders in the PBN implementation Air Navigation Service Providers (ANSP's), aircraft operators, user communities, etc.) be encouraged to provide support including resources to the States and ICAO PBN programme.	Communication of Conclusion to stakeholders and follow-up	ICAO, Stakeholders	State Letter Stakeholder Inputs	Feb. 2009 Ongoing	(To be closed)
CONC. 11/73: MID REGION PBN IMPLEMENTATION STRATEGY AND PLAN That, in order to provide direction to the Stakeholders in their strategic planning during the transition to full implementation of PBN: a) the Middle East Regional Strategy for Implementation of PBN is adopted as at **Appendix 5.5Q** to the Report on Agenda Item 5.5. b) The PBN Regional Implementation Plan is adopted as at **Appendix 5.5R** to the Report on Agenda Item 5.5.	Implementation of PBN Strategy and Plan	ICAO, States	Adoption by MIDANPIRG/11 State Letter PBN Implementation	Feb. 2009 Mar. 2009 Ongoing	(proposed to be replaced by PBN/GNSS TF/2 Draft Conc. 2/2)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/74: PBN STATE IMPLEMENTATION PLAN That, in order to give effect to Assembly Resolution A36-23: Performance based navigation global goals, MID States are urged to complete development of their individual State Implementation plans based on the regional PBN implementation plan by 30 September 2009 so that it may be reviewed by the ATM/SAR/AIS SG as part of the Regional agreement process.	Implement the Conclusion	States	State Implementation Plans PBN Implementation	Nov. 2009 Ongoing	(proposed to be replaced by PBN/GNSS TF/2 Draft Conc. 2/5)
CONC. 11/86: ELIMINATION OF AIR NAVIGATION DEFICIENCIES IN THE MID REGION That, a) States review their respective lists of identified deficiencies, define their root causes and forward an action plan for rectification of outstanding deficiencies to the ICAO MID Regional Office; b) States and Users Organizations use the online facility offered by the ICAO MID Air Navigation Deficiency Database (MANDD) for submitting online requests for addition, update and elimination of air navigation deficiencies; c) States increase their efforts to overcome the delay in mitigating air navigation deficiencies identified by MIDANPIRG and explore ways and means to eliminate deficiencies; d) ICAO continue to provide assistance to States for the purpose of rectifying deficiencies; and when required, States request ICAO assistance through Technical Co-operation Programme, Special Implementation Projects (SIP) and/or other available mechanisms such as IFFAS; and e) States are encouraged to seek support from regional and international organizations (i.e: ACAC, GCC, etc.) for the elimination of identified air navigation deficiencies.	Implementation of the Conclusion	States Users ICAO	Action plans for elimination of deficiencies Feedback from Users and States received through MANDD Assistance provided to States, as requested and as appropriate	May 2009 Ongoing Ongoing	Ongoing - SL AN2/2 – 10/024 of 21 Jan. 2010; - Further follow-up by ANS SG/1 meeting, scheduled for June 2010.

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/87: ENHANCEMENT OF MID STATES' CAPABILITIES FOR SAFETY OVERSIGHT That, in order to improve aviation safety in the MID Region; MID States are urged to: a) enhance their individual safety oversight capabilities and ensure the establishment and management of a sustainable safety oversight system, and b) cooperate bilaterally and/or jointly as a group of States to make the appropriate arrangements in order to strengthen their safety oversight capabilities.	Implementation of the Conclusion	States ANS SG	Feedback from States ANS SG/1 Report	2010	Ongoing (Further follow-up by ANS SG/1 meeting, scheduled for June 2010)

REPORT ON AGENDA ITEM 3:   REVIEW AND UPDATE OF AFTN/CIDIN DIRECTORY AND CNS PART OF MID ANP AND FASID (DOC 9708)

3.1   The meeting noted that the Routing Directory for AFTN/CIDIN Centers in the MID Region was last updated during CNS SG/2 meeting held in Cairo, 28-30 October 2008, it was also noted that with the implementation of the NAFISAT many circuits has been implemented.

3.2   The meeting recalled MIDANPIRG/11 Conclusion 11/57 *DIGITAL SPEED LINKS which inter alia*   encourage States to continue using digital high speed circuits between MID States centers using the state of the art digital technology and keep pace for implementing high speed digital links that will facilitate the transition to ATN.

3.3   The meeting also recalled that it was agreed to revise the rationalized AFTN Plan, taking into consideration the Region's progress towards the transition to ATN and improvements in most of the MID Region Centers, however the meeting agreed to delete the Rationalized AFTN Plan from the MID FASID and keep only the current updated AFTN Plan which was updated by IPS WG/2 and further updated by the meeting as at **Appendix 3A** to the Report on Agenda Item 3 and to be included in the next amendment proposal of the MID FASID.

3.4   The meeting noted that the CNS SG meetings were of the opinion that the process of updating the AFTN/CIDIN directory during the CNS SG meetings is not practical and recalled that it was already agreed that future updates be forwarded to ICAO MID Regional Office in order to maintain the directory updated, however no updates were received since CNS SG/2, consequently the meeting reviewed and updated the AFTN/CIDIN Directory which is at **Appendix 3B** to the Report on Agenda Item 3.

3.5   The meeting noted with appreciation that ICAO MID Regional Office with the support of EUROCONTROL conducted ATS messaging Management Centre (AMC) training in October 2009 at ICAO MID Regional Office, in order to support the AMHS implementations which are progressing well in the ICAO MID Region .

3.6   The meeting was informed that AMC has the facility to store/update the full AFTN/CIDIN directory. The AMC system also suggests optimal routing; however this function is available only for the European Region and not available for other Regions as these Regions are considered External com centers.

3.7   With the introduction of AMHS and new circuits, it was noted that the manual maintenance of the Routing Directory is getting difficult and even complicated. In Europe this function is performed by the AMC operator with the aid of routing software where AMC operators have a complete view of the network. It was further noted that AMC has a function to create an optimum Routing Table and this function can be used by the MID Region without additional development at AMC system but requires authorization from EUROCONTROL.

3.8   Based on the above, the meeting agreed that ICAO MID Regional Office request EUROCONTROL to extend the Routing directory function provided by the AMC system to the MID Region for updating and maintaining the MID Region AFTN/CIDIN directory and agreed to the following Draft Conclusion:

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DRAFT CONCLUSION 3/1: ***UPDATING THE AFTN/CIDIN DIRECTORY***

That, ICAO MID Regional Office request Authorization from EUROCONTOL to provide the routing function available in AMC to the MID Region.

3.9   The meeting agreed that upon agreement from EUROCONTROL for providing the additional functions to the MID region, ICAO MID Regional Office will submit the MID routing directory to EUROCONTROL for population in the AMC system, and will inform the MID States through State Letter.

3.10   The meeting noted with concern the blocking of the AFTN messages routing to "LL" areas which jeopardise safety. Furthermore the meeting also noted none implementation of Amman-Beirut circuit which obliged Amman to reroute most of the traffic through Cairo com center. In this regard the meeting urged concerned States to take necessary measures to fulfill their obligation and it was further agreed that a survey to be conducted for the MID Com center for the evaluation of the performance of the current exit/entry centers and results to be presented to the next ATN/IPS WG meeting for review and present recommendations to the next CNS SG meeting.

3.11   The meeting had lengthy discussions on the suggestion from Jordan for the establishment of the Amman – Europe circuit, in this regards the meeting supported the establishment of the circuit on bilateral basis and requested ICAO MID Regional office to provide the necessary support to Jordan for the establishment of the circuit and requested Jordan to present the performance and utilization of the circuit and present the results to the next CNS SG meeting.

3.12   The meeting noted that Afghanistan's accreditation and Air Navigation Plan (ANP) were transferred to the Asia Pacific Region (APAC) on 15 November 2008. Consequently the meeting agreed that Afghanistan planning material not related to the MID should be removed from the MID ANP and FASID Doc 9708.

3.13   The meeting noted that the Basic ANP and FASID are planning documents and may not necessarily reflect the existing facilities and services, therefore these documents are not to be used for operational purposes. The existing facilities and services should be shown in the AIPs published by States.

3.14   The meeting reviewed the current CNS part of the MID ANP and FASID and was of the view that with the recent advancement in air navigation system especially in the CNS area, it was necessary that a full review of the entire Part IV (CNS) of the MID Air Navigation Plan – Volume I (Basic ANP) is necessary in order to update the CNS parts to reflect the global developments and the current regional requirements for Communication, Performance Based Navigation and new surveillance systems.

3.15   Based on the above, the meeting reviewed the CNS part of MID BASIC ANP and developed a draft as at **Appendix 3C** which could be use as basis for a proposal for amendment of MID Basic ANP.

3.16   The meeting recalled that, MIDANPIRG/11, through Conclusion 11/13, agreed that the ICAO MID Regional Office, on behalf of MIDANPIRG, initiate all necessary Amendment Proposals to the MID Basic ANP and FASID, prior to MIDANPIRG/12, in order to update the AIS, AOP, ATM, CNS and MET Tables.

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3.17   Based on the above, the meeting reviewed the entire CNS part of the MID ANP FASID along with the introduction part "the text and the tables part" taking into consideration the deployment of the mode S radars which require the allocation of Interrogation Code IC, the development in the AFTN, AMHS and other Navigational tables.

3.18   The meeting developed new introduction for the part IV of the MID FASID as at **Appendix 3D** to the Report of Agenda Item 3 catering for major issues like the IC allocation in the introduction along with digital circuits implementation and Frequency allocation request form as a supplement

3.19   The meeting reviewed the following CNS tables in the MID FASID part IV and developed an updated version for each of the tables as follows:

- Table CNS 1C Aeronautical Telecommunication Network at **Appendix 3E** to the report on Agenda item 3.
- Table CNS 1D ATS Direct Speech circuits at **Appendix 3F** to the report on Agenda item 3.
- Table CNS 2 Aeronautical Mobile Service at **Appendix 3G** to the report on Agenda item 3
- Table CNS 3 Table of radio navigation Aids at **Appendix 3H** to the report on Agenda item 3.
- Table CNS 4 Surveillance systems at **Appendix 3I** to the report on Agenda item 3.

3.20   The meeting noted that the MID FASID does not include the AMHS Plan consequently the meeting agreed to include the AMHS implementation plan and addressing scheme as developed by the IPS WG/2 in the MID FASID as at **Appendix 3J** to the Report on Agenda Item 3.

3.21   Based on the above and noting the tremendous number of updates the meeting agreed that a one consolidated amendment proposal for processing by the MID Regional Office is prepared and circulated as per approved ICAO amendment procedures before incorporation in the MID BASIC ANP Doc 9708, and agreed to the following Draft Conclusion:

> *DRAFT CONCLUSION 3/2:*   *DRAFT PROPOSALS FOR AMENDMENT TO THE MID BASIC ANP AND FASID - DOC 9708, PART IV (CNS AND CNS 1, 2, 3, 4 TABLES)*
>
> *That, the ICAO MID Regional Office, on behalf of MIDANPIRG process Proposals For Amendment to the MID Basic ANP and FASID, Part IV –CNS as contained at **Appendices 3A-3J** to the Report on Agenda Item 3.*

3.22   The meeting was of the opinion that MID FASID should also contain the already assigned Interrogation Codes IC for the MID Modes S Radars as a supplement, furthermore the FASID should include the MID allocated 24bit address and the assigned codes.

TABLE CNS 1A - RATIONALIZED AFTN PLAN FOR MID REGION

(All circuits should be implemented using LTT)

EXPLANATION OF THE TABLE

Column:

1   The AFTN Centers/Stations of individual State are listed alphabetically. Each circuit appears twice in the table.

2   Category of circuit

M – Main trunk circuit connecting Main AFTN communication centers.
T – Tributary circuit connecting Main AFTN center and tributary center.
S – AFTN circuit connecting an AFTN Station to an AFTN center.

3 and **7** Type of circuit provided

LTT/a – Landline teletypewriter, analogue (eg. cable, microwave)
LTT/d – Landline teletypewriter, digital (eg. cable, microwave)
LDD/a – Landline data circuit, analogue (eg. cable, microwave)
LDD/d – Landline data circuit, digital (eg. cable, microwave)
SAT/ad – Satellite link, with/ a for analogue or d for digital

4 and **8** Circuit signaling speed, current or planned in bits/s

5 and **9** Circuit protocols, current or planned

6 and **10** Data transfer code (syntax), current or planned.

ITA-2 – International Telegraph alphabet No.2 (5-unit Baudot code).
IA-5 – International Alphabet No.5 (ICAO 7-unit code)
CBI – Code and Byte Independency (ATN compliant)

11   Target date of implementation TBD – To be determined

12   Remarks

TBL_CNS1.exp Final.doc

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	~~T~~ M										Bahrain ready
ABU DHABI	M		64 – 96 bps	CIDIN	IA-5			AMHS	CBI	~~1st~~ 3rd QTR 2010	
BEIRUT	T		9600 bps	CIDIN	IA-5	SAT/d					
DOHA	M		64 – 96 bps	None	IA-5						
JEDDAH	M		64 – 96 bps	~~None~~ CIDIN	IA-5			AMHS	CBI	~~1st~~ 3rd QTR 2010	
KABUL	T		--		IA-5						
KUWAIT	M		64 – 96 bps	None	IA-5		64k bps			~~1st~~ 3rd QTR 2010	
MUSCAT/~~SEEB~~	M		300 baud	None	IA-5		64k bps	AMHS	CBI	~~1st~~ 3rd QTR 2010	
SINGAPORE	M		9600 bps	None	IA-5						
TEHRAN	M		64 – 96 bps	None							
EGYPT											
CAIRO	M										
AMMAN	M		64/9.6	None	IA-5					2010	
ATHENS	T		64/9.6	CIDIN	IA-5					2010	
BEN GURION	M		64/9.6	None	IA-5					2010	
BEIRUT	M		9600	CIDIN	IA-5					2010	
JEDDAH	T		128/9.6	CIDIN	IA-5		128 K			2010	
KHARTOUM	M		9600	None	IA-5					2010	
NAIROBI	M		9600	None	IA-5					2010	
TUNIS	M		64/9.6	None	IA-5					2010	
TRIPOLI	M		64/19.2	None	IA-5						Backup
TRIPOLI	M		9600	None	IA-5					2010	
DAMASCUS	M		64/9.6	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
IRAN TEHRAN BAHRAIN KABUL KUWAIT ABU-DHABI	M T M		64 Kbps - 64 Kbps	None None	IA-5 IA-5	SAT/d					Bahrain ready
IRAQ BAGHDAD AMMAN BEIRUT	T T		- -	None None	IA-5 IA-5						
JORDAN AMMAN BAGHDAD BEIRUT BEN GURION CAIRO DAMASCUS JERUSALEM JEDDAH	T M T M T M T S T		- - 1200 64/9.6 64/9.2 64/19.2	- - None None None None	- - IA-5 IA-5 IA-5 IA-5	- -			2010 2010	Circuit not operational	

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

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
			50 BD
			100 baud
			~~100 baud~~ 64/9.6 bps
			
			2.4 K
			64/9.6 baud
			9.6 bps
				
				None
				None
				None
				None
				
				None
				None
				None
					
					I~~T~~ A-5
					ITA-2
					ITA-2
					ITA-2 5
					
					ITA-2 5
					ITA-2 5
					ITA-2 5
						
						LDD/d
						LDD/d
							
							64/9.6 kbps
							64/9.6 kbps
									
									IA-5
									IA-5
										
										July 2010
										July 2010
											
											In progress
											In progress

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						

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
QATAR											
DOHA											
BAHRAIN	M		9600	None	IA-5						
KUWAIT	M		100 BD	None	ITA-2						
ABU DHABI	T		9600	AMHS							
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/SEEB	M		300	None	ITA-2		9600			2010	
SANA'A	T		9600	None	IA-5						
AMMAN											
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	
UAE											
ABU DHABI											
BAHRAIN	M		64 – 96 bps	CIDIN	IA-5			AMHS	CBI		
AMMAN	T		2 MG bps	AMHS							
MUSCAT	M				IA-5						
QATAR			9600 bps	None							
TEHRAN	M		64 – 96 bps	None	IA-5			AMHS	CBI		

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
YEMEN SANA'A JEDDAH MUSCAT	M M		9600 9600	None None	IA-5 IA-5						

INTERNATIONAL CIVIL AVIATION ORGANIZATION
MIDDLE EAST OFFICE

Routing Directory for

AFTN and CIDIN Centres

in the MID Region

Version 0.4 -May 2010

IV-1

Part IV

DRAFT - Communications, Navigation and Surveillance (CNS)

INTRODUCTION

1.   This part of the Middle East (MID) Basic Air Navigation Plan contains elements of the existing planning system and introduces the basic planning principles, operational requirements and planning criteria related to communications, navigation and surveillance (CNS) as developed for the MID region.

2.   As a complement to the Statement of Basic Operational Requirements and Planning Criteria (BORPC) set out in Part I, Part IV constitutes the stable guidance material considered to be the minimum necessary for effective planning of CNS facilities and services in the MID region. A detailed description/list of the facilities and/or services to be provided by States in order to fulfil the requirements of the plan is contained in the MID Facilities and Services Implementation Document (FASID). During the transition and pending full implementation of the future communications, navigation and surveillance/air traffic management (CNS/ATM) system, it is expected that the existing requirements will gradually be replaced by new CNS/ATM system-related requirements. Further, it is expected that some elements of CNS/ATM system will be subject to amendment, as necessary, on the basis of experience gained in their implementation.

3.   The Standards, Recommended Practices and Procedures to be applied are contained in:

   a)   Annex 10 — *Aeronautical Telecommunicati*ons, Volumes I, II, III, IV and V;

   b)   Annex 6 — *Operation of Aircraft*, Parts I (Chapter 7), II (Chapter 7) and III (Chapter 5);

   c)   Annex 11 — *Air Traffic Services,* Chapter 6; and

   d)   *Regional Supplementary Procedures* (Doc 7030).

4.   The elements of the material referred to above are presented in the following paragraphs with appropriate cross-references to recommendations and/or conclusions of MID meetings.

COMMUNICATIONS

General

5.   The main function of communication systems is to provide for the exchange of aeronautical voice, text and/or data between users or automated systems (for data). The infrastructure used for communications can also be used in support of specific navigation and surveillance functions.

6.   There are basically two categories of aeronautical communications:

   a)   safety-related communications requiring high integrity and rapid delivery:

1)   air traffic services communications (ATSC) carried out between air traffic service (ATS) units and aircraft for air traffic control (ATC), flight information, alerting, etc.;

2)   aeronautical operational control (AOC) communications carried out by aircraft operators on matters related to safety, regularity and efficiency of flights; and

b)   non-safety related communications:

1)   aeronautical administrative communications (AAC) carried out by aeronautical personnel and/or organizations on administrative and private matters;

2)   aeronautical passenger communications (APC).

7.   In general, communication systems used in the CNS/ATM systems are capable of carrying both of the above-mentioned categories. However, safety-related communications shall always have priority over non-safety ones.

Aeronautical fixed service (AFS)

8.   The AFS comprises:

a)   the aeronautical fixed telecommunication network (AFTN);

b)   data communications subnetworks and associated systems supporting the ground ground applications of the aeronautical telecommunication network (ATN), namely the ATS message handling services (AMHS) and inter-centre communications (ICC);

c)   gateways enabling inter-operation (to the extent possible) between a), and b) above;

d)   ATS voice communication circuits and networks; and

e)   aeronautical broadcast systems (e.g. for dissemination of world area forecast system (WAFS) products).

9.   States ~~should~~ are encouraged to providecircuits based on Aeronautical Telecommunication Network (ATN) ~~High grade aeronautical network based on Aeronautical Telecommunication Network (ATN)~~

10.   The modulation rates of circuits connecting main AFTN communication centres should be not less than 300 bauds. Additional capacity required to meet regionally agreed transit times should be obtained by increasing the modulation rate, increasing the number of channels that comprise the circuit or providing additional circuits, as bilaterally agreed between administrations concerned. [MID/3, Rec. 4.1/12] and should be based on (ATN)

11.   The data transmission capacity of circuits connecting tributary AFTN communication centres to main AFTN communication centres should be determined by bilateral agreement in the light of the volume of data to be transmitted, circuit loading and the need to meet regionally agreed transit times. [MID/3, Rec. 4.1/12]

12.   To achieve the required performance:

a)   the international circuits forming part of the AFTN plan in the MID region should be highly reliable circuits such as microwave, satellite or cable. The use of international

circuits leased from a Post Telephone and Telegraph (PTT) authority and/or RPOA
should be extended to the respective aeronautical telecommunications facilities by links
of high reliability and quality;

b)   ~~the main AFTN~~ communication centres should operate in a fully automatic mode; and

c)   the circuits interconnecting ~~main AFTN~~ communication centres equipped with automatic
switching should be operated using AMHS protocol and based on ATN

13.

All MID States ~~to~~ implement a fully automated systems for message switching ~~and~~ handling and should
be capable of integration with the different ATM systems using digital information network that will be
catering for the System Wide Information Management (SWIM), where SWIM will enable increased
common situational awareness and deliver the right information to the right place at the right time.

14.   Associated terminal equipment should be installed or maintained in operation at the
locations shown as tributary ~~AFTN~~ communication centres and stations in FASID Table CNS 1 and Chart
CNS 1.
[\

15.   States should take note of the increasing availability in the region of high grade and high
reliability common carrier communications, inclusive of satellite communication services, and
transfer, wherever practicable and economically feasible, to high speed digital circuits using State of the
ART technology with adequate security.

16.   States should ensure that telecommunication agencies engaged in providing aeronautical
circuits be impressed of the need for high reliability terrestrial links connecting aeronautical facilities
and common carrier terminals, inclusive of priority restoration of service commensurate with the
requirements of a safety service and rapid restoration of circuits in the event of breakdown.
[ASIA/PAC/3, Conc. 10/1; MID/3, Rec. 4.1/1 b)]

17.   The entry/exit points:

a)   between ASIA and MID should be Mumbai, Karachi and Singapore;

b)   between MID and ASIA should be Bahrain, Kuwait and Muscat~~/Seeb~~;

c)   between MID and EUR should be Beirut, Cairo and Kuwait;

d)   between EUR and MID Should be Athens and Nicosia

e)   between MID and AFI should be Cairo and Jeddah.
f)   between AFI and MID should be Addis Ababa, Cairo and Tunis

ATS speech circuits

18.   States should provide LTF on all AFS circuits to be used for international direct ATS speech
communications. [MID/3, Rec. 4.1/19]

Satellite broadcast

19.   WAFS products should be disseminated in the MID region by satellite broadcast as part of the AFS.

20.   The satellite broadcast to serve the MID region is the satellite distribution system for information relating to air navigation (SADIS) provided by the world area forecast centre (WAFC) London. The area to be served by the SADIS is given in Part VI — MET and in FASID Chart CNS 1E.

         *Note.— Area covered by SADIS is WAFS service areas 1, 4, 6 and 7 with western parts of service area 2 being the "footprint" of INTELSAT 604 located over the Indian Ocean, i.e. longitude from 20*EW *to 140*EE. [LIM/MID (COM/MET/RAC), Rec. 6/12]

Aeronautical mobile service (AMS)

21.   The AMS comprises:

         a)   air-ground voice and data communication systems;

         b)   air-to-air voice (and data as applicable) communication systems; and

         c)   ground-to-air broadcast systems.

22.   States should employ selective calling (SELCAL) systems at HF aeronautical stations and wherever possible and necessary, on VHF/GP frequencies, take all necessary technical measures to ensure the satisfactory operation of the system and, when establishing a SELCAL facility, notify users by publication of the appropriate information. [MID/3, Conc. 4.2/15]

VHF aeronautical mobile service facilities plan

23.   The civil aviation authorities concerned in ITU Region 3 should urge their radio frequency licensing authorities to take urgent action for the release of the frequencies in the band for aeronautical mobile (R) service purposes. [MID/SEA, Rec. 17/4]

24.   States are encouraged to permit aircraft operating agencies to establish VHF operational control channels and where such channels are provided, States concerned should:

         a)   select frequencies in so far as practicable from the upper end of the sub-band 128.825–132.025 MHz and in sequential order, so as to provide uniformity between AFI, ASIA and EUR regions in this matter;

         b)   ensure that at no time ATC service frequencies are left unguarded by the flight crews; and

         c)   advise the appropriate ICAO Regional Offices of the assignments for promulgation. [MID/3, Conc. 4.2/14]

25.   States should study the feasibility of clearing the channel 128.95 MHz for exclusive use as an air-to-air communications channel. [MID/3, Rec. 4.2/8]

26.   States should coordinate with the ICAO Regional Offices concerned all radio frequency assignments for both national and international facilities in the 117.975–137 MHz band. Because of the need to protect existing radio frequency assignments, frequencies for new requirements and

frequency changes for existing requirements should be coordinated with the ICAO Regional Offices concerned prior to implementation of such frequencies. States should report complete and accurate data for inclusion in the frequency list of the ICAO Regional Offices concerned. Based on the information provided for this purpose by the States, the ICAO Regional Offices concerned should issue periodically a list or lists of frequencies in the 117.975–137 MHz band.

Note.— Beginning in 1990, the band 117.975–137 MHz will be available for aeronautical mobile service. AM(R)S. Six countries in the MID region also allocate this band to the AM(OR)S (RR 5.202).

HF en-route communications

27.   FASID Table CNS 2 contains only the appropriate designator(s) of the HF network(s) to be available at the aeronautical stations indicated, without reference to the discrete frequencies of such network(s). The inclusion of a network designator applicable to a given aeronautical station is to be interpreted as indicating that all frequencies of that network are assigned to that station, which may implement any desired number of frequencies of that family, based on propagation pertinent to the service range, and diurnal, seasonal and sun-spot cycle conditions, without further coordination with ICAO. Frequencies guarded must be adequate to permit communications with aircraft anywhere within the area served. Except for diurnal changes, the operational status of discrete frequencies should be reflected in the State's Aeronautical Information Publication. The implementation or discontinuance of guard on discrete HF frequencies should be announced to all aeronautical stations operating on the network concerned, and to the users, and should be promulgated by AIRAC NOTAM. [MID/3, Rec. 4.2/2] to be revised by the meeting

Aircraft reporting time schedules

28.   When the provisions of Annex 10, Volume II, 5.2.2.2.4 or 5.2.2.3.1.2 are applied, reporting schedules for transmission of position reports and "Operations Normal" reports (if employed) should be designated after correlation between the appropriate aeronautical stations so as to ensure minimum conflict for the network operations.

Note.— When applied in association with Annex 10, Volume II, 5.2.2.2.4, the designation of reporting times will be done by a "Regular Station". Application in association with 5.2.2.3.1.2 of Annex 10, Volume II, will result in the designation being made by the network station with which the aircraft makes its preflight check or its initial contact after take-off.

NAVIGATION

General

29.   The aeronautical radio navigation plan comprises all facilities that provide navigation support to en-route, terminal, approach, landing and surface movement operations.

30.   The growing number of modern aircraft equipped with area navigation (RNAV) and the increasing emphasis on Performance Based Navigation (PBN) ~~required navigation performance (RNP)~~ result in more flexible route selection and less dependence on any particular type of navigation system. Nevertheless, every single radio navigation facility must operate in strict conformance with the applicable standards.

31.   It is foreseen that the provision of radio navigation services will gradually transition from ground-based to satellite-based system. The global navigation satellite system (GNSS) is the

generic term used for the satellite-based aeronautical radio navigation systems. Existing and/or emerging navigation satellite constellations and their associated satellite-based, aircraft-based and ground-based augmentation systems (SBAS, ABAS and GBAS, respectively) all form elements of the GNSS.

32.   States should coordinate with the ICAO Regional Offices concerned all radio frequency assignments for both national and international facilities in the LF/MF, 108–117.975 MHz and 960–1215 MHz bands. Because of the need to protect existing radio frequency assignments, frequencies for new requirements and frequency changes for existing requirements should be coordinated with the ICAO Regional Offices concerned prior to implementation of such frequencies. States should report complete and accurate data for inclusion in the frequency list of the ICAO Regional Offices concerned. Based on the information provided for this purpose by States, the ICAO Regional Offices concerned should issue periodically a list or lists of frequencies in the LF/MF, 108–117.975 MHz and 960–1215 MHz bands assigned to national and international aeronautical radio navigation facilities. [MID/3, Rec. 4.3/4]

33.   States with expertise and capability in frequency management and assignment should make their expertise and capability known to the ICAO office serving the MID region, and cooperate in the establishment of an appropriate computer-assisted frequency management and assignment capability in the MID region. [MID/3, Rec. 5/39] There are 3 options one use the ICAO developed and other to use the EUR developed or we can use the coordination tool from EUR and allocation from ICAO.

34.   Where different systems are used for navigation and position determination within the same controlled airspace, the ground facilities involved should be collocated and/or oriented so as to provide compatible flight paths and ensure, as far as practicable, a fully integrated ATC pattern. [ASIA/PAC/3, Conc. 14/21]

SURVEILLANCE

General

35.   The aeronautical surveillance plan comprises all facilities, systems and procedures that support the provision of aircraft position information to ATS units.

36.   Traditionally, aeronautical surveillance has been performed by means of voice position reporting, primary surveillance radar (PSR) or secondary surveillance radar (SSR). SSR Mode S ground stations have been implemented in several parts of the world and their operation depends on properly equipped aircraft (i.e. Mode S transponder with assigned 24-bit address). An inherent feature of the SSR Mode S (for surveillance and/or data link) is the unique 24-bit aircraft address assigned to each aircraft, and a worldwide scheme for allocation, assignment and operation of such addresses is already in place (Annex 10, Volume III, Part I, Chapter 9 refers).

37.   However, advances in aeronautical data links and on board navigation systems now allow for aircraft to transmit their position and other information to the appropriate ATS units, or even broadcast such information. These systems have been designated as automatic dependent surveillance (ADS), which is based on a contact between the ATS unit and aircraft, and ADS-broadcast (ADS-B), which allows other craft and ground systems within its area of coverage to receive the information.

38.   It is envisaged that the use of ADS/ADS-B will gradually increase, especially in areas where the provision of radars is not practical or economical. It is also foreseen that the use of PSR for international civil aviation operations will diminish.

39.   The plan and operational requirements for surveillance are contained in FASID Table CNS 4.

40.   Surveillance systems for terminal and en-route ATC purposes should be installed, maintained and operated at those international aerodromes and en-route area control centres whenever it is necessary to improve the safe and expeditious handling of air traffic and where the traffic density and associated complexity of operation, system delays, meteorological conditions and/or transition from oceanic to continental airspace would justify these installations. [ASIA/PAC/3, Rec 5/28]

Implementation of surveillance systems

41.   Implementation of surveillance systems should be pursued as an enhancement to ATS where so required and the use of SSR alone in accordance with the procedures in Doc 7030, should be considered as a cost-effective alternative to PSR. [ASIA/PAC/3, Rec.14/20]

Secondary surveillance radar

42.   Details of the implementation and planning for the provision of ATC radar facilities are presented in FASID Table CNS 4.

Automatic dependent surveillance

43.   States should closely cooperate in the development of procedures for the implementation of ADS in the MID region and participate to the extent possible in trials and demonstrations related to the implementation of ADS. [ASIA/PAC/3, Conc. 14/21]

44. MID States, in coordination with airspace users, should consider the implementation of ADS for providing surveillance in areas in which the provision of radar is not feasible or economical

45. MID States which have not already done so should establish, as a matter of urgency, application of the ICAO procedures for the assignment of 24-bit aircraft addresses.

ATS surveillance system. A generic term meaning variously, ADS-B, PSR, SSR or any comparable ground-based system that enables the identification of aircraft.
Note.— A comparable ground-based system is one that has been demonstrated, by comparative assessment or other methodology, to have a level of safety and performance equal to or better than monopulse SSR.[DOC 4444]

Multilateration (MLAT) System. A group of equipment configured to provide position derived from the secondary surveillance radar (SSR) transponder signals (replies or squitters) primarily using time difference of arrival (TDOA) techniques. Additional information, including identification, can be extracted from the received signals.(Details on MLAT are available in Annex 10 Vol IV)

MID FASID - CNS   **E 4-0-1**

Part IV

COMMUNICATIONS - NAVIGATION - SURVEILLANCE (CNS)

1. Introduction

1.1 The standards, Recommended Practices and Procedures to be applied are as listed in Part IV - CNS of the basic MID ANP. The material in this Part complements that contained in Part I - BORPC of the MID ANP and should be taken into consideration in the overall planning processes for the MID Region.

1.2 This Part contains a detailed description/list of the facilities and/or services to be provided to fulfil the basic requirements of the Plan and are as agreed between the provider and user States concerned. Such agreement indicates a commitment on the part of the State(s) concerned to implement the requirement(s) specified. This element of the FASID, in conjunction with the MID Basic ANP, is kept under constant review by the MIDANPIRG in accordance with its schedule of management, in consultation with user and provider States and with the assistance of the ICAO Middle East Regional Office, Cairo.

1.3 States concerned should take urgent action to implement the main COM centres and trunk circuits of the new rationalized AFTN plan described in FASID Table CNS 1A, and implement/promulgate, as soon as practicable, the tributary centres and circuits of the new rationalized AFTN plan in co-ordination with the States responsible for the corresponding main COM centres (MID/3 Rec. 5/37LIM MID (COM/MET/RAC Rec 6/6).

1.4 States, as a matter of urgency should take action to implement the ATS direct speech plan. Adequate backup facility shall be provided to insure the continuity of the circuit. (FASID Table CNS 1D)

1.5 Where ~~In case~~ ~~means~~ other than dedicated bilateral links are used by the MID-ATN Network, the priority of implementation, should ensure high availability, in restoration of service and appropriate levels of security.

1.6 States are encouraged to deploy digital and high-speed links, as part of overall improvement of current ground-to-ground communications and provision of an infrastructure that would facilitate the transition to ATN

1.7 States should implement ATN routers and communication links in accordance with ATN Plan Table CNS 1C – ATN Plan.

1.8 taking into account that the use of global communications, navigation and surveillance systems is based on assigning exclusive aircraft addresses composed of 24-bit for ACAS, ELT, SSR Mode S, and ATN with VDL, AMSS and other functionality, MID States to apply the procedure established by ICAO to identify aircraft assigned 24-bit aircraft addresses in accordance with Annex 10,

Volume III, Part I, Chapter 9, Global plan for the allocation, assignment and application of aircraft addresses which has the list of assigned addresses to MID States.

2. Table of contents

Chart CNS 3A - En-route radionavigation aids

Chart CNS 3B - Aids to final approach and landing

2.3 *Surveillance*

2.3.1 Table CNS 4 - Surveillance Systems

Chart CNS 4 - Radar facilities

MID FASID – CNS 1C   **4-CNS 1C-1**

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)

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TABLE CNS 1C - ATN PLAN

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
~~Afganistan~~ ~~Kabul~~	~~AMHS~~	~~IS~~						
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**		**X**	Kuwait, Bahrain Afganistan			
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/~~Seeb~~**	AMHS/S AIDC	**BIS**		**X**	**ASIA/PAC** Yemen, Bahrain, UAE, Saudi Arabia			
QATAR **Doha**	AMHS AIDC	IS			Kuwait, Bahrain			

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
SAUDI ARABIA **Jeddah**	AMHS/S AIDC	**BIS**		**X**	**AFI** Egypt, Lebanon Bahrain,Oman Yemen			
SYRIA **Damascus**	AMHS	IS			Jordan, Lebanon			
U.A.E **Abu Dhabi**	AMHS/S AIDC	**BIS**		**X**	Bahrain,Oman, Qatar			
YEMEN **Sana'a**	AMHS	IS			Oman, Saudi Arabia			

TABLE CNS1C-new

MID FASID – CNS 1D 4-CNS 1D-1

TABLE CNS 1D C ATS DIRECT SPEECH CAPABILITY TO LINK ADJACENT FIC/ACC AND ATS UNITS LOCATED OUTSIDE THE CONTROL AREAS OF THESE FIC OR ACC OR BETWEEN TWR FOR MID REGION

EXPLANATION OF THE TABLE

Column

1 & 2   Terminal stations of the circuits are listed alphabetically by the Terminal I station in country order.

3   A   - indicates ATS requirement for voice communication which should be established within 15 seconds.
         D   - indicates requirement for instantaneous communications.

4   Type of service specified:

         LTF   - landline telephone (landline, cable UHF, VHF, satellite).
         RTF   - radiotelephone

5   DIR   - indicates that the circuit shown in Terminal I and II is a direct circuit.
SW C indicates that a direct circuit does not exist and that the requirement is to be provided by switching via the switching centre(s) indicated in column 6.
         IDD   - International direct dialing by public switch telephone network

6   Location of switching centre(s)

7   Status of Implementation. Following codes are used in this column:

         a)   I - if the circuit is implemented
         b)   No indication or mark if the circuit is not implemented and its implementation data is unknown
         c)   If the circuit is not implemented but its implementation date is available, this date is indicated in brackets.

8   Remarks
         Note.C All circuits should be implemented using LTF in MID Region.

ATS REQUIREMENTS FOR SPEECH COMMUNICATIONS BESOINS ATS DE COMMUNICATIONS VOCALES REQUISITOS ATS PARA COMUNICACIONES ORALES				CIRCUIT CIRCUITO		STATUS OF IMPLEMENTATION ESTADO DE IMMPLANTACION	REMARKS OBSERVATIONS OBSERVACIONES
TERMINAL I TÊTE DE LIGNE I ESTACIÓN TERMINAL I	TERMINAL II TÊTE DE LIGNE II ESTACIÓN TERMINAL II	TYPE TIPO	SERVICE SERVICIO	DIR/SW	TO BE SWITCHED VIA COMMUTATION VIA CONMUTACIÓN POR		
1	2	3	4	5	6	7	8
~~AFGHANISTAN~~							
~~Kabul~~	~~Ashgabat~~	~~A~~	~~LTF~~	~~DIR~~		~~I~~	
	~~Dushanbe~~	~~A~~	~~LTF~~	~~DIR~~		~~I~~	
	~~Karachi~~	~~A~~	~~LTF~~	~~DIR~~		~~I~~	
	~~Lahore~~	~~A~~	~~LTF~~				
	~~Tehran~~	~~A~~	~~LTF~~	~~DIR~~			
	~~Peshawar~~	~~A~~	~~LTF~~				
~~ARMENIA~~							
~~Yerevan – Zvartnots~~	~~Tehran~~	~~A~~	~~LTF~~				
BAHRAIN							
Bahrain	Emirates ACC	A	LTF	DIR		I	~~2I+1~~ 2 LINES
	Dammam	A	LTF	DIR		I	
	Doha	A	LTF	DIR		I	2 LINES
	Jeddah	A	LTF	DIR		I	2 LINES
	Kuwait	A	LTF	DIR		I	
	Muscat/~~Seeb~~	A	LTF	DIR		I	
	Riyadh	A	LTF	DIR		I	
	Shiraz	A	LTF				
	Tehran	A	LTF	DIR		I	
~~CYPRUS~~							
~~Nicosia~~	~~Beirut~~	~~A~~	~~LTF~~	~~DIR~~		~~I~~	
	~~Cairo~~	~~A~~	~~LTF~~	~~DIR~~		~~I~~	
	~~Damascus~~	~~A~~	~~LTF~~				
	~~Tel Aviv~~	~~A~~	~~LTF~~				
~~DJIBOUTI~~							
~~Djibouti~~	~~Aden~~	~~A~~	~~LTF~~				
	~~Sana'a~~	~~A~~	~~LTF~~				

ATS REQUIREMENTS FOR SPEECH COMMUNICATIONS BESOINS ATS DE COMMUNICATIONS VOCALES REQUISITOS ATS PARA COMUNICACIONES ORALES				CIRCUIT CIRCUITO		STATUS OF IMPLEMENT ATION ESTADO DE IMMPLANTA CION	REMARKS OBSERVATIONS OBSERVACIONES
TERMINAL I TÊTE DE LIGNE I ESTACIÓN TERMINAL I	TERMINAL II TÊTE DE LIGNE II ESTACIÓN TERMINAL II	TYPE TIPO	SERVICE SERVICI O	DIR/S W	TO BE SWITCHED VIA COMMUTATIO N VIA CONMUTACIÓ N POR		
1	2	3	4	5	6	7	8
EGYPT							
Cairo	Amman	A	LTF	DIR		I	
	Athens	A	LTF	DIR		I	
	Jeddah	A	LTF	DIR		I	
	Khartoum	A	LTF				
	Nicosia	A	LTF	DIR		I	
	Tel Aviv	A	LTF	DIR		I	
	Tripoli	A	LTF	DIR		I	
~~**ERITREA**~~							
~~Asmara~~	~~Jeddah~~	~~A~~	~~LTF~~	~~DIR~~		~~I~~	
	~~Sana'a~~	~~A~~	~~LTF~~				
~~**ETHIOPIA**~~							
~~Addis Ababa~~	~~Jeddah~~	~~A~~	~~LTF~~	~~DIR~~		~~I~~	
	~~Sana'a~~	~~A~~	~~LTF~~				
~~**GREECE**~~							
~~Athens~~	~~Cairo~~	~~A~~	~~LTF~~	~~DIR~~			
~~**INDIA**~~							
~~Mumbai~~	~~Muscat~~	~~A~~	~~LTF~~	~~DIR~~			
	~~Sana'a~~	~~A~~	~~LTF~~				
IRAN (ISLAMIC REPUBLIC OF)							
Abadan	Basrah	A	LTF				
	Shiraz	A	LTF	DIR			
Shiraz	Abadan	A	LTF	DIR			
	Bahrain	A	LTF	DIR			
	Basrah	A	LTF				
	Doha	A	LTF	DIR			
	Karachi	A	LTF	DIR			
	Kuwait	A	LTF	DIR			
	Tehran	A	LTF	DIR			

ATS REQUIREMENTS FOR SPEECH COMMUNICATIONS BESOINS ATS DE COMMUNICATIONS VOCALES REQUISITOS ATS PARA COMUNICACIONES ORALES				CIRCUIT CIRCUITO		STATUS OF IMPLEMENTATION ESTADO DE IMMPLANTACION	REMARKS OBSERVATIONS OBSERVACIONES
TERMINAL I TÊTE DE LIGNE I ESTACIÓN TERMINAL I	TERMINAL II TÊTE DE LIGNE II ESTACIÓN TERMINAL II	TYPE TIPO	SERVICE SERVICIO	DIR/SW	TO BE SWITCHED VIA COMMUTATION VIA CONMUTACIÓN POR		
1	2	3	4	5	6	7	8
Tehran	Emirates ACC	A	LTF	DIR		I	1I
	Ankara	A	LTF	DIR		I	
	Ashgabat	A	LTF	DIR		I	
	Baghdad	A	LTF				
	Bahrain	A	LTF	DIR		I	
	Baku	A	LTF	DIR		I	
	Basrah	A	LTF				
	Doha	A	LTF	DIR		I	
	Kabul	A	LTF				
	Karachi	A	LTF	DIR		I	
	Kuwait	A	LTF	DIR		I	
	Muscat	A	LTF	DIR		I	
	Shiraz	A	LTF	DIR		I	
	Yerevan/Zvartnots	A	LTF	DIR			
IRAQ							
Baghdad	Amman	A	LTF				
	Ankara	A	LTF				
	Basrah	A	LTF				
	Damascus	A	LTF				
	Jeddah	A	LTF				
	Kuwait	A	LTF				
	Mosul	A	LTF				
	Tehran	A	LTF				
Basrah	Abadan	A	LTF				
	Baghdad	A	LTF				
	Kuwait	A	LTF				
	Shiraz	A	LTF				
	Tehran	A	LTF				
Mosul	Baghdad	A	LTF				
ISRAEL							
Tel Aviv	Amman	A	LTF				
	Cairo	A	LTF				
	Nicosia	A	LTF				

3F-4

ATS REQUIREMENTS FOR SPEECH COMMUNICATIONS BESOINS ATS DE COMMUNICATIONS VOCALES REQUISITOS ATS PARA COMUNICACIONES ORALES				CIRCUIT CIRCUITO		STATUS OF IMPLEMENTATION ESTADO DE IMMPLANTACION	REMARKS OBSERVATIONS OBSERVACIONES
TERMINAL I TÊTE DE LIGNE I ESTACIÓN TERMINAL I	TERMINAL II TÊTE DE LIGNE II ESTACIÓN TERMINAL II	TYPE TIPO	SERVICE SERVICIO	DIR/SW	TO BE SWITCHED VIA COMMUTATION VIA CONMUTACIÓN POR		
1	2	3	4	5	6	7	8
JORDAN							
Amman	Baghdad	A	LTF				
	Cairo	A	LTF				
	Damascus	A	LTF				
	Jeddah	A	LTF				
	Tel Aviv	A	LTF				
KUWAIT							
Kuwait	Baghdad	A	LTF				
	Bahrain	A	LTF	DIR		I	
	Basrah	A	LTF				
	Jeddah	A	LTF	DIR		I	
	Shiraz	A	LTF	DIR		I	
	Tehran	A	LTF	DIR		I	
LEBANON							
Beirut	Ankara	A	LTF	DIR		I	
	Damascus	A	LTF	DIR		I	
	Nicosia	A	LTF	DIR		I	
OMAN							
Muscat	Emirates ACC	A	LTF	DIR		I	
	Bahrain	A	LTF	DIR		I	
	Mumbai	A	LTF	DIR		I	
	Jeddah	A	LTF	DIR		I	
	Karachi	A	LTF	DIR		I	
	Salalah	A	LTF	DIR		I	
	Sana'a	A	LTF	DIR		I	
	Tehran	A	LTF	DIR		I	
Salalah	Muscat	A	LTF				

ATS REQUIREMENTS FOR SPEECH COMMUNICATIONS BESOINS ATS DE COMMUNICATIONS VOCALES REQUISITOS ATS PARA COMUNICACIONES ORALES				CIRCUIT CIRCUITO		STATUS OF IMPLEMENT ATION ESTADO DE IMMPLANTA CION	REMARKS OBSERVATIONS OBSERVACIONES
TERMINAL I TÊTE DE LIGNE I ESTACIÓN TERMINAL I	TERMINAL II TÊTE DE LIGNE II ESTACIÓN TERMINAL II	TYPE TIPO	SERVICE SERVICI O	DIR/S W	TO BE SWITCHED VIA COMMUTATIO N VIA CONMUTACIÓ N POR		
1	2	3	4	5	6	7	8
PAKISTAN							
Karachi	Kabul	A	LTF				
	Muscat	A	LTF	DIR		I	
	Shiraz	A	LTF	DIR		I	
	Tehran	A	LTF	DIR		I	
Lahore	Kabul	A	LTF				
Pasni	Muscat	A	LTF				
Peshawar	Kabul	A	LTF				
QATAR							
Doha	Emirates ACC	A	LTF	DIR		I	1I + 1
	Bahrain	A	LTF	DIR		I	
	Shiraz	A	LTF	DIR		I	
	Tehran	A	LTF	DIR		I	
SAUDI ARABIA							
Dammam	Bahrain	A	LTF	DIR		I	
	Jeddah	A	LTF	DIR		I	
	Riyadh	A	LTF	DIR		I	
Jeddah	Addis Ababa	A	LTF				
	Amman	A	LTF	DIR		I	
	Asmara	A	LTF				
	Baghdad	A	LTF				
	Bahrain	A	LTF	DIR		I	
	Cairo	A	LTF	DIR		I	
	Dammam	A	LTF	DIR		I	
	Khartoum	A	LTF				
	Kuwait	A	LTF	DIR		I	
	Muscat	A	LTF	DIR		I	
	Riyadh	A	LTF	DIR		I	
	Sana'a	A	LTF	SW	Via Bahrain	I	

ATS REQUIREMENTS FOR SPEECH COMMUNICATIONS BESOINS ATS DE COMMUNICATIONS VOCALES REQUISITOS ATS PARA COMUNICACIONES ORALES				CIRCUIT CIRCUITO		STATUS OF IMPLEMENTATION ESTADO DE IMMPLANTACION	REMARKS OBSERVATIONS OBSERVACIONES
TERMINAL I TÊTE DE LIGNE I ESTACIÓN TERMINAL I	TERMINAL II TÊTE DE LIGNE II ESTACIÓN TERMINAL II	TYPE TIPO	SERVICE SERVICIO	DIR/SW	TO BE SWITCHED VIA COMMUTATION VIA CONMUTACIÓN POR		
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Riyadh	Bahrain	A	LTF	DIR		I	
	Jeddah	A	LTF	DIR		I	
	Dammam	A	LTF	DIR		I	
SOMALIA							
Mogadishu	Sana'a	A	LTF				
SUDAN							
Khartoum	Cairo	A	LTF				
	Jeddah	A	LTF				
SYRIAN ARAB REPUBLIC							
Damascus	Amman	A	LTF				
	Ankara	A	LTF				
	Baghdad	A	LTF				
	Beirut	A	LTF	DIR		I	
	Nicosia	A	LTF				
TAJIKISTAN							
Dushanbe	Kabul	A	LTF				
TURKEY							
Ankara	Baghdad	A	LTF				
	Beirut	A	LTF	DIR		I	
	Damascus	A	LTF				
	Tehran	A	LTF	DIR		I	
TURKMENISTAN							
Ashgabat	Kabul	A	LTF				

ATS REQUIREMENTS FOR SPEECH COMMUNICATIONS BESOINS ATS DE COMMUNICATIONS VOCALES REQUISITOS ATS PARA COMUNICACIONES ORALES				CIRCUIT CIRCUITO		STATUS OF IMPLEMENTATION ESTADO DE IMMPLANTACION	REMARKS OBSERVATIONS OBSERVACIONES
TERMINAL I TÊTE DE LIGNE I ESTACIÓN TERMINAL I	TERMINAL II TÊTE DE LIGNE II ESTACIÓN TERMINAL II	TYPE TIPO	SERVICE SERVICIO	DIR/SW	TO BE SWITCHED VIA COMMUTATION VIA CONMUTACIÓN POR		
1	2	3	4	5	6	7	8
UNITED ARAB EMIRATES							
Emirates ACC	Abu Dhabi	A	LTF	DIR		I	21
	Al Ain	A	LTF	SW		I	
	Bahrain	A	LTF	DIR		I	
	Doha	A	LTF	DIR		I	
	Dubai	A	LTF	DIR		I	
	Muscat	A	LTF	DIR		I	
	Tehran	A	LTF	DIR		I	
Abu Dhabi	Emirates ACC	A	LTF	SW		I	21
	Al Ain	A	LTF	DIR		I	21
	Dubai	A	LTF	SW		I	21
Al Ain	Emirates ACC	A	LTF	SW		I	21
	Abu Dhabi	A	LTF	DIR		I	21
	Dubai	A	LTF	SW		I	21
Dubai	Emirates ACC	A	LTF	DIR		I	2I + 1
	Abu Dhabi	A	LTF	DIR		I	2I
	Al Ain	A	LTF	SW		I	1I
	Fujairah	A	LTF	DIR		I	1I
	Ras Al KhaimahSharjah	A	LTF	DIR		I	1I
	Sharjah	A	LTF	DIR		I	3I
Fujairah	Ras Al Khaimah	A	LTF	DIR		I	1I
	Emirates ACC	A	LTF	DIR		I	1I
Ras Al Khaimah	Dubai	A	LTF	DIR		I	1I
Sharjah	Dubai	A	LTF	DIR		I	31

ATS REQUIREMENTS FOR SPEECH COMMUNICATIONS BESOINS ATS DE COMMUNICATIONS VOCALES REQUISITOS ATS PARA COMUNICACIONES ORALES				CIRCUIT CIRCUITO		STATUS OF IMPLEMENTATION ESTADO DE IMMPLANTACION	REMARKS OBSERVATIONS OBSERVACIONES
TERMINAL I TÊTE DE LIGNE I ESTACIÓN TERMINAL I	TERMINAL II TÊTE DE LIGNE II ESTACIÓN TERMINAL II	TYPE TIPO	SERVICE SERVICIO	DIR/SW	TO BE SWITCHED VIA COMMUTATION VIA CONMUTACIÓN POR		
1	2	3	4	5	6	7	8
YEMEN							
Aden	Djibouti	A	LTF				
	Sana'a	A	LTF				
~~Riyan~~ Mukalla	Aden	A	LTF				
	Sana'a	A	LTF				
Sana'a	Aden	A	LTF				
	Addis Ababa	A	LTF				
	Asmara	A	LTF				
	Mumbai	A	LTF				
	Djibouti	A	LTF				
	Jeddah	A	LTF		Via Bahrain	I	
	Mogadishu	A	LTF	DIR			
	Muscat	A	LTF			I	
	Riyan	A	LTF				

MID FASID – CNS 2   **4-CNS 2-1**

TABLE CNS 2 C **AERONAUTICAL MOBILE SERVICE**

EXPLANATION OF THE TABLE

Column

1   The name of the State and the locations within the same where the service is provided.

2   The required services or functions are provided. Suitable abbreviations for these services or functions are listed below.

ACC-L	Area control service for flights up to FL 250
ACC-SR-I	Area radar control service up to FL 250
ACC-SR-U	Area radar control service up to FL 450
ACC-U	Area control service up to FL 450
AFIS	Aerodrome flight information services
APP-L	Approach control service for flights below FL 120
APP-I	Approach control service for flights below FL 250
APP-PAR	Precision approach radar service up to FL 40
APP-SR-I	Surveillance radar approach control service up to FL 250
APP-SR-L	Surveillance radar approach control service up to FL 120
APP-SR-U	Surveillance radar approach control service up to FL 450
APP-U	Approach control service for flights up to FL 450
ATIS	Automatic terminal information service
D-ATIS	Data link-automatic terminal information service.
CLRD	Clearance delivery
FIS	Flight information service
VHF-ER	VHF-Extended range

3G-2

GP   Facility providing VHF or HF en-route general purpose system (GPS) communication. These facilities provide air-ground radiotelephony for all categories of messages listed in Annex 10, Volume II, 5.1.8. This system of communication is normally indirect, i.e. exchanged through the intermediary of a third person who   is usually a communicator at an aeronautical slation.

SMC   Surface movement control up to limits of aerodrome

Country and location	Service or function	VHF voice	VHF data	HF voice	HF data	Satellite voice	Satellite data	Mode S	Remarks
1	2	3	4	5	6	7	8	9	10
~~AFGHANISTAN~~									
	~~FIS-U~~	~~1~~							
~~OAKX KABUL FIR~~	~~ACC-U~~	~~1~~							
	~~APP-I~~	~~1~~							~~75~~
~~OAKB KABUL/Kabul~~	~~TWR~~	~~1~~							~~25~~
	~~APP-I~~	~~1~~							~~50~~
~~OAKN KANDAHAR/Kandahar~~	~~TWR~~	~~1~~							~~25~~
BAHRAIN									
OBBB BAHRAIN FIR	ACC-SR-U	2		6					
	ACC-SR-I	1							150
	VOLMET	1							
OBBI BAHRAIN/Bahrain Intl	APP-SR-I	1							80
	TWR	1							25
	SMC	2							AD (GP)
	D-ATIS	1							150
EGYPT									
HEAX ALEXANDRIA/Alexandria Intl	TWR	1							25
HEBA ALEXANDRIA/Borg El Arab Intl	TWR	1							25
	APP-SR-I	1							60
	ACC-SR-U	1							150
HESN ASWAN/Aswan Intl	TWR	1							25
	APP-SR-I	1							60
	ACC-SR-U	1							150
HECC CAIRO FIR	ACC-U- ER	4							ER
	ACC-SR-U-ER	6							ER
	ACC-SR-I-ER	2							ER
	VOLMET	1							ER (100)

3G-4

Country and location	Service or function	VHF voice	VHF data	HF voice	HF data	Satellite voice	Satellite data	Mode S	Remarks
1	2	3	4	5	6	7	8	9	10
HECA CAIRO/Cairo Intl	APP-SR-I TWR SMC ATIS	3 3 1 1							80 25 AD 150
HEAR EL ARISH/El Arish Intl.	TWR APP-SR-I ACC-SR-U	1 1 1							25 60 150
HEGN HURGHADA/Hurghada Intl	TWR APP-SR-I ACC-SR-U SMC	1 1 1 1							25 60 150 AD
HELX LUXOR/Luxor Intl	TWR APP-SR-I ACC-SR-U SMC	1 1 1 1							25 60 150 AD
HESH SHARM EL SHEIKH/Sharm El Sheikh Intl	TWR APP-SR-I ACC-SR-U	1 1 1							25 60 150
HESC ST. CATHERINE/St. Catherine Intl	TWR	1							25
HETB TABA/Taba Intl	TWR APP-SR-I ACC-SR-U	1 1 1							25 60 150
IRAN, ISLAMIC REPUBLIC OF									
OIAA ABADAN	TWR SMC ATIS	1 1 1							25 AD 150
OIAW AHWAZ	APP-I TWR SMC ATIS	1 1 1 1							75 25 AD 150
OIKB BANDAR ABBASS/Bandar Abbass	APP-I TWR SMC ATIS	1 1 1 1							75 25 AD 150
OIBB BUSHEHR	APP-I TWR SMC ATIS	1 1 1 1							75 25 AD 150

Country and location	Service or function	VHF voice	VHF data	HF voice	HF data	Satellite voice	Satellite data	Mode S	Remarks
1	2	3	4	5	6	7	8	9	10
OIFM ESFAHAN/Shahid Beheshti	APP-SR-I TWR SMC ATIS	1 1 1 1							75 25 AD 150
OIBK KISH ISLAND	TWR SMC ATIS	1 1 1							25 AD 150
OISL LAR	TWR SMC	1 1							25 AD
OIMM MASHHAD/Shahid Hashemi Nejad Inlt.	APP-SR-I TWR SMC ATIS	1 1 1 1							75 25 AD 150
OIKR RAFSANJAN	TWR SMC ATIS	1 1 1							25 AD 150
OIGG RASHT	TWR SMC ATIS	1 1 1							25 AD 150
OINZ SARI	TWR SMC ATIS	1 1 1							25 AD 150
OISX SHIRAZ	ACC-SR-U FIS-U VOLMET	18 1 1		MID1 MID2					ER 250
OISS SHIRAZ/ Shahid Dastghaib Intl.	APP-SR-I TWR SMC ATIS	1 1 1 1							75 25 AD 150
OITT TABRIZ/Tabriz	APP-SR-I TWR SMC ATIS	1 1 1 1							75 25 AD 150
OIIX TEHRAN	ACC-SR-U FIS-U VOLMET	24 1 1		MID1 MID2					250
OIIE TEHRAN/Iman Khomaini Intl	APP-SR-I TWR SMC	1 1 1							75 25 AD

3G-6

Country and location	Service or function	VHF voice	VHF data	HF voice	HF data	Satellite voice	Satellite data	Mode S	Remarks
1	2	3	4	5	6	7	8	9	10
	ATIS	1							150
OIII TEHRAN/Mehrabad Intl	APP-SR-I TWR SMC ATIS	1 1 1 1							75 25 AD 150
OIYY YAZD	TWR SMC ATIS	1 1 1							25 AD 150
OIZH ZAHEDAN/ Zahedan Intl	APP-I TWR SMC ATIS	1 1 1 1							75 25 AD 150
IRAQ ORBS BAGHDAD	ACC-U	2							2 FIRs
ORBI BAGHDAD/Baghdad Intl	APP-SR-U APP-U TWR SMC ATIS	2 1 1 2 1							100 100 25 AD 150
ORMM BASRAH	ACC-U ACC-SR-U	1 4							150 150
ORMM BASRAH/Basrah Intl	APP-SR-U TWR SMC ATIS	1 1 2 1							100 25 AD 150
ORER ERBIL/Erbil Intl									
ORSU SULAYMANIYAH/Sulaymaniyah Intl									
ORNI AL NAJAF/Al najaf Intl									
ISRAEL LLET ELIAT/Eliat Intl	APP-L TWR ATIS	1 1 1							50 25 150
LLOV OVDA/Ovda Intl	APP-SR-L TWR	1 1							50 25
	ACC-SR-U	2							150

Country and location	Service or function	VHF voice	VHF data	HF voice	HF data	Satellite voice	Satellite data	Mode S	Remarks
1	2	3	4	5	6	7	8	9	10
LLTA TEL-AVIV	ACC-SR-I ACC-SR-L	3 2							100 50
LLBG TEL AVIV/Ben Gurion Intl	APP-SR-I APP-SR-I APP-SR-L APP-L TWR SMC ATIS	1 1 1 1 1 1 1							100 TMA 50 50 25 AD 150
JORDAN OJAC AMMAN	ACC-SR-U ACC-SR-I ACC-U	3 3 3							180 80 FIR
OJAM AMMAN/Marka Intl	TWR SMC	1 1							25 AD
OJAI AMMAN/Queen Alia	APP-L TWR SMC ATIS	1 1 1 1							50 25 AD 150
OJAQ AQABA/Aqaba Intl.	APP-SR-I TWR SMC	2 1 1							75 25 AD
~~OJJR JERUSALEM/Jerusalem~~	~~APP-I~~ ~~TWR~~	~~1~~ ~~1~~							~~40~~ ~~25~~
KUWAIT OKAC KUWAIT	ACC-SR-U	2							200
OKBK KUWAIT/Kuwait Intl	APP-SR-I TWR SMC	2 1 2							100 25 AD
LEBANON OLBB BEIRUT	ACC-U ACC-SR-I ACC-SR-U	2 1 1							CTA 75 75
OLBA BEIRUT/ R. B. H - Beirut Intl	APP-L APP-I APP-SR-I APP-SR-L VOLMET TWR SMC ATIS	1 1 1 1 1 1 1 1							75 75 75 50 FIR 25 AD 150
OLKA KLELATE/Rene Mouawad	APP TWR	1 1							50 25

3G-8

Country and location	Service or function	VHF voice	VHF data	HF voice	HF data	Satellite voice	Satellite data	Mode S	Remarks
1	2	3	4	5	6	7	8	9	10
	SMC	1							AD
OMAN OOMM MUSCAT	ACC-SR-U FIS-L VOLMET	2 1 2							FIR 240 FIR
OOMS MUSCAT/Muscat Seeb Intl	APP-SR-I TWR SMC ATIS	2 1 1 1							75 25 AD 150
OOSA SALALAH/Salalah	APP-SR-I TWR SMC ATIS	2 1 1 1							75 25 AD 150
QATAR OTBD DOHA/Doha Intl	APP-SR-I TWR SMC ATIS	2 1 1 1							75 25 AD 150
OTHH DOHA/New Doha Intl (Future – 2010)									
SAUDI ARABIA OEDF DAMMAM/King Fahd Intl	APP-SR-U APP-SR-I TWR SMC ATIS	1 2 1 2 1							150 75 25 AD(CD) 150
OEJD JEDDAH	ACC-U ACC-SR-U	1 16							FIR FIR (ER
OEJN JEDDAH/King AbdulAziz Intl	APP-SR-U APP-SR-I TWR SMC ATIS	1 2 2 3 1							150 75 25 AD(CD) 150
OEMA MADINAH/Prince Mohamed Bin Abdulaziz Intl	APP-I APP-L TWR	1 2 1							50 75 25
	SMC ATIS	1 11							AD 150
OERK RIYADH/King Khalid Intl	APP-SR-U APP-SR-I TWR SMC ATIS	2 2 2 3 1							150 75 25 AD(CD) 150

Country and location	Service or function	VHF voice	VHF data	HF voice	HF data	Satellite voice	Satellite data	Mode S	Remarks
1	2	3	4	5	6	7	8	9	10
SYRIAN ARAB REPUBLIC OSAP ALEPPO/Aleppo Intl.	APP-L TWR	1 1							50 25
OSIT DAMASCUS	FIS-U ACC-U	1 2							FIR FIR
OSDI DAMASCUS/Damascus Intl	APP-SR-U APP-U TWR SMC	1 2 1 1							80 150 25 AD
OSLK BASSEL AL-ASSAD/Lattakia	APP-L TWR	1 1							50 25
UNITED ARAB EMIRATES OMAE ABU DHABI	ACC-SR-U	5							FIR
OMAA ABU DHABI/Abu Dhabi Intl	APP-SR-I TWR SMC ATIS	2 1 1 1							75 25 AD 150
OMDB DUBAI/Dubai Intl	APP-SR-I TWR SMC ATIS	2 1 1 1							75 25 AD 150
OMDW DUBAI –JEBEL–ALI/Al Maktoum (Future, 2010 -2012)									
OMFJ FUJAIRAH/Fujairah Intl	APP-L TWR	1 1							50 25
OMSJ SHARJAH/Sharjah Intl	APP-L TWR	1 1							50 25
OMAL AL AIN/Al Ain Intl	APP-L TWR	1 1							50 25
YEMEN OYAA ADEN/Aden Intl	APP-U TWR SMC	1 1 1							150 25 AD
OYHD HODEIDAH/Hodeidah	APP-U TWR SMC	1 1 1							150 25 AD

3G-10

Country and location	Service or function	VHF voice	VHF data	HF voice	HF data	Satellite voice	Satellite data	Mode S	Remarks
1	2	3	4	5	6	7	8	9	10
OYAR MUKALLA Mukalla ~~RIYAN/Riyan~~	APP-U TWR SMC	1 1 1							150 25 AD
OYSC SANA'A	ACC-SR-U ACC-SR-I	1 1							400 200
OYSN SANA'A/Sanaa Intl	APP-SR-U APP-SR-I TWR SMC ATIS	1 1 1 1 1							150 75 25 AD 150
OYTZ TAIZ/Ganad	TWR SMC	1 1							25 AD

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TABLE CNS 3 C RADIO NAVIGATION AIDS (MID REGION)
TABLA CNS 3 C AYUDAS PARA LA RADIONAVEGACIÓN (REGIÓN MID)

EXPLANATION OF THE TABLE

Column

1 Name of the country, city and aerodrome and, for en-route aids, the location of the installation.

2 The designator number and runway type:

NPA C non-precision approach
PA-1 C precision approach runway, Category I
PA-2 C precision approach runway, Category II
PA-3 C precision approach runway, Category III

3 The functions carried out by the aids appear in columns 4 to 8 and 10 to 12:

A/L C Approach and landing
T C Terminal
E C En-route

4 ILS C Instrument landing system. Roman numeral I and II indicate the acting category of the ILS, I, II or III. (I) indicates that the facility is implemented

The letter "D" indicates a DME requirement to serve as a substitute for a marker beacon component of an ILS

Note.- Indication of category refers to the standard of facility performance to be achieved and maintained in accordance with pertinent specifications in ICAO Annex 10 and not to the specifications of the ILS equipment itself, which are not necessarily the same.

An asterisk (*) *indicates that the ILS requires a Category II signal quality, but without reliability and availability provided by redundant equipment and automatic changeover.*

5 Radio beacon localizer, be it associated with an ILS or to be used as an approach aid to an aerodrome.

6 Radiotelemetrical equipment. When an "X" appears in column 6 in line with the VOR in column 7, this indicates the need that the DME be installed at a common site with the VOR.

7 VOR VHF omnidirectional radio range.

8 NDB – Non Directional Beacon

9   The distance and altitude to which signal protection of the VOR or VOR/DME are required, indicated in nautical miles (NM) and in thousands of feet.

10, 11, 12   GNSS-global navigation satellite system (includes GBAS and SBAS).

LNAV lateral Navigation using GNSS

LNAV/VNAV Lateral with Vertical Navigation

GBAS (ground-based augmentation system) implementation planned to be used in precision approach and landing CATI,
CATII, CAT III.

SBAS (Satellite-based augmentation system) implementation planned to be used for route navigation, for terminal, for non precision approach and landing. An "X" indicates service availability,; exact location of installation will be determined.

Note.- GPS receiver is under standard rules and ABAS (aircraft-based augmentation system)

13   **Remarks**

Note.- Columns 5 to 12 use the following symbols:

X- Required but not implemented
XI- Required and implemented

TABLE CNS 3

Station	RWY Type	Function	ILS	L	DME	VOR	NDB	Coverage	GNSS GPS	GNSS LNAV	GNSS LNAV/VNAV	REMARKS OBSERVACIONES
1	2	3	4	5	6	7	8	9	10	11	12	13
~~AFGHANISTAN~~												
~~GHAZNI~~		~~E~~				~~X~~		~~200/45~~				
~~KABUL/Kabul~~	~~11 NPA~~	~~A/L~~			~~X~~	~~X~~						
	~~29 PA 1~~	~~A/L~~	~~I*~~	~~X~~	~~X~~	~~X~~						
		~~T~~			~~X~~	~~X~~						
		~~E~~			~~X~~	~~X~~		~~300/45~~				
~~KANDAHAR/Kandahar~~	~~05 NPA~~	~~A/L~~		~~x~~		~~X~~						
	~~23 NPA~~	~~A/L~~				~~X~~						
		~~T~~				~~X~~		~~300/45~~				
		~~E~~				~~X~~		~~300/45~~				
BAHRAIN												
BAHRAIN/Bahrain Intl	12R NPA				X I	X I				I		
	30L NPA				X I	X I				I		
	12L PA2	A/L	II (I)		XI	XI						
	30R PA2	A/L	II (I)	X	XI	XI		300/45				
EGYPT												
EL-ARISH/ El-Arish Int'l	16 NPA	A/L			XI	XI		150/45				
	34 NPA											
ASYUT/ Asyut Int'l	13 NPA	A/L			XI	XI		200/45		I		
	31 NPA	E								I		
ALEXANDRIA/ Alexandria Intl	04 PA 1	A/L	I*		XI	XI	XI	100/45		I		
	22 NPA	E			XI	XI		150/45		I		
	18 NPA											
	36 NPA											
ALEXANDRIA/ Borg El Arab Int'l	32 PA 1	A/L	I* (I) D	X	XI	XI	XI	100/45		I		
	14 NPA	T										
CAIRO/ Almaza Int.	18 NPA	A/L					XI	25/45				
	36 NPA											
	05 NINST											
	23 NINST											

Station	RWY Type	Function	ILS	L	DME	VOR	NDB	Coverage	GNSS			REMARKS OBSERVACIONES
									GPS	LNAV	LNAV/VNAV	
1	2	3	4	5	6	7	8	9	10	11	12	13
CAIRO/Cairo Intl	05R PA 2	A/L	II	X	XI	XI		150/45				
	23R PA 2	A/L	II(I)	X						I I		
	23L PA 2	A/L	II (I)	X	XI	XI		200/45		I		
	05L PA 2	A/L T E	II (I)	X								
	23C PA 05C PA									I I		
	16 NPA 34 NPA											
HURGHADA/ Hurghada Intl	16 NPA 34 PA 2	A/L T E	I*(I)		XI XI	XI XI		100/45		I I		
LUXOR/ Luxor Intl	02 NPA 20 PA 1	A/L T E	I* (I)		XI XI	XI XI		150/45		I I		
MARSA ALAM/ Marsa Alam Int'l	15 NPA 33 NPA	A/L			XI	XI		150/45				
SHARK EL OWEINAT/ Shark El Oweinat Int'l	01 NPA 19 NPA	L					XI	100/45				
PORT –SAID/ Port –Said Int'l	10 NPA 28 NPA	L			XI	XI		200/45				
ST. CATHERINE/ St. Catherine Intl	17 NPA 35 NINST	L					XI	150/45				
SHARM EL SHEIKH/ Sharm El Sheikh Intl	04L PA1 22R NPA	A/L T E	I (II)	X	XI XI	XI XI	XI	100/45 200/50		I I		
	04R NPA 22L NPA									I I		
ASWAN/ Aswan Intl	17 PA1 35 PA1	A/L T E	II	X	XI XI	XI XI		150/45		I I		

Station	RWY Type	Function	ILS	L	DME	VOR	NDB	Coverage	GNSS			REMARKS OBSERVACIONES
									GPS	LNAV	LNAV/VNAV	
1	2	3	4	5	6	7	8	9	10	11	12	13
TABA/ Taba Int'l	04 NPA 22 NPA	A/L T			X	XI	XI	150/45 100/45		I I		
IRAN, ISLAMIC REPUBLIC OF												
ABADAN	32L PA 1	A/L E	I* (I)		XI	XI		200/45				
AHWAZ	30 PA 1	A/L E	I* (I)		XI	XI		300/45				
ARDABIL	31 33 PA 1	A/L E	I* (I)		XI	XI		200/45				
ASALOYEH	30 PA 1	A/L E	I*		XI	XI		300/45				
BANDAR ABBAS/Intl	21L PA1	A/L E	I* (I)		XI	XI		200/45				
BANDAR LENGEH	NPA	A/L E			XI	XI		200/45				
BANDAR MAHSHAHR / MAHSHAHR	NPA	A/L E			XI	XI		300/45				
BIRJAND		E			XI	XI		300/50				
BOJNORD	NINST	E			XI	XI		150/45				
BUSHEHR	NPA 30 PA2	A/L E	I*		XI	XI		300/45				
CHAH BAHAR / KONARAK	NPA	A/L E			XI	XI		200/45				
DARBAND		E			XI	XI		300/45				
DEH-NAMAK		E			XI	XI		300/45				
ESFAHAN / Shahid Beheshti Intl	26R PA 1	A/L E	I*(I)		XI	XI		300/45				
HAMADAN	NPA	A/L E			XI	XI		200/45				

Station	RWY Type	Function	ILS	L	DME	VOR	NDB	Coverage	GNSS			REMARKS OBSERVACIONES
									GPS	LNAV	LNAV/VNAV	
1	2	3	4	5	6	7	8	9	10	11	12	13
ILAM	NPA	A/L E			XI	XI		300/45				
IRAN-SHAHR	NPA	A/L E			X	X		300/45				
JAM/TOHID	NPA	A/L			XI	XI		300/45				
KARAJ / PAYAM	NPA	A/L			XI	XI		200/45				
KERMAN	~~NPA~~ 34 PA1	A/L E	I*(I)		XI	XI		200/45				
KERMANSHAH / Shahid Ashrafi Esfahani	29 PA1	A/L E	I* (I)		XI	XI		300/45				
KHARK ISLAND /Khark	NPA	A/L E			XI	XI		300/45				
KHORAM ABAD	29 PA 1	A/L E	I*		XI	XI		200/45				
KISH ISLAND	NPA	A/L E			XI	XI		200/45				
MALAYER		E			XI	XI		300/45				
MASHHAD / Shahid Hashemi Nejad Intl	31R PA1	A/L E	I* (I)		XI	XI		300/45				
NOSHAHR	NPA	A/L E			X	X		200/45				
OMIDIYEH	NPA	A/L			XI	XI		200/45				
RASHT	27 PA 1	A/L E	I* (I)		XI	XI		300/45				
SABZEVAR	NPA	A/L E			XI	XI		300/45				
ANARAK		E			XI	XI		300/45				
SANANDAJ	NPA	A/L E			XI	XI		200/45				
SARI/Dashte-Naz	NPA	A/L E			XI	XI		300/45				

Station	RWY Type	Function	ILS	L	DME	VOR	NDB	Coverage	GNSS			REMARKS OBSERVACIONES
									GPS	LNAV	LNAV/VNAV	
1	2	3	4	5	6	7	8	9	10	11	12	13
SAVEH		E			XI	X		300/45				
SHIRAZ / Shahid Dastghaib Intl	29L PA 1	A/L E	I* (I)		XI	XI		300/45		I		
SIRJAN	NPA	A/L E			XI	XI		200/45				
TABRIZ Intl	30R PA 1	A/L E	I* (I)		XI	XI		200/45				
TEHRAN/Imam Khomaini Intl	29R PA 2	A/L	II* (I)		XI	XI		300/45				
TEHRAN/Mehrabad Intl	29L PA 1	A/L E	I* (I)	XI	XI	XI		300/45		I		
UROMIYEH	~~NPA~~ 21 PA1	A/L E	I* (I)		XI	XI		200/45				
YAZD / Shahid Sadooghi	NPA	A/L E			XI	XI		300/45				
ZAHEDAN	~~NPA~~ 35 PA1	A/L E	I* (I)		XI	XI		200/45				
ZANJAN	NPA	E			XI	XI	XI	200/45				
IRAQ												
AIN ZALAH		E			X	X		100/50				
BAGHDAD/~~Saddam~~ Baghdad Int'l	~~15R PA 2~~ NINST ~~33L PA 2~~ NINST ~~15L PA 2~~ NINST ~~33R PA 2~~ NINST	A/L A/L A/L A/L E	II (I) II (I) II (I) II (I)	X X X X	X X X X X	X X X X X		200/45	XI XI			

Station	RWY Type	Function	ILS	L	DME	VOR	NDB	Coverage	GNSS			REMARKS
									GPS	LNAV	LNAV/VNAV	OBSERVACIONES
1	2	3	4	5	6	7	8	9	10	11	12	13
BASRAH/Intl	~~14 PA 2~~	A/L	II (I)	X	X	X						
	~~32 PA 2~~	A/L	II (I)	X	X							
		E				X		300/45				
HASHIMIYA		E			X	X		200/45				
(HADITHA)		E			X	X		100/50				
MANDALY		E										
MOSUL	PA2 1	A/L		X	X	X			XI XI			
SAMARA		E			X	X		200/45				
HAWIJA		E			X	X		100/50				
SHATRA		E			X	X		100/50				
ISRAEL												
ELAT/Elat	03 NPA	A/L			XI	XI						
	21 NINST	E			XI	XI						
					X	X		300/45				
HAIFA/Haifa	16 NINST											
	34 NINST											
JERUSALEM/Atarot	12 NINST	A/L										
	30 PA 1	A/L	I*									
METZADA		E			X	X		150/45				
NATANIA		E			X	X		150/45				
OVDA/Intl	20R NPA	A/L	I		X	X		150/50		XI		
	02L NINST											

Station	RWY Type	Function	ILS	L	DME	VOR	NDB	Coverage	GNSS			REMARKS OBSERVACIONES
									GPS	LNAV	LNAV/VNAV	
1	2	3	4	5	6	7	8	9	10	11	12	13
TEL AVIV/Ben Gurion	03 NPA 21 NINST 08 NINST 26 PA 1 12 PA 1 30 NPA	A/L A/L A/L E E	I* (I) I* (I)	X X	XI XI XI XI XI XI	XI XI XI XI XI X X		 150/50 200/50		I I		
TEL AVIV/Sde-Dov	03 NINST 21 NINST	A/L A/L										
ZOFAR		E			X	X		150/45				
JORDAN												
AMMAN/MARKA	24 PA 1 06 NPA	A/L A/L	I (I)	XI X	XI	XI	XI	175/37.5				
AMMAN/Queen Alia	08R NPA 26L PA 2 08L PA 2 26R PA 2	A/L A/L A/L A/L	X II(I) II(I) II(I)	X XI XI XI	X XI XI XI	 XI XI	XI XI XI XI			I I I I	I I I I	
AQABA/Aqaba king Hussein	02 01 PA 1	A/L E	I(I)	XI	XI	XI	X	200/50 200/50		I	I	
METSA		E			X	X		150/50				
QATRANEH		E			XI	XI		100/50				
KUWAIT												
KUWAIT/Intl	15R PA 2 33L PA 2 15L PA 2 33R PA 2	A/L A/L A/L A/L T E	II (I) II (I) II (I) II (I)	XI XI	XI XI XI XI XI XI	 XI XI		 300/50 300/50		I I I I		

Station	RWY Type	Function	ILS	L	DME	VOR	NDB	Coverage	GNSS			REMARKS
									GPS	LNAV	LNAV/VNAV	OBSERVACIONES
1	2	3	4	5	6	7	8	9	10	11	12	13
LEBANON												
~~BAYSUR~~		E				X		~~180/40~~				
BEIRUT/Beirut Intl	~~18~~ 16 PA 1	A/L	I* (I) D	X	X I	~~X I~~				I		
	~~21~~ 17 PA 1	A/L	I* (I) D	X	X I	~~X I~~				I		
	03 PA 1	A/L	I* (I) D	X	X I	~~X I~~				I		
	21 PA1	~~E~~ AL	I* (I) D	X	X I	~~X I~~		~~150/45~~		I		
CHEKKA		E			Xi	XI		~~80~~ 150/50				
~~SAIDA~~ kHALDE		E/T			Xi	XI		150/50				
BOD		E/T					XI	150				
BAB		E/T					XI	150				
OMAN												
HAIMA		E			X I	X I		200/45				
IZKI		E			X I	X I		200/45				
MARMUL	14 NPA	~~E~~			~~X I~~	~~X I~~		~~200/45~~			I	
	32 NPA										I	
MUSCAT/~~Seeb~~ Intl	08 PA 1	A/L	I* (I) D		X I							
	26 PA 1	A/L	I* (I) D		X I							
		E			X I	X I		200/45				
SALALAH/Salalah Intl	07 NPA	A/L			X I	X I						
	25 PA 1	A/L	I* (I) D		X I	X I						
		E			X I	X I		200/45				
SUR		E			X I	X I		200/45				
QATAR												
DOHA/Doha Intl	16 NPA	A/L			X	X				I		
	34 PA 1	A/L	I* (I)	X	X	X				I		
		E			X	X		300/45				

Station	RWY Type	Function	ILS	L	DME	VOR	NDB	Coverage	GNSS			REMARKS OBSERVACIONES
									GPS	LNAV	LNAV/VNAV	
1	2	3	4	5	6	7	8	9	10	11	12	13
SAUDI ARABIA												
AL JOUF	10 NPA	A/L			XI	XI						
	28 NPA	A/L			XI	XI						
	28 PA 1	A/L	I*		XI	XI						
		T			X	X		300/50				
AL SHIGAR		E			XI	XI		300/50				
ARAR	10 NPA	A/L			XI	XI				I		
	28 NPA	A/L			XI	XI				I		
		T			X	X						
		E			XI	XI		300/50				
BAHA	07 NPA	A/L			XI	XI				I		
	25 NPA	A/L			XI	XI				I		
	25 NPA	A/L		X								
	25 PA 1	A/L	I*		XI	XI						
		T			X	X		300/50				
BIR DURB		E			X	X		300/50				
BISHA	18 NPA	A/L			XI	XI				I		
	36 NPA	A/L			XI	XI						
	18 PA1	A/L	I*		X							
		T			X	X						
		E			X	X		300/50				
BOPAN		E			XI	XI		300/50				
DAFINAH		E			XI	XI		300/50				
DAMMAM (King Fahad Intl)	16L PA 1	A/L	I (I)		XI	XI						
	34R PA 1	A/L	I (I)		XI	XI						
	16R PA 1	A/L	I (I)		XI	XI						
	34L PA 1	A/L	I (I)		XI	XI						
		T			XI	XI						
		E			XI	XI		300/50				

Station	RWY Type	Function	ILS	L	DME	VOR	NDB	Coverage	GNSS			REMARKS
									GPS	LNAV	LNAV/VNAV	OBSERVACIONES
1	2	3	4	5	6	7	8	9	10	11	12	13
GASSIM	15 NPA	A/L			XI	XI						
	33 NPA	A/L			XI	XI						
	15 PA 1	A/L	I*		X							
		T			X	X						
		E			X	X		300/50				
GURIAT	10 NPA	A/L			I XI	XI						
	28 NPA	A/L		X								
	28 NPA	A/L			XI	X						
		T			X	X						
		E			X	X		300/50				
HAFR AL-BATIN	16 NPA	A/L			XI	XI						
	34 NPA	A/L			XI	XI						
		T			X	X						
		E			XI	XI		300/50				
HAIL	18 NPA	A/L			XI	XI						
	36 NPA	A/L			XI	XI						
	18 PA 1	A/L	I *		X							
		T			X	X						
		E			X	X		300/50				
HALAIFA		E			XI	XI		300/50				
JEDDAH/King Abdul Aziz Intl	16R PA 2	A/L	II (I)		XI	XI				I		
	34L PA 2	A/L	II (I)		XI	XI				I		
	16L PA 1	A/L	I* (I)		XI	XI				I		
	34R PA 1	A/L	I* (I)		XI	XI				I		
	16C PA 2	A/L	II (I)		XI	XI				I		
	34C PA2	A/L	II (I)		XI	XI				I		
		T			XI	XI						
		E			XI	XI		300/50				
JUBAIL	17 NPA	A/L				X						
	35 NPA	A/L				X						
	35 PA 1	A/L	I*		X	X						
		T			X			300/50				

Station	RWY Type	Function	ILS	L	DME	VOR	NDB	Coverage	GNSS			REMARKS
									GPS	LNAV	LNAV/VNAV	OBSERVACIONES
1	2	3	4	5	6	7	8	9	10	11	12	13
MADINAH/Prince Mohammad Bin Abdulaziz	17 PA 1	A/L	I*		XI	XI						
	35 PA 1	A/L	I*	X	XI	XI						
	36 PA 1	A/L	I*	X	XI	XI						
	18 NPA	A/L			XI	XI						
		T			XI	XI						
		E			XI	XI		300/50				
MAGALA		E			XI	XI		300/50				
RABIGH		E			XI	XI		300/50				
RAFHA	11 NPA	A/L			XI	I XI						
	29 NPA	A/L			XI	XI						
		T			X	X						
		E			XI	XI		300/50				
RAGHBA		E			XI	XI		300/50				
RIYADH/King Khalid Intl	15L PA 1	A/L	I* (I)		XI	XI						
	33R PA 1	A/L	I* (I)		XI	XI						
	15R PA 1	A/L	I* (I)		XI	XI						
	33L PA 1	A/L	I* (I)		XI	XI						
		T			XI	XI						
		E			XI	XI		300/50				
TURAIF	10 NPA	A/L			XI	XI						
	28 NPA	A/L			XI	XI						
		T			X	X						
		E			XI	XI		300/50				
WADI AL-DAWASIR	10 NPA	A/L			XI	XI				I		
	28 NPA	A/L			XI	XI				I		
	10 PA 1	A/L	I*		XI							
		T			X	X						
		E			XI	XI		300/50				
WEDJH	15 NPA	A/L			XI	XI						
	33 NPA	A/L			XI	XI				I		
	33 NPA	A/L		X								
	33 PA 1	A/L	I*									
		T			X	X						
		E			XI	XI		300/50				

| Station | RWY Type | Function | ILS | L | DME | VOR | NDB | Coverage | GNSS | | | REMARKS |
									GPS	LNAV	LNAV/VNAV	OBSERVACIONES
1	2	3	4	5	6	7	8	9	10	11	12	13
YENBO	10 NPA	A/L			XI	XI						
	28 NPA	A/L			XI	XI				I		
	28 PA 1	A/L	I*		XI					I		
		T			X	X						
		E			XI	XI		300/50				
SYRIAN ARAB REPUBLIC												
ALEPPO/Neirab	27 ~~N~~ PA2	A/L		X		X						
		E				X		150/50				
DAMASCUS/Intl	05L ~~NPA2~~	A/L			X	X						
	23R PA ~~1~~ 2	A/L	I* (I)	X	X	X						
	05R ~~NPA2~~	A/L			X	X						
		E			X	X		150/50				
KARIATAIN		E			X	X		150/50				
LATAKIA/Bassel -Al- Assad	17 NPA	A/L		X	X	X						
TANF		E				X		160/40				
UNITED ARAB EMIRATES												
ABU DHABI/Abu Dhabi Intl	13 PA 1	A/L	I* (I)		X I	X I				I		
	31 PA 3	A/L	III (I)		X I	X I				I		
		E			X I	X I		300/45				
AL AIN/Al Ain Intl	01 PA 1	A/L	I*		X I	X I						
	19 NPA	A/L			X I	X I						
		E			X I	X I		300/45				

Station	RWY Type	Function	ILS	L	DME	VOR	NDB	Coverage	GNSS			REMARKS
									GPS	LNAV	LNAV/VNAV	OBSERVACIONES
1	2	3	4	5	6	7	8	9	10	11	12	13
DUBAI/Dubai Intl	12L PA 3	A/L	III (I)		X I	X I				I		
	30R PA 3	A/L	III (I)		X I	X I				I		
	12R PA 2	A/L	II (I)		X I	X I						
	30L PA 2	A/L	II (I)		X I	X I						
		E			X I	X I		300/45				
FUJAIRAH/Fujairah Intl	11 NPA	A/L			X I	X I				I		
	29 PA 1	A/L	I* (I)		X I	X I				I		
		T			X I	X I		40/25				
RAS AL KHAIMAH/Ras al Khaimah Intl	16 NPA	A/L		X	X I	X I						
	34 PA 1	A/L	I* (I)	X								
SHARJAH/Sharjah Intl	12 NPA	A/L			X I	X				I		
	30 PA 1	A/L	I* (I)	X I	X I	X				I		
		E				X I		300/45				
YEMEN												
ADEN/Intl	08 NPA	A/L			X	X						
	26 PA 1	A/L	I* (I)	X	X	X						
		E			X	X		300/50				
AL-GHAIDAH		E			X	X		300/50				
HODEIDAH	03 NPA	A/L		X	X	X						
	21 NPA	A/L		X	X	X						
		E			X	X		200/45		I		
~~RIYAN~~ MUKALALA/Intl	06 NPA	A/L			X	X						
	24 NPA	A/L			X	X						
		E			X	X		300/50				
SANA'A/Intl	18 PA 1	A/L	I* (I)	X	X	X I						
	36 NPA	A/L			X	X I						
		E			X	X I		200/45				

Station	RWY Type	Function	ILS	L	DME	VOR	NDB	Coverage	GNSS			REMARKS OBSERVACIONES
									GPS	LNAV	LNAV/VNAV	
1	2	3	4	5	6	7	8	9	10	11	12	13
SIYUN		E			X	X		150/45				
TAIZ/Intl	01 NPA	A/L		X	X	X						
	19 NPA	A/L		X	X	X						
		E			X	X		200/45				

Table CNS 4 - SURVEILLANCE SYSTEMS

EXPLANATION OF THE TABLE

Column

1   Name of country and location of the facility or FIR

2   Geographical area

3   Air Traffic Services Units served by the facility or FIR

4   PSR - Primary Surveillance Radar

5   Coverage of Primary Surveillance Radar in nautical miles

6   Coverage of Primary Surveillance Radar and Modes implemented will be indicated
        within Brackets, namely Modes A, C & S

7   Coverage of Secondary Surveillance radar in nautical miles

8   ADS-B- Automatic Dependent Surveillance Broadcast *

9   ADS-C - Automatic Dependent Surveillance Contract

10   SMR- Surface Movement Radar

11   PRM - Precision Runway Monitor

12   Multirateration

13   Remarks

Note:
The following codes are used in columns 4,6,8-12

        I -   Required and implemented for column 6,
                 I stands for implementation using conventional SSR while
                 MI stands for implementation using Monopulse SSR

        X-   Required but implementation status not determined

        N -   Required but not implemented

        A -   Existing facility provided to supplement or substitute the requirement

F -   Future Plan

< -   Year planned commissioning year to be used as appropriate in
          conjunction with AF@ & AN@

> -   Year planned decommissioning year to be used as appropriate in
          conjunction with AA@ & AI@.

•   *Under development*

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TABLE CNS 4- SURVEILLANCE SYSTEMS

Country/Location	G A	ATS Units Served	PSR	Coverage of SSR (NM	SSR (A/C/S)	Coverage of SSR (NM)	ADS-B	ADS-C	SMR	PRM	Remarks
1	2	3	4	5	6	7	8	9	10	11	12
AFGHANISTAN											
BAHRAIN											
Bahrain		Bahrain ACC Bahrain APP Bahrain ACC Bahrain APP	I	80	MI(A/C) F(A/C/S) <2005	250 250					Mode S will be implemented in 2012
EGYPT											
Cairo		Cairo ACC Cairo APP Cairo APP/TMA	I I F<2002	200 70 60	MI(A/C) I(A/C) MF (A/C)	250 100 250					Mode S Implemented In Four Airports
Hurghada		Hurghada ACC Hurghada ACC Hurghada APP	I I I	60	MI(A/C) MI(A/C)	250 250					
Mersa Matruh		Mersa Matruh ACC			MI(A/C)	250					
Aswan		Aswan ACC Aswan ACC Aswan APP	I F<2002 <2002	60	MI(A/C) MF(A/C)	250 250					
Asyut		Asyut ACC		250	MI(A/C)	250					
Luxor		Luxor ACC Luxor APP	I	60	MI(A/C)	250					
Sharm El Sheikh		Sharm El Sheikh ACC Sharm El Sheikh APP	I	60	MI(A/C)	250					
Borg El Arab		Borg El Arab ACC Borg El Arab APP	F<2002	60	F (A/C) < 2002	250					
El Arish		El Arish ACC El Arish APP	F<2002	60	F (A/C) < 2002	250					
Taba		Taba ACC Taba APP	F<2002	60	F (A/C) < 2002	250					

3I-4

Country/Location	GA	ATS Units Served	PSR	Coverage of SSR (NM	SSR (A/C/S)	Coverage of SSR (NM)	ADS-B	ADS-C	SMR	PRM	Remarks
1	2	3	4	5	6	7	8	9	10	11	12
IRAN											
Shiraz		Shiraz APP	I	80	I (A/C/S)	250					
Tehran / Mehrabad		Mehrabad APP	I	80	I (A/C/S)	250					
Ahwaz		Tehran ACC			MI(A/C/S) < 2000	250					
Iran Shahr		Tehran ACC			F (A/C/S) < 2002	250					
Jiroft		Tehran ACC			MI(A/C/S) < 2001	250					
Lar		Tehran ACC			MI(A/C/S) < 2001	250					
Mashhad		Tehran ACC			MI(A/C/S) < 2001	250					
Draz-now (Gorgan)		Tehran ACC			MI(A/C/S) < 2002	250					
Tabas		Tehran ACC			MI(A/C/S) < 2002	250					
Tabriz		Tehran ACC			MI(A/C/S) < 2000	250					
Tehran/Kushke Bazm		Tehran ACC			MI(A/C/S) < 1999	250					ADS-A installed and available in Tehran ACC
Zanjan		Tehran ACC			MI(A/C/S) < 2001	250					
IRAQ											
Baghdad Basrah		Baghdad APP Basrah ACC Basrah APP	I I	60 80	I MI(A/C) MI(A/C/S) I	250 250					Mode S is planed In Baghdad

Country/Location	GA	ATS Units Served	PSR	Coverage of SSR (NM	SSR (A/C/S)	Coverage of SSR (NM)	ADS-B	ADS-C	SMR	PRM	Remarks
1	2	3	4	5	6	7	8	9	10	11	12
ISRAEL											
Tel Aviv		Tel Aviv ACC Ben Gurion APP	I I		I I						
JORDAN											
Amman		Amman ACC	I	80	MI(A/C/)	250					
KUWAIT											
Kuwait		Kuwait ACC	I	80	MI(A/C/)	250					
LEBANON											Implemented Mode S
Beirut		Beirut ACC Beirut APP Beirut TWR	I	60	MI(A/C/)	250					
OMAN											
Muscat		Muscat ACC Muscat APP	I	100	I	250					
Salalah		Salalah ACC Salalah APP	I	100	I	250					
Jaalan Bani Bu Ali		Muscat ACC			I	250					
Wudam Al-Sahil Ras Al-Hadd Duqm Qiroon Hayreeti		Muscat ACC Muscat ACC Muscat ACC Muscat ACC			I I I I	250 250 250 250					
QATAR											
Doha		Doha ACC Doha APP	I		I						
SAUDI ARABIA											
Abha		Jeddha ACC			I	200					
Afif		Jeddha ACC			I	200					} } KSA is providing
AL Kharj		Jeddha ACC			I	200					} radar coverage } to all KSA
Badanah		Jeddha ACC			I	200					} airspace } (Jeddah FIR),
Dammam		Dammam APP	I	100	MI	200					} with the } exception of the

Country/Location	G A	ATS Units Served	PSR	Coverage of SSR (NM	SSR (A/C/S)	Coverage of SSR (NM)	ADS-B	ADS-C	SMR	PRM	Remarks
1	2	3	4	5	6	7	8	9	10	11	12
Dhahran		Jeddha ACC			I	200					} "Empty Quarter"
Hail		Jeddha ACC			I	200					Mode S will be implemented
Jeddah		Jeddha APP	I	100	I	200					
Nariya		Jeddha ACC			I	200					
Qaisumah		Jeddha ACC			I	200					
Raffina		Jeddha ACC			I	200					
Raghdan		Jeddha ACC			I	200					
Riyadh		Riyadh APP	I	100	MI	200					
Salbuk		Jeddha ACC			I	200					
Sharurah		Jeddha ACC			I	200					
Sulayel		Jeddha ACC			I	200					
Tabuk		Jeddha ACC			I	200					
Taif		Jeddha ACC			I	200					
Turaif		Jeddha ACC			I	200					
Wejh		Jeddha ACC			I	200					
SYRIA											
Damascus		Damascus ACC			I						
UNITED ARAB EMIRATES											
Abu Dhabi		Emirates ACC Bahrain ACC			MI(A/C)	200					
Abu Dhabi		Abu Dhabi APP Emirates ACC			AF<2001	200					Replacement MSSR

Country/Location	GA	ATS Units Served	PSR	Coverage of SSR (NM	SSR (A/C/S)	Coverage of SSR (NM)	ADS-B	ADS-C	SMR	PRM	Remarks
1	2	3	4	5	6	7	8	9	10	11	12
Abu Dhabi		Abu Dhabi APP Abu Dhabi TWR	AF2004 AF2003	125					X		Replacement PSR
Al Ain		Al Ain APP Abu Dhabi APP Emirates ACC	AF2004	80		200					
Dubai		Dubai APP Emirates ACC Dubai TWR	I	80	MI(A/C)	150			I		
Dubai		Emirates ACC Dubai APP			AF<2004	250					New project
Fujairah		Fujairah APP			MI(A/C)	250					
Ras Al Khaimah		Ras Al Khaimah APP	I	80	X						
Tarif		Emirates ACC Bahrain ACC Muscat ACC Abu Dhabi APP			F(A/C) <2001	240					New project
YEMEN											
Aden ~~Riyan~~ Mukalla Sana'a		Aden APP ~~Riyan~~ Mukalla APP Sana'a APP	F		I(A/C) I(A/C) I(A/C)						

MID FASID – CNS 1B -

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.*

4-CNS 1B-2 MID FASID – CNS 1B

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	-	-	-	-	-	-	-	-
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			

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REPORT ON AGENDA ITEM 4:   REVIEW OF IPS WORKING GROUP REPORTS

4.1   The meeting noted that the first and second IPS Working Group Meetings (IPS WG/1 & WG/2) were held at the ICAO MID Regional Office in Cairo in 12-14 May 2009 and 11-12 October 2009 respectively. The second meeting was held back to back with the MID ATS Messaging Management Center (AMC) which was held with the support of EUROCONTROL and inline with ICAO agreement for the use of the European AMC for the short to medium term for address management.

4.2   The meeting also noted that the IPS WG received an update on the latest developments within the global ICAO framework related to the work programme of the IPS Working Group and noted that Amendment 83 affected Volumes 1 and 3 of Annex 10, and is applicable as of 20 November 2008. The Amendment, among other issues, introduced Internet Protocol Suite (IPS) technology to the Aeronautical Telecommunication Network (ATN).

4.3   The meeting was apprised on the Manual for the ATN using IPS Standards Protocols (Doc 9896) which had been approved, and the transfer of relevant material from Doc 9705 to Doc 9880 is going on at the end of which Doc 9705 will be withdrawn.

4.4   The meeting was briefed about the Internet Engineering Task Force (IETF) and the set up of a working group on Address Lifetime Expectations (ALE) also IETF established an IPng (IP next generation) working group to make recommendations for the IP Next Generation Protocol. Eventually, the specifications for Internet Protocol, Version 6 (IPv6) were produced in RFC 2460. In addition to a much larger address space (2^{128}), the specifications also support additional features like mechanism for auto-configuration of network interfaces, encapsulation of itself and other protocols, built in authentication and encryption etc.

4.5   The meeting shared the same global views about the complete implementation of IPv6, that is going to take time and there will be a very long period when both the protocols IPv4 and IPv6 are going to co-exist.

4.6   The meeting was in consistence with the IPS WG agreement that careful attention is given to the current implementations of AFTN, CIDIN and ISO/OSI based ATN, and Provisions for continuation of CIDIN, AFTN and ISO/OSI should be developed to secure these implementations. Furthermore the MID ATN implementation will take place on the basis of regionally agreed requirements where MID ATN network will be based on System Wide Information Management (SWIM) concept.

4.7   The meeting agreed with the IPS WG views that periodical data collection and publication in the MID ANP FASID was 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 EURO 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.

4.8   The meeting was informed about the web-based Flight Message Transport Protocol (FMTP) and ATM Ground Voice Network (AGVN) database inventories, developed by Eurocontrol. These inventories enabled collection and maintenance of OLDI and ATS direct speech connectivity data from Eurocontrol member States. The meeting agreed that means and ways to be explored for the introduction of such tools in the MID Region.

4.9   The meeting noted that the transition from AFTN to the AMHS is progressing and continuing at a good pace globally and in the MID Region, and for the orderly operation of the AMHS on a global scale, it is necessary to coordinate and synchronize the allocation of AMHS addresses. In response to this, ICAO will utilize the European ATS Messaging Management Center (AMC), and in cooperation with the European Organization for the Safety of Air Navigation (EUROCONTROL), which established procedures for the coordination and synchronization of AMHS addresses in the short-to medium-term. States were informed of this development in State Letter AN 7/49.1-09/34.

4.10   The meeting noted that in order to use the AMC it is necessary for the users to be trained before they are actually allowed to enter data in the AMC (http://www.eurocontrol.int/amc). In response to this ICAO MID regional Office organized in coordination with EUROCONTROL three days (13-15 October 2009) training, which fostered the AMHS implementation in the Region.

4.11   The meeting noted that in Europe a Pan European Network (PEN) has been initiated by EUROCONTROL. PEN will be implemented in Europe to meet the ATM requirements for a cost-effective, international communications network with the ability to support existing as well as future services. In its initial form, PEN is planned as a ground-ground IP network serving data communications between ANSPs and between ANSPs and EUROCONTROL.

4.12   The meeting agreed with the views of IPS WG for the development of the MID IP Network that would benefit the region considerably and noted that the IPS WG developed a survey which was circulated to all MID States and replies were expected to reach ICAO MID Office by the end of April 2010, however no replies were received. In this context the meeting urged all MID States to complete the survey and send back to ICAO MID Regional Office before the next IPS WG and agreed to the following Draft Conclusion:

> *DRAFT CONCLUSION 3/3:   MID IP NETWORK SURVEY*
>
> *That, MID States be urged to complete the MID IP Network survey as at **Appendix4A** to the Report on Agenda Item 4 and send to ICAO MID Regional Office by December 2010.*

4.13   The meeting appreciated the efforts of the IPS WG for completing the development of the ATN planning document and agreed to the renaming of the document as suggested by the IPS WG "MID REGIONAL ATN PLANNING AND IMPLEMENTATION DOCUMENT". The meeting tasked the IPS WG to complete the document and present it to the next CNS SG for approval.

4.14   The meeting noted that IPS WG had developed strategy for the public internet usage and agreed with the IPS WG views to have the inventory of public internet usage for aeronautical purposes in the MID Region as this will enable common agreement for its use.

4.15   Based on the above, the meeting noted that IPS WG developed the public internet usage survey that was circulated to all MID States, however no replies were received. Consequently the meeting urged States to complete and send replies of the survey to ICAO MID Regional Office before the next IPS WG meeting.

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4.16 The meeting agreed with the IPS WG meetings, that the development of IP Networks and the introduction of public internet would require special expertise. Accordingly the meeting agreed to extend the invitations to organizations that can support the work of the IPS WG, it was also encouraged that MID States carry out research and test beds for different IP applications that would support the Region.

4.17 The meeting noted with appreciation the initiative of Jordan and UAE for the establishment of the first 2MB international Secured VPN connectivity and tasked the IPS WG to monitor this activity and make recommendation for eliminating some of the connectivity deficiencies in the MID Region.

4.18 The meeting reviewed the draft conclusions and decision emanated from the two IPS WG meetings and agreed that conclusions 1/4 and 2/6 to be endorsed and considered as CNS SG/3 meeting Draft Conclusions:

DRAFT CONCLUSION 3/4: POSTING OF AMHS PLANS IN AMC

That, MID States are encouraged to post their AMHS implementation plans on the European ATS Messages Manager Centre (AMC).

DRAFT CONCLUSION 3/5: USE OF PUBLIC INTERNET IN THE MID REGION

That MID States:

a) *are encouraged to follow the guidance **Appendix 4B** to the Report on Agenda Item 4, when using the public internet for critical aeronautical communication; and*

b) *provide to the ICAO MID Regional Office, the inventory on the public internet usage as per **Appendix 4C** to the Report on Agenda item4 by 30 December 2010.*

4.19 The meeting agreed that conclusion 1/1 and 2/4 are of general nature and to be included in the MID FASID, at the appropriate part and agreed to the following paragraph for inclusion in MID FASID :

"MID ATN will be IPS based and will maintain compatibility with AFTN, CIDIN and ISO/OSI implementation, phase out of any protocol will be based in close coordination within MID Region and with the adjacent Region"

4.20 Based on the deliberations the meeting was of a view that the IPS WG to be renamed as **ATN/IPS** Working Group and the Terms of Reference to be updated as in **Appendix 4D** to the Report on Agenda Item 4. Accordingly, the meeting developed the following Draft Decision:

DRAFT DECISION 3/6: REVISED NAME AND TOR OF THE IPS WG

That,

a) *the IPS WG is renamed as ATN/IPS WG with same members; and*

b) *Terms of Reference and Work Programme of the ATN/IPS Working Group be updated as at **Appendix4D** to the Report of Agenda Item 4.*

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4.21   The meeting was apprised about the AMHS Implementation in Jordan, where the new integrated AFTN/AMHS system started its operation on a new international AMHS link between Jordan and the United Arab Emirates since 3 March 2010.

4.22   The meeting noted the Prerequisites for the start of AMHS operations and the importance of acquiring the knowledge necessary to run an AMHS system, personnel training being an important aspect for the success of the project.

4.23   The meeting noted with appreciation the lessons learned and Jordan's offer to help and support other States establish AMHS connections and perform Interoperability and Pre-Operational tests with Amman Centre.

4.24   The meeting agreed that Amman- Abu Dhabi main trunk link be an alternative circuit to Jeddah, to take maximum advantage of reliable, technically advanced communication link, and to encourage migration to AMHS.

4.25   The meeting urged States to adhere to the agreed ATN Plans and to keep AMHS addressee updated at each AIRAC cycle date to prevent mis-routings and non-deliveries.

4.26   The meeting noted with Appreciation Jordan's proposal for the establishment of the MID AMC and agreed that Jordan provide complete project plan with details, on hardware, software, supporting team missions to EUROCONTROL and the daily operation of the AMC to the next ATN/IPS WG meeting, it was highlighted that ICAO will help and facilitate the transfer of the AMC software from EUROCONTROL to Jordan in the same way as it was handled for other ICAO Regions,.

4.27   The meeting noted with appreciation the developments in Saudi Arabia where a new Message Handling System in Jeddah Communication Center as well as new facilities at Riyadh and Dammam International Airports with capabilities of AFTN, CIDIN and AMHS implemented and   put in service in October 2009. The meeting also noted with appreciation the upgrades of JEDDAH-BEIRUT circuit.

Introduction

This survey has been developed for the purpose of collecting information about the existing IP infrastructure between the states in-order to come with a unified IP scheme plan for the MID-Region ATN.

General Information:

State:	……………………………………..
Does IP network existing in place?	
❏ Yes ❏ No	
Is Aviation systems connected together over IP?	
❏ Yes ❏ No	
Who to contact if more details or clarification is required?	
Name:	………………………………………….
Title:	………………………………………….
Email:	………………………………………….
Telephone:	…………………… Fax: ……………………

Link Specific Information:

Please fill the following form **for each link** between you state and neighboring state within MID-Region:

1	Connection From:	State: ……………. Location: ……………………
2	Connection To:	State: ……………. Location: ……………………
3	Service Provider:	
4	Link Speed:	………… Kbps
5	Link Type:	❏ Leased Circuit ❏ Frame-relay ❏ V-SAT ❏ MPLS ❏ Other ……………………
6	IP version:	❏ IPv4 ❏ IPv6
7	IP Subnet:	❏ 10.__.__.__ Netmask: ___.___.___.___ ❏ 172.__.__.__ Netmask: ___.___.___.___ ❏ 192.168.__.__ Netmask: ___.___.___.___ ❏ Other: ……………. Netmask: ___.___.___.___
8	Router	Manufacturer: ……………............. Model: …………………………….
9	Router Interfaces Supported*:	❏ Async Serial ❏ Sync Serial ❏ Ethernet ❏ Other: ……………………
10	Supported Routing Protocols*:	❏ RIP ❏ OSPF ❏ BGP ❏ IS-IS ❏ Other: …………………..
11	Supported Voice Signaling on router*:	❏ SIP ❏ H.323 ❏ Other: ………………
12	Data Applications in use*:	❏ AFTN ❏ AMHS ❏ OLDI ❏ Other: …………………….

13	Voice Applications in use*:	❑ ATC Voice ❑ VHF Voice ❑ Other Voice: ……………………
14	Data end user interface:	❑ Serial ❑ IP based (Answer Below) ❑ Other: …………………………….
15	Security measures between LAN and WAN*:	❑ Single-firewall (Type: ……………………………) ❑ IPS (Type: ……………………………………..) ❑ Dual-firewall (Types: ………………………...…..)
16	Voice end user interface*:	❑ FXS/FXO ❑ ISDN ❑ VoIP ❑ Other: ……………………..

* Choose all that apply

Public Internet usage strategy and guidance

<u>**Security and Implementation Guidelines:**</u>
- MID states implementing a service on the public internet must comply with ICAO document 9855.
- Internet based services must be used for low traffic, non-time critical applications where leased lines are not justifiable.
- The user of the application should expect service outages due to the nature and reliability of the public internet environment and should have a fallback procedure during the internet based service outage.
- Services to be provided via public internet can be categorized into two groups:

> **- CAT1: View only service**
>> User can view only the data via internet such as AFTN messages or MET charts.
> **- CAT2: View and modify service**
>> User can view and send data via the internet such as sending AFTN messages or uploading AIS documents.

> - Authentication Requirements:
>> - CAT1: A minimum authentication mechanism of username/password unique for each user must be provided for accessing the service over the public internet with strong password policy.
>> - CAT2: A two-factor authentication must be implemented for services in this category, beside the username/password another mechanism must be used to verify the identity of the user such as certificates or smartcards.

> - Authenticity and Privacy:

>> - CAT1: The user must be able to verify the authenticity and integrity of the data received over the public internet by implementing industry standard protocols for message signing or secure transfer protocol (HTTPS). Encryption of the data is not mandatory.

>> - CAT2: mutual authentication is required where both ends the user and the server must be able to authenticate each other using public key infrastructure (PKI) and the data must be encrypted using a minimum 128-bit.
>> - Users upon registration with the internet based service must be verified by some mean.

- Network Security
> - All internal systems must be protected by a dual layer enterprise class firewalls from two different vendors from the external internet environment, no direct traffic allowed from the internet into the internal systems. All traffic must be forwarded via a proxy system placed in a DMZ with strong policy (such as system update and patching, minimum running services on systems ... etc)
> - Preferably systems exposed to the internet in the DMZ should have host-based intrusion prevention or a dedicated intrusion prevention system appliance.

> - Logging and Auditing
>> – Systems exposed to the internet must be keeping a log of all transactions with the user on the public internet side and the systems in the internal network.
>> – Logs must be kept for a minimum period of 30 days.
>> – The log must contain the original message received by the server with server time-stamp and user ID if available.

Introduction:

The purpose of this survey is documenting the internet use in the field of aviation in MID-region. Accordingly new application could be added.

Please fill the following survey accordingly for each aviation application that is served over the public internet

General Information:

State:	………………………………………..
Does IP network existing in place?	
❏ Yes ❏ No	
Is Aviation systems connected together over IP?	
❏ Yes ❏ No	
Is the Aviation systems connected on a separate network from other general systems (such as email, internet)?	
❏ Yes ❏ No	
Who to contact if more details or clarification is required?	
Name:	………………………………………………….
Title:	………………………………………………….
Email:	………………………………………………….
Telephone:	……………………	Fax:	……………………

Internet for Aviation Systems Information:

Aviation Application:	………………………………………………….. (e.g. AFTN, MET messages, Flight plans)
Type of Internet Protocol:	❏ HTTP ❏ FTP ❏ SMTP ❏ Other: ………….
Who is accessing the service over the internet?	
	(e.g. Remote airport, backup for conventional leased circuit) ………………………………………………………………………. ……………………………………………………………………….
Internet user privileges:	❏ Receive data only ❏ Send data only ❏ Send/Receive data ❏ Full control of service
How can you describe the class of service?	
	❏ Users and operation relay on the service ❏ Low traffic application with no high importance ❏ Backup method in case of main system failure ❏ Non-operation traffic and data only
What types of network defense measure are in use?	
	❏ Single Firewall (Type: …………………………..) ❏ IPS (Type: …………………………………..) ❏ Dual-layer firewall (Type: …………..………….) ❏ Content-Inspection (Type:……………………..) ❏ Other ……………………………………………

Is anonymous access allowed?	❑ Yes ❑ No
What type of user authentication is used?	
❑ Username/password ❑ Certificates ❑ Other: ……………………………….	
Is data integrity is verified?	❑ Yes ❑ No
If yes, what type of message digest used?	
❑ MD5 ❑ SHA ❑ Other:………………………	
What data encryption is used if any?	
❑ DES ❑ 3DES ❑ AES128 ❑ AES256 ❑ None ❑ Other: …………………………………	
Are the Internet links redundant?	
❑ Yes ❑ No	
Is the internet service provider accredited as mention in ICAO Doc XXXX?	
❑ Yes ❑ No	
How the Internet users connect to the aviation systems?	
❑ Traffic directly routed to the aviation system (via firewall or gateway) ❑ Traffic is sent to an intermediate proxy ❑ User has to go via VPN tunnel first to reach system	

ATN/IPS WORKING GROUP

1.   Terms of Reference

1.1   The Terms of Reference of the ATN/IPS Working Group (ATN/IPS WG) are:

a) To promote regionally harmonized and agreed approach to transition planning to ATN in order for MID States to work collaboratively in developing their future transition arrangements towards the ATM system envisioned in the Global ATM Operational Concept; and

b) address regional planning and implementation issues, related to AFTN/CIDIN/AMHS and networking issues including the usage of the public internet and development of MID IP NET standards

1.2   In order to meet the Terms of Reference, the ATN/IPS WG shall:

a) Develop MID Region public Internet usage guidance and document all Internet usage with particular attention to the safety/security of the data exchanged over the public internet;

b) development of the ATN planning and implementation document to be main source for planning and implementation guidance;

c) review and analyze the MID Region AFTN/CIDIN/AMHS plans and make suggestion for the improvement in accordance with the new development in the MID Region and coordinate the AMHS implementation;

d) develop MID IP Network common specification and implementation guidance;

e) develop AMHS implementation plan for the MID and related AMC implementation related materials;

f) develop task list for the work programee and provide updates to CNS SG; and

g) Provide the necessary support for the implementation of the IPS in the MID Region.

2.   Composition

ATN/IPS Group will be composed of experts nominated by MIDANPIRG Provider States

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

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Report on Agenda Item 5

REPORT ON AGENDA ITEM 5:   DEVELOPMENTS IN CNS

5.1   The meeting was apprised about World Radiocommunication Conference (WRC) which is organized by International Telecommunication Union (ITU) to review, and if necessary to revise the Radio Regulations, the international treaty governing the use of the radio-frequency spectrum and the geostationary-satellite and non-geostationary-satellite orbits. WRC is held every three to four years. It becomes critically important that ICAO position on various WRC Agenda Items are presented and defended at the Conference in the interest of safety and progress of global aviation activities.

5.2   Based on the above ICAO's 36th Assembly adopted Resolution A36-25 urges ICAO, Contracting States to support aviation requirements for spectrum and instruct ICAO to make sufficient resources available to enable increased participation in spectrum management activities.

5.3   The meeting was informed on WRC–07 held from 22 October to 16 November 2007 in Geneva, Switzerland. Over 2,800 delegates from 164 ITU Member States and 104 international organizations participated in the Conference. In addition to taking decision on the WRC-07 Agenda Items, the Conference also finalized 33 Agenda Items for the Next WRC which is expected to be convened by ITU from 23 January to 17 February 2012 in Geneva. Consequently ICAO position to WRC-12 has been approved by ICAO Council in June 2009 and was included in State Letter E 3/5-09/61 dated 30 June 2009.

5.4   ICAO Position addresses all regulatory aspects on aeronautical matters on the agenda for the WRC-12. Items of main concern to aviation include spectrum requirements for unmanned aircraft systems (UAS), regulatory measures to facilitate introduction of new aeronautical mobile (R) services in a number of frequency bands, long-term spectrum availability and access to spectrum to meet the requirements of the aeronautical mobile satellite (R) service, and review of footnotes to the table of frequency allocations. Two items address possible allocations for radiolocation and oceanographic radar in the high frequency (HF) and very high frequency (VHF) spectrum which includes a number of frequency bands for aeronautical safety communications. Early proposals for an agenda item addressing possible new allocations to the mobile satellite service (MSS) have identified aeronautical mobile and aeronautical radio navigation spectrum as being potential candidates for sharing with the MSS, which would ultimately reduce aviations access to this frequency.

5.5   The meeting noted that Assembly Resolution A36-25, urges States to firmly support the ICAO Position, by undertaking to provide experts from their civil aviation authorities to fully participate in the development of State's, regional positions and development of aviation interests at the ITU. The resolution also instructs the Council and the Secretary General, as a matter of high priority, to ensure that the resources necessary to support increased participation by ICAO to international and regional spectrum management activities are made available. With a view to increasing the awareness of and support for the aviation requirements of ITU WRC-12, ICAO will undertake, within the budget limits of the Organization and wherever possible, to present the ICAO Position.

5.6   The meeting noted that ICAO MID office in coordination with ICAO HQ are organizing "Regional Planning Workshop for WRC-12" in Cairo 19-20 September 2010, which will be followed by "Aeronautical Communications Panel (ACP) WG-F #23"meeting where ACP among other tasks develops ICAO position to the ITU WRC. The meeting urged MID States to participate actively in the workshop and attend the ACP WG-F #23 meeting. The meeting recommended that States request their national Telecommunication Regulatory Authority (TRA) to attend the workshop in order to raise their awareness on ICAO position and the aviation requirements for the spectrum.

5.7   The meeting noted that the Arab Spectrum Management Group (ASMG) held its 13th meeting in Tunis, from 1-6 March 2010, ICAO MID Office had sent the ICAO Position to WRC-12 to the meeting for its consideration highlighting Agenda Item 1.7 "Long term spectrum availability and access to spectrum necessary to meet requirements for the aeronautical mobile-satellite (R) service", .The ASMG preliminary position is not in favor of the aviation position, which calls for the full protection of MSS from AMSRS communications. The meeting noted with appreciation that Bahrain civil aviation delegate participated with the States TRA delegate in the ASMG/13 meeting, furthermore the final report of the ASMG/13 meeting is not yet finalized.

5.8   The meeting recalled that in order to ensure MID States support to the ICAO position the CNS SG formed the Ad-Hoc Action Group for the support of Aeronautical Frequency Bands, however since its creation the Ad-Hoc Action group did not play any active role in developing an action plan to address threats to Aviation spectrum nor in promoting ICAO positions therefore the meeting agreed to dissolve this group and transfer the tasks of the Ad hoc group to the CNS SG. Accordingly the meeting agreed to the following Draft Conclusions to replace and supersede MIDANPIRG/11 Conclusion 11/56:

> ***DRAFT DECISION 3/7:***   ***DISSOLVE THE AD HOC ACTION GROUP FOR THE SUPPORT OF AERONAUTICAL FREQUENCY BANDS***
>
> *That, the Ad Hoc Action Group for the support of Aeronautical frequency bands is dissolved and its task to be carried out by the CNS SG.*

5.9   The meeting re-iterated the need for States to consider incorporation of ICAO position into their State's position for the WRC-12 and that States delegation to the WRC 12 conference be prepared to support the ICAO Position on issues of concern to international civil aviation. The delegation from ICAO will participate in the work of the WRC 12 and will assist States by presenting the agreed aviation position and coordinating with aviation delegates as required in the course of the WRC-12 conference. Accordingly the meeting agreed to the following Draft Conclusion to replace and supersede MIDANPIRG/11 Conclusion 11/56:

> ***DRAFT CONCLUSION 3/8:***   ***SUPPORT ICAO POSITION FOR WRC-12***
>
> *That MID States be urged to,*
>
> a)   *include ICAO Position on WRC-12 into their State Position to the extent possible;*
>
> b)   *Civil Aviation Authorities, aviation spectrum experts to participate actively in the national and regional level activities related to WRC-12 including ITU study groups to support ICAO Position; and*
>
> c)   *Civil Aviation Authorities, aviation spectrum experts to participate in WRC-12 and coordinate with the ICAO delegation to the conference.*

5.10   The meeting was informed that Iraq and Iran names are still in Foot notes 5.201 and six MID States: Iran, Jordan, Oman, Saudi Arabia, Syria and UAE are listed in foot note 5.202; the meeting urged these States to coordinate with their National TRA for the removal of their States Name from the foot notes.

5.11   meeting was apprised on Amendment 85 to the International Standards and Recommended Practices, Aeronautical Telecommunications (Annex 10 to the Convention on International Civil Aviation) which was adopted by the Council at the seventh meeting of its 189th Session on 26 February 2010.When adopting the amendment, the Council prescribed 12 July 2010 as the date on which it will become effective, except for any part concerning where a majority of Contracting States have registered their disapproval before that date. In addition, the Council resolved that Amendment 85, to the extent it becomes effective, will become applicable on 18 November 2010.

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5.12   The meeting noted that the adoption of amendment 85 to Annex 10 was circulated through State Letter 7/1.1.45-10/28 dated 01 April 2010, affects Volumes I, III and IV of Annex 10, arises from the work undertaken in the Navigation Systems Panel (NSP), the Aeronautical Surveillance Panel (ASP) and the Secretariat.

5.13   The meeting noted that the objectives of the amendment 85 are to:

a)   amend the Standards and Recommended Practices (SARPs) concerning instrument landing system (ILS) coverage requirements, global navigation satellite system (GNSS) signal-in-space performance requirements, GLObal NAvigation Satellite System (GLONASS) system requirements;

b)   amend the SARPs concerning 24-bit aircraft address, secondary surveillance radar (SSR) and extended squitter and introduce new provisions for multilateration systems and airborne surveillance applications; and

c)   amend the SARPs concerning the airborne collision avoidance system (ACAS).

5.14   While reviewing amendment 85 to annex 10 the meeting urged MID States to strictly adhere to the 24-bit addresses allocated to their States as listed in Annex 10, Volume III, Part I, Chapter 9, Table 9-1. Allocation of aircraft addresses to States. The meeting further urged States to allocate the 24 bit address to all aircraft registered in their State with the principle that; at any one time, no address shall be assigned to more than one aircraft

The meeting was of the view that States maintain database for all the 24bit aircraft address allocation pertaining to their States and send the assigned allocation to ICAO MID Office and MID RMA for inclusion in their databases. Consequently the meeting agreed   that, MID States provide to ICAO MID Office the list of the assigned 24 bits address to the aircraft registered in their State before 30 December 2010.

5.15   The meeting also drafted the following paragraph for inclusion in the MID FASID at the appropriate part along with the proposal for amendment which will be processed by the MID Office as in para 3.21.

> *taking into account that the use of global communications, navigation and surveillance systems is based on assigning exclusive aircraft addresses composed of 24-bit for ACAS, ELT, SSR Mode S, and ATN with VDL, AMSS and other functionality, MID States to apply the procedure established by ICAO to identify aircraft assigned 24-bit aircraft addresses in accordance with Annex 10, Volume III, Part I, Chapter 9, Global plan for the allocation, assignment and application of aircraft addresses.*

5.16   The meeting recalled that EUROCONTROL developed All Purpose STructured Eurocontrol suRveillance Information eXchange (ASTERIX) for the exchange of Surveillance related data. ASTERIX provides a structured approach to a message format to be applied in the exchange of surveillance related information for various applications. Having started as a EUROCONTROL development, ASTERIX is now applied worldwide, **Appendix 5A** to the report on Agenda item 5, is the System Area Code (SAC) codes assigned to MID States.

5.17   The meeting noted that SSR Mode S interrogator Identifier Codes are used to reduce garble and to improve performance in the overlapping coverage of SSRs. ICAO SARPs provided for 4 bit Interrogator Identifier (II) code permits 16 code combinations to be available for operational use. The code 0 (zero) is reserved and is not generically available for II code assignment. In 1998, Annex 10, Volume IV

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was amended to provide SARPs for additional 63 Surveillance Identifier (SI) codes, in addition to II codes, to meet the requirement of SSR interrogators in the areas of high density of installations.

5.18   The meeting also noted that each Mode S sensor or cluster of Mode S sensors requires a unique Interrogator Identifier (II) code and/or a Surveillance Identifier (SI) code, collectively referred to as Interrogator Codes (IC). Since there are only 15 II and 63 SI codes that can be operationally assigned (special use of II Code zero and SI Code zero is not used), IC assignment needs to be carefully organized to ensure that identical codes are not used in overlapping Mode S coverage areas.

5.19   The meeting was informed that assignment of interrogator identifier (II) codes, where necessary in areas of overlapping coverage, across international boundaries of flight information regions, according to annex 10 shall be subject to regional air navigation agreements.

5.20   The meeting noted APAC Region agreed that only II code will be used and assigned according to a table that was developed and supported by locally developed software, however Europe Region has Mode S IC Co-ordination Group (MICoG) and Civil/Military SSR Environment Liaison Group (CIMSEL), also developed a software application for this purpose.

5.21   The meeting was of the view that since ICAO MID Region is an interface with AFI, Europe and ASIA/PAC Regions coordination for the allocations is necessary within the MID Region and with other Regions especially with European region as it is very populated with the MODE S Radars. The meeting noted that some MID States have faced conflict issues with Europe and coordination process were carried out with European Region through the MICoG and the MICA application for the allocation of the IC codes for MID States .

5.22   The meeting agreed that ICAO MID Region continue using the Europe developed tool through MICoG of EUROCONTROL and the MID Office to act as focal point for the MID Region, as this is already been tested and used for MID Region. In this regard the meeting requested ICAO MID Regional office to formalize the process with EUROCONTROL.

5.23   The meeting agreed that ICOA MID office also add a supplement to the MID FASID showing the IC code allocation of the MID mode S radars which is at **Appendix 5B** to the Report on Agenda Item 5 and to process it with the proposal for amendment mentioned in 3.21.

5.24   The meeting noted that surveillance and other ATM technologies are being developed in order to meet the Global ATM Operational concept (doc 9854) , Several programmes such as Nexgen and SESAR were launched in other regions, further in the deliberations on surveillance the meeting noted that emerging new surveillance technologies for which the MID Region has not yet benefited fully is being applied in other regions in this regards the meeting agreed that as an initial step organization of a Surveillance workshop is of paramount importance where the workshop can draw the road map for the MID region Surveillance strategy.

5.25   The meeting was of a view that a workshop will also support the development of performance-based action plan for the implementation of surveillance system aimed for the achievement of the Performance Objective to "improve Situational Awareness" and Performance Based Navigation (PBN) related performance objectives as agreed by the PBN/GNSS Task Force.

5.26   The meeting also noted that the SSRCA SG/3 in order to improve the MID SSR Code Allocation System developed MID strategy which is reliant on emerging surveillance technologies.

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5.27   Based on all the above, the meeting agreed to the following Draft Conclusion:

DRAFT CONCLUSION 3/9:   MID SURVEILLANCE WORKSHOP

That, ICAO MID Regional office organize/workshop with objective to develop MID Region's Surveillance strategy and road map.

5.28   The meeting was apprised of the outcome of the Third Inter-Regional Co-ordination Meeting (IRCM/3) held in Cairo, 24 - 26 March 2009, eleventh meeting of the ATM/SAR/AIS Sub-Group held in Bahrain, 10 - 12 November 2009 and the first meeting of the ICAO New Flight Plan Format Study Group (INFPL SG/1) held in Cairo, 15 - 17 February 2010.

5.29   In this regard, the meeting noted that ANB developed a web tool called Flight Plan Implementation Tracking System (FITS) website: http://www2.icao.int/en/FITS/Pages/home.aspx.   The tool, provides information regarding the implementation status of the new flight plan provisions in each State along with guidance and harmonized solutions to any difficulties encountered in the implementation process.

5.30   The meeting re-iterated the need for States to secure necessary budget for the implementation of the new FPL Format Project, and urged States to develop the technical requirements related to the upgrade of their ATC systems to comply with the new FPL Format and to initiate necessary negotiation with the ATC systems manufacturing vendors as soon as possible.

5.31   The meeting noted that INFPL SG/1 reviewed and updated the list of focal point of contact and the Regional Performance Framework Form (PFF) related to the ICAO new Flight Plan Format. It was particularly noted that the INFPL SG/1 meeting developed a table reflecting the level of preparedness of MID States for the implementation of the INFPL, as follows:

	Focal point	Manf. cont / Budget	Milestone	Implementation date of new	Remarks
Bahrain	√	√ / √	4		
Egypt	√		3		
Iran	√		3		
Iraq					
Israel					
Jordan		√ / √	3		
Kuwait	√		2		
Lebanon					
Libya					
Oman	√				
Qatar	√	√/√	5		
Saudi Arabia	√	√/√	4		
Sudan					
Syria	√				
UAE	√	√/√	5		
Yemen					

Milestone:
           1- Empty
           2- Analysis of the draft amendment
           3- Evaluation of current system

> 4- Introduction of capability to parse new information
> 5- Check of AIDC / OLDI compatibility
> 6- Coordination with neighboring ANSP and airspace users
> 7- Implementation of new system

5.32   The meeting recalled MIDANPIRG/11 conclusion 11/27: *SSR CODES SHARING IN THE MID REGION,* tasking CNS SG, to consider the feasibility of FDPS upgrades in the MID Region to further support SSR code sharing approach. In this regard the meeting noted that SSRCA SG/3 held in Cairo, analyzed the FDPS questionnaire replies as in **Appendix 5C** to the Report on Agenda Item 5, where it was evident that FDPS's do not require upgrades to satisfactorily perform the functions according to the Participating Area (PA) requirement. However, the use of directional assignment will require the upgrade of FDPS.

5.33   The meeting noted that the ICAO MID Regional Office will organize a Workshop from 4-6 July 2010 as a Special Implementation Project (SIP), in order to assist States in the preparation for the timely implementation of the ICAO new Flight Plan Format.

5.34   Based on the above, the meeting urged States to take necessary follow up actions on the ATM/SAR/AIS SG/11, INFPL SG/1 and SSRCA SG meetings Conclusions related to the ICAO New Flight Plan format. States were urged also to take all necessary measures to comply with the applicability date of 15 November 2012. Furthermore, the meeting encouraged States to actively participate in the Workshop on ICAO New Flight Plan Format.

5.35   The meeting was apprised on the development in the ACP, where it was noted that among other activities. A new Working Group, WG-S (Surface) will be formed to develop SARPS and Guidance Material for the Airport Surface Datalink, since this is a high priority task as it is an early requirement of the NextGen and SESAR programmes.

5.36   The meeting was also apprised on ICAO Panels that are involved in the development of SARPs and guidance materials relating to aeronautical surveillance being Aeronautical Surveillance Panel (ASP) Operational Data Link Panel (OPLINKP), and Separation and Airspace Safety Panel (SASP), where SASP work has been progressed by several project teams including Project Team 13 dealing with ADS-B and MLAT.

5.37   The meeting was informed on the Navigation Systems Panel (NSP) work programme and completion of the development of a proposal for Amendment 86 to Annex 10, Volume I, in November 2009. After review by the Air Navigation Commission, a consultation with States and international organizations is planned to be initiated in May 2010. The proposed Amendment is envisaged for applicability on 17 November 2011.

5.38   The meeting was apprised on Saudi Arabia National ANS Network (NAN) that will form the communication infrastructure to transport the ground-ground domestic operational voice and data flows to support the Air Traffic Management, and noted that it will be completed by the end of year 2011.

5.39   The meeting was informed that GCC ANC for Gulf States has been established early 2009 in order to improve the GCC airspace performance by providing best facilities/services to the airspace users, the meeting encouraged the exchange of data and experiences and recommended the GCC States to update appropriate MIDANPIRG Subsidiary bodies ICAO meeting on the progress achieved in order to gain this experience and avoid any duplication of efforts.

ASTERIX SAC CODE ASSIGNMENT PLAN TO THE MIDDLE EAST REGION

State/Territory	SAC Code Format								Hexadecimal SAC Code
	B7	B6	B5	B4	B3	B2	B1	B0	
Afghanistan	1	1	0	1	1	0	1	0	DA
Bahrain	1	1	0	1	1	0	1	1	DB
Egypt	1	1	0	1	1	1	0	0	DC
Iran, Islamic Republic of	1	1	0	1	1	1	0	1	DD
Iraq	1	1	0	1	1	1	1	0	DE
Israel	1	1	0	1	1	1	1	1	DF
Jordan	1	1	1	0	0	0	0	0	E0
Kuwait	1	1	1	0	0	0	0	1	E1
Lebanon	1	1	1	0	0	0	1	0	E2
Libyan Arab Jamahiriya	1	1	1	0	0	0	1	1	E3
Oman	1	1	1	0	0	1	0	0	E4
Qatar	1	1	1	0	0	1	0	1	E5
Saudi Arabia	1	1	1	0	0	1	1	0	E6
Sudan	1	1	1	0	0	1	1	1	E7
Syrian Arab Republic	1	1	1	0	1	0	0	0	E8
United Arab Emirates	1	1	1	0	1	0	0	1	E9
Yemen	1	1	1	0	1	0	1	0	EA

- - - - - -

ICAO CNS Supplement   Mode S IC Allocations MID Region

RECORD OF AMENDMENTS

Amendments to the SSR Mode-S Interrogator Codes (IC) Allocations for the ICAO MID Region will be disseminated to States on an annual basis. The space below is provided as a means of keeping a record of such amendments.

AMENDMENTS			
No.	**Date Applicable**	**Date Entered**	**Entered by**
1	13/5/2010	13/5/2010	ICAO MID Regional office

Code Allocation Status for Bahrain

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station		ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
		II	SI	Effective Date		
BAHRAIN						

Code Allocation Status for Egypt

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station		ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
		II	SI	Effective Date		
EGYPT						
Aswan ERR		**02**		**ad hoc 17/03/2009**	**NANSC**	**MICA/ALLOC461**
Asyut ERR		**03**		**ad hoc 17/03/2009**	**NANSC**	**MICA/ALLOC462**
Cairo ERR		**04**		**ad hoc 17/03/2009**	**NANSC**	**MICA/ALLOC463**
Hurghada ERR		**05**		**ad hoc 17/03/2009**	**NANSC**	**MICA/ALLOC464**
Messa Matruh ERR		**06**		**ad hoc 17/03/2009**	**NANSC**	**MICA/ALLOC465**

Code Allocation Status for Iran

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station		ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
		II	SI	Effective Date		
IRAN						

Code Allocation Status for Iraq

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station		ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
		II	SI	Effective Date		
IRAQ						

Code Allocation Status for Israel

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station		ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
		II	SI	Effective Date		
ISRAEL						

Code Allocation Status for Jordan

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station		ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
		II	SI	Effective Date		
JORDAN						

Code Allocation Status for Kuwait

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station		ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
		II	SI	Effective Date		
KUWAIT						

Code Allocation Status for Lebanon

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station		ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
		II	SI	Effective Date		
LEBANON						
Baysour		02		23/04/2009	DGCA	MICA/ALLOC467

Code Allocation Status for Libya

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station		ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
		II	SI	Effective Date		
LIBYA						

Code Allocation Status for Oman

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station		ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
		II	SI	Effective Date		
OMAN						

5B-4

Code Allocation Status for Qatar

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station		ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
		II	SI	Effective Date		
QATAR						

Code Allocation Status for Saudi Arabia

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station		ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
		II	SI	Effective Date		
SAUDI-ARABIA						
Madinah		04		Ad-hoc, 06/05/2010	GACA	MICA/ALLOC529
Rafha		05		Ad-hoc, 06/05/2010	GACA	MICA/ALLOC530
Zamosc		10		Ad-hoc, 06/05/2010	GACA	MICA/ALLOC531

Code Allocation Status for Sudan

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station		ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
		II	SI	Effective Date		
SUDAN						

Code Allocation Status for Syria

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station		ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
		II	SI	Effective Date		
SYRIA						

Code Allocation Status for UAE

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station		ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
		II	SI	Effective Date		
EMIRATES						

Code Allocation Status for Yemen

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station		ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
		II	SI	Effective Date		
YEMEN						

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Appendix 5C to the Report on Agenda Item 5

MID FDPS ANALYSIS

	Bahrain	Egypt	Iran	Iraq	Kuwait	Oman	Qatar	Saudi Arabia	Syria	UAE
ATS SYSTEM	Thales	EUROCAT 2000		Raytheon Autotrac II		Raytheon Autotrac II		Thales EUROCAT X		
Type of code DIF T/D	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Directional Assignment	YES	YES	YES	NO	NO	YES	YES	YES	NO	NO
Multiple Assignment	NO	NO	YES	NO	NO	NO	YES	YES	NO	YES
Time ref assignment	YES	NO	NO	NO	NO	YES	NO	YES	NO	NO
Other method	NO	YES	Six categories off line defined.	YES *Oldest code different code pools*	NO	NO	YES Manual orders and messages reception	YES Manual assignment by Controller	NO	NO
Time of assignment spec	Off line defined time	SSR code is assigned at pre-activation time for departure flights. Pre-activation time is off-line defined parameter in	From DEP aerodrome	0 to 60 minutes set for 30 min	Assigned manually regardless	On start - up	Upon manual activation or system parameter before ETD	At creation of FPL	Immediately upon issuing DEP Clearance	Start - up

	Bahrain	**Egypt**	**Iran**	**Iraq**	**Kuwait**	**Oman**	**Qatar**	**Saudi Arabia**	**Syria**	**UAE**
		the range of 15 to 120 minutes								
DLA/DEP	The system retains the code, or the operator can remove the code, releasing it for future use (after the recycle time has expired)	SSR code is frozen and stored in the table for a period of time. After that period the code is released and could be used on other flights. The flight will be assigned another code when pre-activated again. If pre-activated within the frozen period, the SSR code is retained	It will not use again for the next two hours	Will remain assigned to the delayed flight	The code stays assigned to a particular A/C for 3 hours	Retains the same code	Manually deactivated	Controller has to finish or Cancel the FPL.	After one hour the code will be inactivated	Code not issued for DLA Manual removal for return to gate
Transparency	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES
Code retention	NO	NO	YES	YES	NO	YES	YES	YES	YES	YES
Protection	NO	NO	YES	NO	NO	YES	YES	YES	NO	NO

	Bahrain	**Egypt**	**Iran**	**Iraq**	**Kuwait**	**Oman**	**Qatar**	**Saudi Arabia**	**Syria**	**UAE**
Saturation	An error message is presented to the operator when all codes are used.	Codes shall always be assigned from the appropriate code category. De-assignment shall be performed either at cancellation or when a new code is assigned	Print out	*One code is reserved as a basic code.*	Not Applicable		The system provides indication when parametric percentage of slots (or combination of slots) is not available for assignment	Various capacity thresholds are defined in system		Not Applicable
Recording	Run log which includes received radar tracks (including SSR)	None	Print out	*billing data is automatically collected, has the SSR code listed*	None		Logs and Data Reduction Tools	*Java aided DAF Environment;*	In the Data base of the FDPS, and in the RDP system	FDP logs and RDP recordings are kept
Automation	ABI, ACT, and LAM YES rest NO	ABI, ACT, LAM, PAC AND MAC YES rest NO	ABI, ACT, LAM,AND PAC YES rest NO	ABI, ACT, LAM,AND PAC,MAC YES rest NO	Not Applicable		ABI, ACT, LAM, PAC, MAC, INF, REV and COD YES	ABI, ACT, LAM,AND PAC,COD YES rest NO	NO	ABI, ACT, PAC and LAM YES rest NO

CNS SG/3
Report on Agenda Item 6

REPORT ON AGENDA ITEM 6:   REVIEW AIR NAVIGATION DEFICIENCIES IN CNS

6.1   The meeting recalled that MIDANPIRG/10 and MIDANPIRG/11 noted with concern that many deficiencies continue to persist for a number of years.

6.2   The meeting noted that the MSG/1 meeting (Dubai, UAE, 1-3 July 2008) when addressing the issue of air navigation deficiencies, shared the concern of the ICAO Council, ANC and MIDANPIRG related to the longstanding deficiencies and explored ways and means to alleviate these deficiencies. In this regard, the MSG/1 meeting was of view that MID States Members of Gulf Co-operation Council (GCC), which has established an Air Navigation Commission, should present the subject of deficiencies to this Commission asking for up-down support for their elimination in the GCC States. The meeting also encouraged MID States that are Member of Arab Civil Aviation Commission (ACAC) to seek ACAC's assistance for the elimination of deficiencies.

6.3   The meeting noted that the ICAO MID Regional Office further improved the MID Air Navigation Deficiency Database (MANDD), which is available on the web (restricted), as requested by MIDANPIRG.

6.4   The meeting recalled that MIDANPIRG/11 developed Conclusion 11/86 related to the elimination of air navigation deficiencies as follows:

> *CONCLUSION 11/86:   ELIMINATION OF AIR NAVIGATION DEFICIENCIES IN THE MID REGION*
>
> *That,*
>
> a) *MID States review their respective lists of identified deficiencies, define their root causes and forward an action plan for rectification of outstanding deficiencies to the ICAO MID Regional Office;*
>
> b) *MID States and Users Organizations use the online facility offered by the ICAO MID Air Navigation Deficiency Database (MANDD) for submitting online requests for addition, update and elimination of air navigation deficiencies;*
>
> c) *MID States increase their efforts to overcome the delay in mitigating air navigation deficiencies identified by MIDANPIRG and explore ways and means to eliminate deficiencies;*
>
> d) *ICAO continue to provide assistance to States for the purpose of rectifying deficiencies; and when required, States request ICAO assistance through Technical Co-operation Programme, Special Implementation Projects (SIP) and/or other available mechanisms such as IFFAS; and*
>
> e) *MID States are encouraged to seek support from regional and international organizations (i.e. ACAC, GCC, etc.) for the elimination of identified air navigation deficiencies.*

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Report on Agenda Item 6

6.5   As a follow-up action to MIDANPIRG Conclusion 11/86; a State Letter was circulated by ICAO MID Office (Ref. AN 2/2-024 dated 21 January 2010) to all concerned MID States requesting the update of the information related to their list of deficiencies using MANDD.

6.6   The meeting noted that Jeddah/Beirut/Jeddah AFTN circuit has been upgraded to digital at speed of 19.2 KBs. Accordingly this deficiency was cleared from the list of deficiencies.

6.7   The meeting noted with concern the deficiency related to the none implementation of Amman- Beirut circuit and was of the view that Jordan coordinate with Lebanon for its implementation since the comments in the database indicate that Lebanon is ready to implement.

6.8   The meeting while reviewing and updating the list of deficiencies in the CNS field have noted that a total of 09 CNS deficiencies have been resolved with only 04 new CNS deficiencies reported. Further the meeting urged States to use the MANDD for online updates, report action taken and/or add new deficiencies.

6.9   The meeting noted that MSG/2 meeting held in (Amman, Jordan, 9 - 11 March 2010) explored ways and means to increase the efficiency of MIDANPIRG. In this regard, the MSG/2 meeting agreed among others that ICAO MID Regional Office carry out more missions to States, preferably based on States' requests, in order to, amongst others:

- review the status of implementation of SARPs and Air Navigation Plan provisions;
- review the Civil Aviation System and safety oversight functions;
- provide necessary assistance for the elimination of deficiencies (air navigation deficiencies and USOAP findings, as appropriate); and
- collect relevant data necessary for performance monitoring of the air navigation systems.

6.10   The updated list of MID Air Navigation Deficiencies in CNS area is at **Appendix 6A** to the Report on Agenda Item 6.

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Appendix 6A to the Report on Agenda Item 6

Deficiencies in the CNS Field

BAHRAIN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	AFTN Rationalized Plan (LIM MID RAN Rec 6/6, 6/9 and MIDANPIRG/4 Conclusion 4/19)	Afghanistan-Bahrain-Kabul-Bahrain AFTN Circuit	The circuit is not yet implemented	Oct, 1998	Bahrain is ready to implement the circuit	O	Follow-up the matter with IATA concerning Afghanistan VSAT are available and now checking compatibility	Afghanistan Bahrain	Dec, 2010	B

[1] Rationale for non-elimination: "F"= Financial   "H"= Human Resources   "S"= State (Military/political)   "O"= Other unknown causes

Deficiencies in the CNS Field

EGYPT

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	AFTN Main Circuits (LIM MID RAN Rec 10/5)	Egypt – Tunisia Cairo – Tunis AFTN Circuit	The circuit is implemented on 100 bauds	Oct, 1999	Egypt is ready to up-grade the circuit to 9.6 K	O	Planned to be up-graded to 1200 bauds. Upon Tunis readiness Egypt Confirmed their readiness	Egypt - Tunisia	Dec, 2009	A
2	Upgrade of Egypt – Syria Circuit	Egypt - Syria	Upgrdae of the Egypt Syria Circuit is needed	Oct, 2008	-	O	Egypt is working wioth Syria for the upgrade of the circuit	Egypt - Syria	Dec, 2009	A

[1] Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the CNS Field

IRAN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	**Facilities/ Services**	**Description**	**Date First Reported**	**Remarks/ Rationale for Non-elimination**		**Description**	**Executing Body**	**Date of Completion**	**Priority for Action**
1	AFTN Rationalized Plan (LIM MID RAN Rec 6/6, 6/9 and MIDANPIRG/4 Conclusion 4/19)	Afghanistan-Iran-Kabul-Tehran AFTN Circuit	The circuit is not yet implemented	Oct, 1998	VSAT network to be implemented	S	Iran advised that they are ready	Afghanistan Iran	Dec, 2009	A

[1] Rationale for non-elimination: "F"= Financial   "H"= Human Resources   "S"= State (Military/political)   "O"= Other unknown causes

Deficiencies in the CNS Field

IRAQ

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	**Facilities/ Services**	**Description**	**Date First Reported**	**Remarks/ Rationale for Non-elimination**		**Description**	**Executing Body**	**Date of Completion**	**Priority for Action**
1	AFTN usage (LIM MID RAN Rec 6/2)	Baghdad AFTN Center	Circuit Loading Statistics	May, 1995	Monthly statistics should be sent to MID Office	S	Refers to ICAO fax ref. F.ME 165 reminding States to send data to ICAO Office	Iraq	Dec, 2010	B
2	ATS Direct Speech circuit	Iraq - Syria	ATS Direct speech circuit between adjacent centers is needed	Oct, 2008	New reported	O	Iraq Advise they can provide VSAT	Iraq and Syria	Dec, 2010	U
3	ATS Direct Speech circuit	Iraq – Jordan	ATS Direct speech circuit between adjacent centers is needed	Oct, 2010	New reported	O	Iraq Advise they can provide VSAT	Iraq and Jordan	Dec, 2010	U
4	MID FASID	Baghdad VOR	VOR not installed	Dec 2010	New reported	O	Iraq advised that all NAV AID will be installed according to the master plan		Dec, 2010	U
5	MID FASID	Baghdad DME	DME not installed	Dec 2010	New reported	O	Iraq advised that all NAV AID will be installed according to the master plan		Dec, 2010	U

[1] Rationale for non-elimination: "F"= Financial   "H"= Human Resources   "S"= State (Military/political)   "O"= Other unknown causes

Deficiencies in the CNS Field

JORDAN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	**Facilities/ Services**	**Description**	**Date First Reported**	**Remarks/ Rationale for Non-elimination**		**Description**	**Executing Body**	**Date of Completion**	**Priority for Action**
1	AFTN Rationalized Plan (LIM MID RAN Rec 6/6, 6/9 and MIDANPIRG/4 Conclusion 4/19)	Jordan-Lebanon-Amman-Beirut AFTN Circuit	The circuit is not yet implemented	Oct, 1998	Lebanon is ready to implement the circuit	S	Jordan will co-ordinate with Lebanon for up-grading

Jordan confirmed that they are ready | Lebanon – Jordan | Dec, 2010 | A |
| ~~2~~ | ~~Upgrade of Jordan Syria Circuit~~ | ~~Jordan – Syria~~ | ~~Upgrade is needed for the Jordan Syria Circuit~~ | ~~Oct, 2008~~ | ~~–~~ | ~~O~~ | ~~Jordan and Syria are working on the required upgrade~~ | ~~Jordan – Syria~~ | ~~Dec, 2009~~ | ~~B~~ |
| 3 | ATS Direct Speech circuit | Iraq – Jordan | ATS Direct speech circuit between adjacent centers is needed | Oct, 2010 | New reported | O | Iraq Advise they can provide VSAT | Iraq and Jordan | Dec, 2010 | U |

[1] Rationale for non-elimination: "F"= Financial   "H"= Human Resources   "S"= State (Military/political)   "O"= Other unknown causes

Deficiencies in the CNS Field

KUWAIT

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	**Facilities/ Services**	**Description**	**Date First Reported**	**Remarks/ Rationale for Non-elimination**		**Description**	**Executing Body**	**Date of Completion**	**Priority for Action**
1	AFTN usage (LIM MID RAN Rec 6/2)	Kuwait AFTN Center	Circuit Loading Statistics	May, 1995	Monthly statistics should be sent to MID Office	O	Refer to ICAO fax ref. F.ME 165 reminding States to send data to Regional Office	Kuwait	Dec, 2010	B
2	AFTN Main Circuits (LIM MID RAN Rec10/5)	Lebanon-Kuwait-Beirut – Kuwait AFTN Circuit	The circuit is implemented on 100 bauds	Oct, 1999	The circuit is operating satisfactorily on 100 bauds.	O	Kuwait is ready to upgrade to higher speed according to the readiness of Lebanon	Kuwait Beirut	Dec, 2010	B

[1] Rationale for non-elimination: "F"= Financial   "H"= Human Resources   "S"= State (Military/political)   "O"= Other unknown causes

Deficiencies in the CNS Field

LEBANON

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	**Facilities/ Services**	**Description**	**Date First Reported**	**Remarks/ Rationale for Non-elimination**		**Description**	**Executing Body**	**Date of Completion**	**Priority for Action**
1	AFTN Rationalized Plan (LIM MID RAN Rec 6/6, 6/9 and MIDANPIRG/4 Conclusion 4/19)	Jordan-Lebanon Amman-Beirut AFTN Circuit	The circuit is not yet implemented	Oct, 1998	Lebanon is ready to implement the circuit	S	Another alternative should be proposed in the MID AFTN Plan	Jordan Lebanon	Dec, 2009	A
2	~~AFTN Main Circuits (LIM MID RAN Rec10/5)~~	~~Lebanon – Saudi Arabia Beirut – Jeddah AFTN Circuit~~	~~The circuit is implemented on 100 bauds~~	~~Oct, 1999~~	~~Will be upgraded to 64 K~~	~~O~~	~~Circuit will be upgraded to 64K~~	~~Lebanon- Saudi Arabia~~	~~Jun, 2009~~	~~B~~
3	AFTN Main Circuits (LIM MID RAN Rec10/5	Lebanon – Kuwait Beirut – Kuwait AFTN Circuit	The circuit is implemented on 100 bauds	Oct, 1999	The circuit is operating satisfactorily on 100 bauds	O	Kuwait ready for upgrade to digital	Kuwait Lebanon	Jun, 2009	B

[1] Rationale for non-elimination: "F"= Financial   "H"= Human Resources   "S"= State (Military/political)   "O"= Other unknown causes

Deficiencies in the CNS Field

OMAN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	**Facilities/ Services**	**Description**	**Date First Reported**	**Remarks/ Rationale for Non-elimination**		**Description**	**Executing Body**	**Date of Completion**	**Priority for Action**
2	Direct Speech circuit (LIM MID RAN)	Oman - Yemen	Direct Speech circuit is required	Oct, 1998	under Implementation	O	Oman confirm they are ready	Oman - Yemen	Dec, 2010	A

[1] Rationale for non-elimination: "F"= Financial   "H"= Human Resources   "S"= State (Military/political)   "O"= Other unknown causes

Deficiencies in the CNS Field

QATAR

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	**Facilities/ Services**	**Description**	**Date First Reported**	**Remarks/ Rationale for Non-elimination**		**Description**	**Executing Body**	**Date of Completion**	**Priority for Action**
1	AFTN usage (LIM MID RAN Rec 6/2)	Doha AFTN Center	Circuit Loading Statistics	May, 1995	Refer to ICAO fax ref. F.ME 165 reminding States to send data to Regional Office	H	Data should be sent to ICAO Office	Qatar	Dec, 2010	B

[1] Rationale for non-elimination: "F"= Financial   "H"= Human Resources   "S"= State (Military/political)   "O"= Other unknown causes

Deficiencies in the CNS Field

SAUDI ARABIA

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	AFTN usage (LIM MID RAN Rec 6/2)	Jeddah AFTN Center	Circuit Loading Statistics	May, 1995	Refer to ICAO fax ref. F.ME 165 reminding States to send data to Regional Office.	O	software installed	Circuit Loading Statistics information is part of	Dec 2010	B
2	~~AFTN Main Circuits (LIM RAN Rec 10/5)~~	~~Lebanon – Saudi Arabia Beirut – Jeddah AFTN Circuit~~	~~The circuit is implemented on 100 bauds~~	~~Oct, 1999~~	~~Circuit to be improved~~	~~O~~	~~Planned to be up-graded to 9.6K~~	~~Lebanon – Saudi Arabia~~	~~Dec, 2009~~	~~B~~

(1) Rationale for non-elimination: "F"= Financial   "H"= Human Resources   "S"= State (Military/political)   "O"= Other unknown causes

Deficiencies in the CNS Field

SYRIA

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	ATS Direct SPeech circuit	Syria - IRAQ	Direct Speech circuit required between Syria and Iraq	Oct, 2008	-	O	Iraq advise they are ready to provide VSAT for the implementation	Syria-Iraq	Dec, 2009	U
2	Upgrade of the Circuit	Syria- Egypt	Upgrade needed for teh circuit between Syria and Egypt	Oct, 2008	-	O	Syria and Egypt working on the implementation of the required upgrade	Syria- Egypt	Dec, 2009	A
3	Upgrade of Syria Jordan Circuit	Syria - Jordan	Upgrade is needed for the Syria Jordan circuit	Oct, 2008	-	O	Syria and Jordan are working on the required upgrade	Syria - Jordan	Dec, 2009	B

[1] Rationale for non-elimination: "F"= Financial   "H"= Human Resources   "S"= State (Military/political)   "O"= Other unknown causes

Deficiencies in the CNS Field

UAE

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	**Facilities/ Services**	**Description**	**Date First Reported**	**Remarks/ Rationale for Non-elimination**		**Description**	**Executing Body**	**Date of Completion**	**Priority for Action**
1	Radio Frequencies	UAE ACC	133.550 MHz	Feb, 2002	Unknown Interference	O	Report was sent to Nat. Telecom. Admin	Follow-up by ICAO and State	Dec, 2010	U
2	Radio Frequencies	AL Ain	129.150 MHz	Jun, 2002	Kish Air Dispatch	O	Nat. Telecom. Admin	Follow-up by ICAO and State	Dec, 2010	A
3	VOR designator SHJ	VOR	Changed VOR designator from SHJ to SHR causing duplication with IRAN NDB	Dec, 2009	UAE GCAA are looking into the matter	O	Change to the correct designator which is SHJ	UAE GCAA	july 2010	U

[1] Rationale for non-elimination: "F"= Financial   "H"= Human Resources   "S"= State (Military/political)   "O"= Other unknown causes

Deficiencies in the CNS Field

YEMEN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	**Facilities/ Services**	**Description**	**Date First Reported**	**Remarks/ Rationale for Non-elimination**		**Description**	**Executing Body**	**Date of Completion**	**Priority for Action**
1	Direct SPeech Circuit with Adjacent center Djibouti	Yemen - Djibouti	requirement for a Direct SPeech Circuit with Adjacent center Djibouti	Oct, 1998	-	O	Establishment fo direct speech circuit between Yemen and Djibouti	Yemen - Djibouti	Dec, 2010	A
2	Direct SPeech Circuit with Adjacent center India	Yemen - India	Direct SPeech Circuit with Adjacent center India	Oct, 1998	-	O	Establishments of a Direct SPeech Circuit with Adjacent center in India	Yemen - India	Dec, 2010	B
3	Direct SPeech Circuit with Adjacent center Oman	Yemen - Oman	Requirement for a Direct SPeech Circuit with Adjacent center Oman	Oct, 1998	-	F H O	Establish a direct Speech Circuit with Adjacent center Oman	Yemen - Oman	Dec, 2010	U
4	Direct SPeech Circuit with Adjacent center with Eritrea and Somalia	Yemen - Eritrea , Somalia	requirement for a direct Speech Circuit with Adjacent center in Eritrea and Somalia	Oct, 1998	-	F H S O	Establishment of direct Speech Circuit with Adjacent center in Eritrea and Somalia	Yemen - Eritrea , Somalia	Dec, 2010	B

[1] Rationale for non-elimination: "F"= Financial   "H"= Human Resources   "S"= State (Military/political)   "O"= Other unknown causes

Note:* Priority for action to remedy a deficiency is based on the following safety assessments:

'U' priority = Urgent requirements having a direct impact on safety and requiring immediate corrective actions.

Urgent requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is urgently required for air navigation safety.

'A' priority = Top priority requirements necessary for air navigation safety.

Top priority requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is considered necessary for air navigation safety.

'B' priority = Intermediate requirements necessary for air navigation regularity and efficiency.

Intermediate priority requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is considered necessary for air navigation regularity and efficiency.

Definition:

A deficiency is a situation where a facility, service or procedure does not comply with a regional air navigation plan approved by the Council, or with related ICAO Standards and Recommended Practices, and which situation has a negative impact on the safety, regularity and/or efficiency of international civil aviation.

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[1] Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

REPORT ON AGENDA ITEM 7: CNS PERFORMANCE OBJECTIVE FOR MID REGION

7.1 The meeting noted that the notion of a performance based air navigation systems emanated from good industry practices that have emerged over many years. As the aviation industry has evolved into a less regulated and more corporatized environment with greater accountabilities, the advantages of transitioning from systems based to performance-based air navigation planning are apparent.

7.2 ICAO planning objective is to achieve a performance based global air traffic management (ATM) system through the implementation of air navigation systems and procedures in a progressive, cost-effective and cooperative manner. The regional planning and implementation process is the principal engine of ICAO's planning framework.

7.3 The Performance-Based Approach (PBA) adheres to strong focus on results through adoption of performance objectives and targets; collaborative decision making driven by the results; and reliance on facts and data for decision making. Assessment of achievements is periodically checked through a performance review, which in turn requires adequate performance measurement and data collection capabilities

7.4 To facilitate the realization of a performance based Global ATM system, the meeting noted that ICAO has made significant progress in the development of relevant guidance material. The intent of the guidance material is to promote a globally harmonized approach to transition planning and to ensure collaboration in developing air navigation systems and procedures. These documents include *Global Air Traffic Management Operational Concept (Doc 9854)* , *The Air Traffic Management System Requirements (Doc 9882), the Manual on Global Performance of the Air Navigation System (Doc 9883)* to assist planners in weighing outcomes and making appropriate decisions, and the *Global Air Navigation Plan* (Doc 9750).

7.5 In terms of establishing the infrastructure for air navigation systems, it was recognized that States, in cooperation with the ATM community, have been developing their national plans in harmony with the regional plan by using relevant ICAO guidance material. As such, States should evolve or develop national plans aligned with the regionally agreed performance objectives through the use of common template, the Performance Framework Forms (PFF).

7.6 The meeting recalled that MIDANPIRG/11, while adopting a Regional Performance Framework under Conclusion 11/70, invited States to implement a National Performance Framework (MIDANPIRG/11Conclusion 11/71 refers). The performance framework should include identification of national performance objectives taking into consideration user expectations and completion of National Performance Framework Forms for all air navigation areas.

7.7 The meeting noted that in order to provide requisite training in the development of air navigation performance framework, the ICAO MID Regional Office with the support of ICAO HQ organized a workshop on "The development of National Performance Framework to achieve a global ATM system" in Cairo, 1-5 November 2009. The meeting supported the workshop recommendations, emphasizing on the recommendation which encourages States to organize at national level, similar workshops on the Development of National performance framework.

7.8 The meeting recalled that performance monitoring and measurement of ATM systems calls for metrics in Key Performance Areas (KPAs) that envelopes access and equity, capacity, cost-effectiveness, efficiency, environment, flexibility, predictability, safety and security, which are subset of 11 KPAs listed in ICAO Doc 9854.

7.9   Considering the need to have a clearly defined common approach to performance monitoring and measurement and the need to agree on a uniform set of metrics, the meeting noted that MSG/2 meeting held in Amman, Jordan, 9 - 11 March 2010 agreed to the following Draft Conclusion:

DRAFT CONCLUSION 2/2:   MID REGION PERFORMANCE METRICS

That:

a) *the following MID Region Metrics be adopted for performance monitoring of the air navigation systems:*

MID Metric 1: *Number of accidents per 1,000 000 departures;*

MID Metric 2: *Percentage of certified international aerodromes;*

MID Metric 3: *Number of Runway incursions and excursions per year;*

MID Metric 4: *Percentage of States reporting necessary data to the MID RMA on regular basis and in a timely manner;*

MID Metric 5: *The overall vertical-collision risk in MID RVSM airspace;*

MID Metric 6: *Percentage of air navigation deficiencies priority "U" eliminated;*

MID Metric 7: *Percentage of instrument Runway ends with an RNAV approach procedure; and*

MID Metric 8: *Percentage of en-route and terminal PBN routes implemented in accordance with the regional PBN plan.*

b) *the MIDANPIRG subsidiary bodies monitor the Metrics related to their work programmes; develop associated performance targets and provide feed-back to MIDANPIRG.*

7.10   The MSG/2 meeting recognized that data collection, processing, storage and reporting are fundamental to the performance-based approach and forms part of performance monitoring and management. Data will be condensed into a few indicators which represent the high level knowledge about the performance of the system. Accordingly, MSG/2 meeting agreed to the following Draft Conclusion:

DRAFT CONCLUSION 2/3:   DATA COLLECTION FOR MID REGION PERFORMANCE METRICS

That, States:

a) *incorporate the agreed MID Region Performance Metrics into their National performance monitoring process;*

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> *b) collect and process relevant data necessary for performance monitoring of the air navigation systems to support the regional Metrics adopted by MIDANPIRG; and*
>
> *c) submit this data to the ICAO MID Regional Office on a regular basis.*

7.11   the meeting was of the view that the agreed metrics are not directly related to the work programmes of the subgroup however the CNS being an enabler to all air navigation areas the Sub Group will provide the necessary support for the realization of the best result additionally the Sub-Group will contribute to the elimination of the deficiencies in the CNS area.

7.12   The meeting further reviewed and updated the MID Regional CNS PFFs adopted by MIDANPIRG/11 and updated by the IPS WG/2 and developed an updated PFF as at **Appendix7A** to the Report on Agenda Item 7 and invited States to develop their National Performance Framework Forms.

Regional PERFORMANCE PLANNING FRAMEWORK

AERONAUTICAL RADIO SPECTRUM
MID-ITU-01 - Implement Radio Spectrum Management and processes to protect the aeronautical spectrum

Benefits	
Efficiency	• Administer the use of the allocated aviation spectrum
Safety	• Assurance of aviation spectrum
	•

Strategy **Short term (2010-2012)** *Medium term (2011 - 2015)*				
ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
AO, TS, CM, AUO, ATMSDM	• Ensure Regional coordination for the protection of the aviation spectrum at WRC-12, and beyond • Ensure Participation of Civil Aviation Experts in State's delegation to ITU WRC Meetings •	2009-2012	ICAO, States	Valid
	• Disseminate ICAO policy statements of requirements for aeronautical radio frequency spectrum for wrc-12	june 2009	ICAO	Completed
	• Implement frequency spectrum management	2009-2011	States	Valid
	• Frequency management tool to be implemented	May 2010-2011	ICAO	Valid
	• States to arrange for the Deletion of MID States name from footnote affecting Aviation spectrum	2009-2011	States	Valid
	• coordinate with their National TRA for the support of the ICAO position and inclusion in State position to the extent	2009-2012	States	Valid
	• Support ICAO Position during WRC-12	2012	States	Valid

	• Civil Aviation Spectrum experts attend WRC-12 and be part of their National delegation	Feb 2012	States	Valid
	• ICAO attend WRC-12 to provide necessary support to the delegation for the support of the aviation spectrum	Feb 2012	ICAO	Valid
	• ICAO to organize workshop for the Regional support to ICAO position	May 2010- Oct 2010	ICAO	Valid
	• Attend Regional Workshop along with the National TRA	Sep 2010	States	Valid
Linkage to GPIs	GPI-9: SITUATIONAL AWARENESS GPI-21: Navigation Systems, GPI-22: Communications Infrastructure; GPI-23: Aeronautical radio spectrum			

IMPROVEMENT OF COMMUNICATION INFRASTRUCTURE **MID-RCI-01 - Implement communication infrastructure to support ground-to-ground voice and data communication**				

Benefits

Efficiency	• Improvement in operational efficiency
	• Better coordination • Support the migration to ground-ground ATN applications
Safety	• Improved safety

Strategy
Short term (2008-2012)
Medium term (2016)

ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
AO, TS, CM, AUO AOM, ATMSDM	• Follow up on the implementation of the Aeronautical Fixed Services (AFS)	2009-2011	ICAO, States ATN/IPS WG CNS SG	Valid
	• Follow up the implementation on voice communications	2008-2011	CNS SG	Valid
	• Migrate from AFTN/CIDIN to AMHS	2009-2011	ATN/IPS WG	Valid
	• Implement high speed digital circuits between main centres	2008-2012	STATES	Valid
	• Monitor the implementations	2008-2011	ATN/IPS WG AND CNS SG	Valid
	• Follow up the developments in the Panels	2008-2011	ATN/IPS WG CNS SG	Valid
	• Plans for Implement the appropriate developments	2008-2011	ATN/IPS WG and CNS SG	Valid
	• Monitor and report deficiencies In order to support agreed MID METRICS	2010-2011	ATN/IPS WG and CNS SG	Valid
Linkage to GPIs	GPI-22: Communications Infrastructure;			

<table>
<tr><td colspan="5" align="center">**IMPROVEMENT OF COMMUNICATION INFRASTRUCTURE**
MID-RCI-02 -Implementation of ATN in the MID region</td></tr>
<tr><td colspan="5" align="center">**Benefits**</td></tr>
<tr><td>**Efficiency**</td><td colspan="4">• Improvement in operational efficiency</td></tr>
<tr><td></td><td colspan="4">• Better coordination</td></tr>
<tr><td>**Safety**</td><td colspan="4">• Improved safety</td></tr>
<tr><td colspan="5" align="center">*Strategy*
Short term (2010-2012)
Medium term (2013-2016)</td></tr>
<tr><td>**ATM OC COMPONENTS**</td><td>**TASKS**</td><td>**TIMEFRAME START-END**</td><td>**RESPONSIBILITY**</td><td>**STATUS**</td></tr>
<tr><td>AO, TS, CM, AUO</td><td>• Develop Regional ATN Planning document</td><td>2008-2011</td><td>ATN/IPS WG</td><td>Valid</td></tr>
<tr><td></td><td>• Review of ATN implementation issues and develop coordinated solutions</td><td>2009-2011</td><td>ATN/ IPS WG and CNS SG</td><td>Valid</td></tr>
<tr><td></td><td>• Develop G-G ATN Operation procedures</td><td>2009-2011</td><td>ATN/ IPS WG and CNS SG</td><td>Valid</td></tr>
<tr><td></td><td>• Develop conformance procedures and check list for AMHS</td><td>2009-2011</td><td>ATN/ IPS WG and CNS SG</td><td>Completed</td></tr>
<tr><td></td><td>• Develop Information Security policy</td><td>2009-2011</td><td>ATN/ IPS WG and CNS SG</td><td>Valid</td></tr>
<tr><td></td><td>• Develop information Security Guidance</td><td>2009-2011</td><td>ATN/ IPS WG and CNS SG</td><td>Valid</td></tr>
<tr><td></td><td>• Coordinate and monitor implementation to be harmonized and interoperable globally</td><td>On going</td><td>ATN/ IPS WG and CNS SG</td><td>Valid</td></tr>
<tr><td></td><td>• Follow-up activities of panels and other regions</td><td>On going</td><td>ATN/ IPS WG and CNS SG</td><td>Valid</td></tr>
<tr><td></td><td>• Implement ATN plan</td><td>On going</td><td>States</td><td>Valid</td></tr>
<tr><td></td><td>• Monitor and report deficiencies In order to support agreed MID METRICS</td><td>2010-2011</td><td>ATN/IPS WG and CNS SG</td><td>Valid</td></tr>
<tr><td></td><td>• Support other MIDANPIRG Subsidiary bodies for CNS infrastructure requirement</td><td>2008-2011</td><td>ATN/IPS WG and CNS SG</td><td></td></tr>
</table>

Linkage to GPIs	GPI-22: Communications Infrastructure;

	IMPROVEMENT OF COMMUNICATION INFRASTRUCTURE MID-RCI-04 - Implement advanced technologies to support data link services			
	Benefits			
Efficiency	• Improvement in operational efficiency			
	• Better coordination			
Safety	• Improved safety			
	•			
	Strategy **Short term (2010-2012)** *Medium term (2013-2016)*			
ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
AO, TS, CM, AUO DCB, ATMSDM	• Identify & implement selected, harmonized data links to ensure interoperability between States and Regions D-ATIS	2008-2010	ICAO, States CNS SG SNS/ATM/IC SG	Valid
	• Plan for implementing technologies	2009-2011	States, CNS SG CNSATM/IC SG	Valid
	• Technical audit of available supporting infrastructure	2010-2012	CNSATM/IC SG	Valid
	• Implement available technologies in to facilitate ground and airborne applications (CPDLC, ADS-C, ADS-B)	2011-2012	States , user	Valid
	• Monitor and report deficiencies In order to support agreed MID METRICS	2010-2011	ATN/IPS WG and CNS SG	Valid
Linkage to GPIs	GPI-22: Communications Infrastructure; GP!-17: Data Link Application			

MID-RNI-01 - IMPLEMENTATION OF GNSS IN THE MID REGION				
Benefits				
Efficiency	• Optimal use of advanced technologies			
	• Optimization of infrastructure			
	• Operational Efficiency			
Safety	• Reduced navigational errors			
Environment	• Reduction in environmental impact			
Strategy **Short term (2010-2012)** *Medium term (2013-2016)*				
ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
AO, TS, CM, AUO AOM,	• Carry out GNSS trials, demonstrations and test beds;	2008-2011	States, ICAO	Valid
	• Determine the most appropriate augmentation system for the MID Region based on cost-benefit analysis;	2009-2011	PBN/GNSS TF CNS/ATM/IC CNS SG	Valid
	• Introduce, in an evolutionary manner, the use of GNSS with appropriate augmentation system in the MID Region	2009-2011	States	Valid
	• Define required infrastructure according to regional PBN implementation plan	2009-2011	PBN/GNSS TF CNS/ATM/IC CNS SG	Valid
	• Implement required infrastructure	2009-2011	States	Valid
	• Monitor implementation progress	2009-2011	PBN/GNSS TF and CNS SG	Valid
	• Monitor and report deficiencies In order to support agreed MID METRICS	2010-2011	PBN/GNSS TF CNS/ATM/IC and CNS SG	Valid
Linkage to GPIs	GPI-21: NAVIGATION SYSTEMS GPI-9 Situational Awareness			

<table>
<tr><td colspan="5" align="center">MID-SUR-01 – Surveillance Infrastructure</td></tr>
<tr><td colspan="5" align="center">Benefits</td></tr>
<tr><td>Efficiency</td><td colspan="4">• Optimal use of advanced technologies</td></tr>
<tr><td></td><td colspan="4">• Optimization of infrastructure</td></tr>
<tr><td></td><td colspan="4">• Operational Efficiency</td></tr>
<tr><td>Safety</td><td colspan="4">• Reduced separation errors</td></tr>
<tr><td>Environment</td><td colspan="4">• Reduction in environmental impact</td></tr>
<tr><td></td><td colspan="4">•</td></tr>
<tr><td colspan="5" align="center"><i>Strategy</i>
Short term (2008-2012)
<i>Medium term (2016)</i></td></tr>
<tr><td>ATM OC COMPONENTS</td><td>TASKS</td><td>TIMEFRAME START-END</td><td>RESPONSIBILITY</td><td>STATUS</td></tr>
<tr><td>AO, TS, CM, AUO AOM,</td><td>• Prepare Plan for introduction of new surveillance systems</td><td>2011-2012</td><td>States, ICAO PBN/GNSS TF CNS/ATM/IC CNS SG</td><td>Valid</td></tr>
<tr><td></td><td>• Determine the most appropriate surveillance for each States supporting the PBN regional Plan</td><td>2009-2011</td><td>States CNS/ATM/IC</td><td>Valid</td></tr>
<tr><td></td><td>• Organize workshop for developing MID surveillance roadmap</td><td>2009-2011</td><td>ICAO</td><td>Valid</td></tr>
<tr><td></td><td>• MID States participate actively in the workshop to reach its objective</td><td>2011</td><td>States</td><td>Valid</td></tr>
<tr><td></td><td>• Follow up on the Regional Surveillance systems in MID Regional ANP and FASID</td><td>2008-2011</td><td>CNS SG</td><td>Valid</td></tr>
<tr><td></td><td>• Monitor and report deficiencies In order to support agreed MID METRICS</td><td>2010-2011</td><td>ATN/IPS WG and CNS SG</td><td>Valid</td></tr>
<tr><td>Linkage to GPIs</td><td colspan="4">GPI-9   Situational Awareness</td></tr>
</table>

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Report on Agenda Item 8

REPORT ON AGENDA ITEM 8:   **FUTURE WORK PROGRAMME**

8.1   The meeting recalled that, in accordance with the ICAO business planning process, all work of the PIRGs would have to be justified and based on clearly established performance objectives in support of the ICAO Strategic Objectives

8.2   With a view to increase the efficiency of MIDANPIRG and considering the new regional planning methodologies precipitated by the Global Plan and ICAO Business Planning requirements, the meeting recalled that MIDANPIRG/11, through Decision 11/5, endorsed a revised version of the MIDANPIRG Procedural Handbook, which includes, inter-alia, updated version of the MIDANPIRG Subsidiary Bodies Terms of Reference in two formats.

8.3   With a view to maintain conformity and alignment of the TOR format used in MIDANPIRG Procedural Handbook with the ICAO Council and Air Navigation Commission (ANC) format. The meeting noted that the MSG/2 meeting held in Amman, Jordan, 9 - 11 March 2010, agreed that the format of the Terms of Reference (TOR) of the different MIDANPIRG Sub-Groups should be harmonized with the format of the PIRGs TOR approved by the ICAO Council.

8.4   Based on the above and taking into consideration the new developments in the CNS field along with the work accomplished by the sub group. The meeting reviewed and updated the TOR and work programme of the Sub-Group as at **Appendix 8A** to the Report on Agenda Item 8 and agreed to the following Draft Decision:

> *DRAFT DECISION 3/10:   REVISED TOR OF THE CNS SUB-GROUP*
>
> *That, the Terms of Reference and Work Programme of the CNS Sub-Group be updated as at **Appendix 8A** to the Report on Agenda Item 8.*

8.5   Taking into consideration the work programme of the Sub-group and noting that the MIDANPIRG/12 meeting is scheduled in October 2010, the meeting agreed that the CNS SG/4 meeting be tentatively scheduled to be held early third quarter of 2011. The venue will be Cairo, unless a State is willing to host the meeting.

8.6   The meeting agreed to the Provisional Agenda for the CNS SG/4, as at **Appendix 8B** to the Report on Agenda Item 8.

8.7   In accordance with the ICAO Business plan and the requirements for performance monitoring, the meeting developed a follow-up action plan as at **Appendix 8C** to the Report on Agenda Item 8.

**COMMUNICATION, NAVIGATION AND SURVEILLANCE SUB-GROUP
(CNS SG) OF THE MID REGION**

1.   Terms of Reference

1.1   The Terms of Reference of the CNS Sub-Group (CNS) are:

   a) Ensure the continuing and coherent development of the MID Regional Air Navigation
      Plan in the fields of aeronautical communications, navigation and surveillance (CNS),
      including the development of CNS elements of the MID CNS/ATM Implementation Plan
      in the light of new developments, in harmony with the ICAO Global Air Navigation Plan
      (Doc 9750) and the plans for adjacent regions;

   b) Review and identify any deficiencies that impede the implementation or provision of
      efficient CNS services in the MID Region and recommend correction actions;

   c) Make specific recommendations aimed at improving CNS services through the use of
      existing procedures and facilities or, through modernization programmes and
      evolutionary introduction of new procedures or technologies based on operational
      requirements;

   d) Review and identify inter regional or any co-ordination issues in the fields of CNS and
      recommend actions to address those issues; and

   e) Monitor and encourage CNS systems research and development, trial and demonstrations
      in the fields of CNS and facilitate the transfer of this information and expertise between
      MID States, including studies on institutional arrangement for the implementation of the
      CNS system in MID Region

1.2   In order to meet the Terms of Reference, the CNS SG shall:

   a) Survey and update of CNS deficiencies in the MID Region on a regular basis and focus
      on surveys and information from users such as IATA and IFALPA;

   b) To follow-up the developments of ICAO position regarding future ITU World Radio
      Communication (WRC) Conferences and their preparatory meetings, and urge States to
      support ICAO Position at WRC, and encourage States for the proper utilization of the
      spectrum;

   c) Develop ATN Plan for MID region and assist in its Implementation;

   d) Develop Surveillance Plan and Strategy for the MID region in Coordination with other
      subgroups to support MID Region PBN Implementation Plan;

   e) Review and update ATN/IPS WG TOR and task list and encourage harmonized and
      coordinated implementation plans;

f)   Introduction of data link usage to support the ATC at flight level 290 by 2010;

g)   Develop MID CNS Regional Performance Framework Forms supported by detailed action plans and assist in measurement of agreed MID Metric;

h)   Provide the necessary expertise to other MIDANPIRG subgroups task forces on issues related to CNS and infrastructure and coordinate requirements with these groups; and

i)   Assist and encourage States groups to foster implementation of the CNS infrastructure and procedures.

2.   Composition

The CNS SG is composed of:

a)   MIDANPIRG Provider States;
b)   concerned International/Regional Organizations as observers;
c)   additional representatives from Industry may be invited on ad hoc basis, as observers, when required.

CNS SG/3
Appendix 8B to the Report on Agenda Item 8

**FOURTH MEETING OF THE CNS SUB-GROUP
(CNS SG/4)**

PROVISIONAL AGENDA

Agenda Item 1:   Adoption of the Provisional Agenda

Agenda Item 2:   Follow-up:

a- MIDANPIRG
b- MSG
c- CNS/ATM
d- PBN/GNSS TF
e- ATN/IPS WG
f- CNS SG

Agenda Item 3:   Aeronautical Fixed Service (AFS)

Agenda Item 4:   Aeronautical Mobile Service (AMS)

Agenda Item 5:   Spectrum issues and ICAO POSITION WRC-12

Agenda Item 6:   Navigation

Agenda Item 7:   Surveillance

Agenda Item 8:   Monitoring and Follow up CNS Deficiencies in the MID Region

Agenda Item 9:   Latest Developments in CNS area

Agenda Item 10:   Review and update of CNS performance objectives (PFF)

Agenda Item 11:   Future work programme

Agenda Item 12:   Any other business

CNS SG/3
Appendix 8C to the Report on Agenda Item 8

FOLLOW-UP ACTION PLAN ON CNS SG/3 CONCLUSIONS AND DECISIONS

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
DRAFT CONC. 3/1: UPDATING THE AFTN/CIDIN DIRECTORY That, ICAO MID Regional Office request Authorization from EUROCONTROL to provide the routing function available in AMC to the MID Region.	Request to EUROCONTROL	ICAO	ICAO State letter EUROCONTROL feedback Routing directory in AMC	Dec 2010	
DRAFT CONC. 3/2: DRAFT PROPOSALS FOR AMENDMENT TO THE MID BASIC AND FASID-DOC 9708, PART IV (CNS AND CNS 1, 2, 3, 4 TABLES) That, the ICAO MID Regional Office, on behalf of MIDANPIRG process Proposals For Amendment to the MID Basic ANP and FASID, Part IV –CNS as contained at Appendices 3A-3J to the Report on Agenda Item 3.	Consolidate the proposal for amendment	ICAO	Proposal for amendment to issued	June 2010	
DRAFT CONC. 3/3: MID IP NETWORK SURVEY That, MID States be urged to complete the MID IP Network survey as at Appendix4X to the Report on Agenda Item 4 and send to ICAO MID Regional Office by December 2010.	State letter	ICAO State ATN/IPS WG	State letter States Replies	Dec 2010	
DRAFT CONC. 3/4: POSTING OF AMHS PLANS IN AMC That, MID States be encouraged to post their AMHS implementation plans on the European ATS Messages manager Center (AMC).	Follow-up the posting of plans	States	Plans updated on AMC	Oct 2010	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
DRAFT CONC. 3/5: USE OF PUBLIC INTERNET IN THE MID REGION That MID States: a) are encouraged to follow the guidance Appendix 4A to the Report on Agenda Item 4, when using the public internet for critical aeronautical communication; and b) provide to the ICAO MID Regional Office, the inventory on the public internet usage as per Appendix 4B to the Report on Agenda item4 by date 30 December 2010.	Implement conclusion and provide feed back	ICAO States ATN/IPS WG	State Letter States replies	Dec 2010	
DRAFT DEC. 3/6: REVISED TITLE AND TOR OF THE IPS WG That MID States: a) IPS WG is renamed as ATN/IPS WG with same members; and b) Terms of Reference and Work Programme of the ATN/IPS Working Group be updated as at Appendix 4X to the Report on Agenda Item 4.	Follow-up work programme	MIDANPIRG/12 ATN/IPS WG	ATN/IPS WG/3 Report	October 2010 Jan 2010	
DRAFT DEC. 3/7: DISSOLVE THE AD HOC ACTION GROUP FOR THE SUPPORT OF AERONAUTICAL FREQUENCY BANDS That, the Ad-Hoc Action Group for the support of Aeronautical Frequency Bands is dissolved and its task be carried by the CNS SG.	Present to MIDANPIRG/12	MIDANPIRG/12 Approval	Group Dissolved	October 2010	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
DRAFT CONC. 3/8: SUPPORT OF ICAO POSITION FOR WRC-12 That MID States be urged to: a) include ICAO Position on WRC-12 into their State Position to the extent possible; b) Civil Aviation Authorities, aviation spectrum experts to participate actively in the national and regional level activities related to WRC-12 including ITU study groups to support ICAO Position; and c) Civil Aviation Authorities, aviation spectrum experts to participate in WRC-12 and coordinate with the ICAO delegation to the conference.	States to include ICAO position In their States position Attend the Workshop with their TRAs States Support ICAO position in WRC	States ICAO	States and ICAO participation in WRC and its study groups	Feb 2012	
DRAFT CONC. 3/9: MID SURVEILLANCE WORKSHOP That, ICAO MID Regional Office organize workshop with objective to develop MID Region's Surveillance strategy.	Arrangement for Organizing the workshop	ICAO States	Workshop Surveillance strategy	3rd Qtr 2011	
DRAFT DEC. 3/10: REVISED TOR OF THE CNS SUB-GROUP That, the Terms of Reference and Work Programme of the CNS Sub-Group be updated as at Appendix 8A to the Report on Agenda Item 8.	Follow up the work programme	CNS SG	CNS SG/4 report	Sep 2011	

CNS SG/3
Report on Agenda Item 9

REPORT ON AGENDA ITEM 9: ANY OTHER BUSINESS

9.1   The meeting noted with appreciation the progress achieved in Oman with regard to their project for the major upgrade of the CNS/ATM infrastructure and wished the Sultanate of Oman all the success.

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