INTERNATIONAL CIVIL AVIATION ORGANIZATION

THE MIDDLE EAST AIR NAVIGATION PLANNING AND IMPLEMENTATION REGIONAL GROUP (MIDANPIRG)

REPORT OF THE SIXTH MEETING OF MET SUB-GROUP (MET SG/6)

(Cairo, Egypt, 1 - 3 March 2016)

The views expressed in this Report should be taken as those of the MIDANPIRG MET Sub-Group and not of the Organization. This Report will, however, be submitted to the MIDANPIRG and any formal action taken will be published in due course as a Supplement to the Report.

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

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PART I – HISTORY OF THE MEETING

1. PLACE AND DURATION

1.1 The Sixth meeting of the Meteorology Sub-Group of the Middle East Air Navigation Planning and Implementation Regional Group (MET SG/6) was held at the ICAO Middle East Office – Cairo, Egypt, from 1 to 3 March 2016.

2. OPENING

2.1 Mr. Mohamed Smaoui, Acting Regional Director, ICAO Middle East Office, opened the meeting. He welcomed all the participants to Cairo and wished them success in addressing MET related issues in the MID Region that would improve MET Services for international civil aviation.

2.2 Mr. Smaoui highlighted the importance of implementing current meteorological provisions for international civil aviation, which supported the implementation of the Aviation System Block Upgrade Block 0 (B0-AMET) as part of the Global Air Navigation Plan. Implementation elements such as World Area Forecast System (WAFS), Quality Management System (QMS), OPMET exchange and SIGMET were highlighted and should be reflected in the implementation elements in the form of key performance indicators as part of the MID Region Air Navigation Strategy that will be presented to the MIDANPIRG Steering Group in April 2016. He noted the progress on the implementation of Regional OPMET Centre (ROC) Jeddah and back-up ROC Bahrain and encouraged the remaining States whose OPMET exchange was not fully compliant with the new MID OPMET exchange scheme to provide Jeddah the necessary information needed for full implementation. He also noted the future implementation challenges related to the implementation of the ICAO Meteorological Information Exchange Model (IWXXM) that will support System Wide Information Management (SWIM) as well as the establishment of Regional Hazardous Weather Advisory Centres and Global and Regional Space Weather Centres associated with the Block 1 of AMET in the time frame 2018-2023.

2.3 Mr. Smaoui also emphasized a thorough review of the MET Part of the electronic Air Navigation Plan, and in particular, to items of the plan that should be located under regional specific elements. The MID Region was the first ICAO Region to have Volumes I, II and III of the electronic Air Navigation Plan approved and therefore, no more references to Basic ANP and FASID were appropriate. He reiterated that Volume I contained the stable elements of the plan that involved the designation of regional centres which required the approval by the Council. Volume II contained more dynamic elements of the plan which required approval by the Regional Office after circulation to States and stakeholders in the Region. Volume III contained the status of implementation of provisions and approved by the associated Planning and Implementation Group (e.g. MIDANPIRG for MID). Continuous review of the eANP and suggestions for improvement such as providing elements in Volume III in the context of performance based approach was requested.

2.4 Mr. Smaoui informed the meeting that the format of Sub-Groups will change during the next cycle of meetings such that States were expected to provide presentations related to implementation of provisions. Status of implementation, challenges and proposed actions would be addressed at Sub-Group meetings.

2.5 Mr. Smaoui wished the meeting success noting the overall importance of aeronautical meteorology to the Air Traffic System.

3. ATTENDANCE

3.1 The meeting was attended by a total of fourteen (14) participants, from five (5) States (Egypt, Kuwait, Saudi Arabia, Sudan and United Arab Emirates). The SADIS Provider State also joined the meeting through WebEx on 1 March 2016 from 1100 to 1200 local time. The list of participants is at the **Attachment A**.

4. OFFICERS AND SECRETARIAT

4.1 The meeting was chaired by Mr. Fahad A-Malki, Manager of Planning and Analysis General Authority of Civil Aviation, Saudi Arabia. The Secretary of the meeting was Mr. Christopher Keohan, Air Navigation Systems Implementation (Meteorology), Europe and North Atlantic, supported by Mr. Abbas Niknejad, Regional Officer, Aeronautical Information Management/Air Traffic Management from the ICAO Middle East Office.

5. LANGUAGE

5.1 The meeting was conducted in English and documentation posted under meetings on the ICAO MID Regional Office website.

6. AGENDA

6.1 The following Agenda was adopted:

Agenda Item 1: Adoption of the Provisional Agenda and election of Chairpersons

Agenda Item 2: Follow-up on MIDANPIRG/15 Conclusions and Decisions relevant to MET

Agenda Item 3: Global/Regional developments related to MET

Agenda Item 4: Performance Framework for MET implementation in the MID Region:

4.1 Review of the implementation of WAFS and SADIS

4.2 Review implementation of the Meteorological Advisories and Warnings:

a) International Airways Volcano Watch (IAVW);
b) Tropical Cyclone Warning System; and
c) SIGMET and AIRMET information, and other warnings

4.3 Review of requirements for OPMET data and status of OPMET data exchange as well as the status of implementation of Regional OPMET Centre (ROC) Jeddah and back-up ROC Bahrain

4.4 Review and update of the draft MID Air Navigation Strategy parts related to MET

4.5 Quality Management System

4.6 Review of the MET Provisions in the MID electronic Air Navigation Plan

Agenda Item 5: Review of air navigation deficiencies in the MET field

Agenda Item 6: Future Work Programme

Agenda Item 7: Any other business

7. CONCLUSIONS AND DECISIONS - DEFINITIONS

7.1 All MIDANPIRG Sub-Groups and Task Forces record their actions in the form of Conclusions and Decisions with the following significance:

a) **Conclusions** deal with the 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.

8. LIST OF DRAFT CONCLUSIONS AND DRAFT DECISIONS

DRAFT CONCLUSION 6/1: PREPARATION FOR CESSATION OF SADIS 2G

DRAFT CONCLUSION 6/2: SPECIAL AIR-REPORT TEST

DRAFT DECISION 6/3: REVISED BMG TERMS OF REFERENCE

DRAFT CONCLUSION 6/4: MID REGIONAL REQUIREMENTS FOR HALF-HOURLY METAR

DRAFT CONCLUSION 6/5: MID eANP VOLUMES II AND III – MET PART

PART II: REPORT ON AGENDA ITEMS

REPORT ON AGENDA ITEM 1: ADOPTION OF THE PROVISIONAL AGENDA AND ELECTION OF CHAIRPERSONS

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

1.2 The meeting noted the recent retirement of the MIDANPIRG MET SG Chairperson, Mr. Ali Almotawa, Chief of MET Aviation, Meteorology Department of Kuwait. Accordingly, the meeting unanimously elected Mr. Fahad Al-Malki, Manager of Planning and Analysis General Authority of Civil Aviation, Saudi Arabia, and Dr. Hussain Al Sarraf, Head of Aviation Meteorology Directorate General of Civil Aviation, Kuwait as the Chairperson and Vice-Chairperson of the MET Sub-Group, respectively.

REPORT ON AGENDA ITEM 2: FOLLOW-UP ON MIDANPIRG/15 CONCLUSIONS AND DECISIONS RELEVANT TO MET

2.1 The meeting noted the status of the MIDANPIRG/15 Conclusions and Decisions relevant to MET and the follow-up actions taken by concerned parties as at **Appendix 2A**.

REPORT ON AGENDA ITEM 3: GLOBAL/REGIONAL DEVELOPMENTS RELATED TO MET

MET Panel

3.1 This subject was addressed in IP/3 presented by the Secretariat. The meeting was apprised of the new global structure managing ICAO MET provisions, and in particular to outcomes of the Meteorology Panel (MET Panel) and associated working groups.

3.2 The First Meeting of the MET Panel (METP/1) was held in Montréal from 20 to 24 April 2015. METP/1 reviewed twenty-nine recommendations derived from the Meteorology Divisional Meeting (7-18 July 2014, Montréal) and in many cases developed a job card that was assigned to a specific panel or group. Details related to the job cards can be found in the METP/1 report at the following web link: http://www.icao.int/airnavigation/METP/MeetingDocs/METP-1/Report/Final%20report.pdf.

3.3 The meeting was informed that the job cards were assigned to one of the following working groups: ICAO Meteorology Panel Working Group on Meteorological Requirements and Integration (WG-MRI); ICAO Meteorology Panel Working Group on Meteorological Information and Service Development (WG-MISD); ICAO Meteorology Panel Working Group on Meteorological Information Exchange (WG-MIE); and ICAO Meteorology Panel Working Group on Meteorological Operations Groups (WG-MOG). More details such as a summary of description of the group, their membership and initial work plans can be found at the above URL.

WG-MRI

3.4 The meeting noted that the WG-MRI is addressing the following topics: development of a MET-specific module related to Block 2 and detailing of the MET-specific module related to Block 1 of the ASBU methodology to cover meteorological information to support ATM in the terminal area; aeronautical meteorological information to support ATM operations from gate to gate; and reorganization of provisions relating to aeronautical meteorology.

3.5 Significant outcomes of the first meeting of the WG-MRI held in Montréal from 3 to 6 November 2015 were not yet available. Nevertheless, potential impacts of the work of this group on the MID MET SG included the likely establishment of a MID MET/ATM TF in 2017 to address regional implementation of provisions (Annex 3, PANS-MET) for MET support to selected ASBU Block 1 modules (e.g. support to trajectory based operations, terminal area operations) that would become applicable in 2018. The Secretariat encouraged participants to provide presentations for those MID States that have aerodromes with capacity reduction due to weather events (e.g. fog, thunderstorms and wind).

WG-MISD

3.6 The meeting noted that the WG-MISD is addressing the following topics: further development of the International Airways Volcano Watch (IAVW); further development of provisions for information on the release of radioactive material into the atmosphere; implementation of regional advisory system for select en-route hazardous meteorological conditions; development of provisions for information on space weather to international air navigation; and further development of the World Area Forecast System.

3.7 Significant outcomes of the first meeting of the WG-MISD held in Montréal from 2 to 6 November 2015 were not yet available. Nevertheless, potential impacts to MID MET SG included: monitor developments associated with provisions for information on the release of radioactive material into the atmosphere; monitor developments associated with Regional Hazardous Weather Advisory Centres, and where applicable, an implementation strategy needed by MIDANPIRG in 2019

for 2020 applicability date; monitor the developments associated with space weather information and space weather selection criteria, and where applicable, an implementation strategy needed by MIDANPIRG in 2016 or 2017 for 2018 applicability date; monitor developments associated with volcanic ash information in ASBU Block 1 (2018-2023); and monitor developments associated with World Area Forecast System in ASBU Block 1 (2018-2023). The meeting concurred that the Secretariat provide criteria related to the selection of regional and global centres as soon as that information becomes available.

WG-MIE

3.8 The meeting noted that the WG-MIE is addressing the following topics: testing of the ATS message handling system (AMHS) in relation to exchange of digital aeronautical meteorological information; and the inclusion of aeronautical meteorological information in the SWIM-enabled environment and further development of the SWIM concept relating to meteorology.

3.9 Significant outcomes of the first meeting of the WG-MIE held in Montréal from 16 to 20 November 2015 were reviewed and included: development of a plan for MET into SWIM in the near term; add a requirement in Annex 3 for States to limit access to IWXXM to approved aviation users; recommend to the METP that for changes requiring modification of IWXXM, the minimum time between approval of an Amendment to Annex 3 and the implementation of the XML component should be at least 18 months; IWXXM should support the inclusion of extensions; TAC will be frozen except for extraordinary situations; users should not convert from IWXXM to TAC; IWXXM should not be used to recreate or convert to TAC; observations should be fed directly to IWXXM rather than be converted from text; missing observations should be handled in IWXXM; a validation schema for IWXXM is needed; and a trial SADIS web service for IWXXM compliant data will be developed.

3.10 Potential impacts to MIDANPIRG MET SG included: monitor developments related to testing of the ATS message handling system (AMHS) in relation to the exchange of digital aeronautical meteorological information (global OPMET information and WAFS forecasts) – results may have an impact on the implementation and these results may be considered at the proposed workshop on IWXXM for implementation by ROC Jeddah and backup ROC Bahrain in 2016 as well as the proposed inter-regional workshop, *Service Improvement through integration of Digital AIM, MET and ATM information in 2017*; and monitor developments related to MET-in-SWIM (mainly 2018 and beyond).

3.11 In addition, the meeting was informed of a SWIM workshop that will be held at the Asia/Pacific ICAO Regional Office in Bangkok in 2016. The invitation to this workshop was extended to MID States Civil Aviation Authorities and expected to be coordinated with MET, AIM and ATM. This workshop is expected to address the infrastructure, governance and management of meteorological, aeronautical and flight and flow information.

WG-MOG

3.12 The meeting noted the WG-MOG is addressing the following topics: SADIS/WIFS related work; WAFS issues; and tasks of the IAVWOPSG. Significant outcomes of the WG-MOG held in Gatwick from 8 to 11 September 2015 were reviewed and included: the need to provide more EDR data that would assist in turbulence forecasts; WAFC Provider States provide additional levels as specified in the MET/14 Divisional Meeting; WAFC Providers make available on the ICAO METP MOG website source data and generic visualisations of WAFS gridded forecasts and cumulonimbus cloud, icing and turbulence; WAFC Providers present WAFS Medium Level Strategy WAFS for ASBU Block 1 (2018-2023) to METP WG-MISD and WG-MRI for their consideration; and updated guidance on the Use of WAFS Grids for Cumulonimbus Cloud, Icing and Turbulence Forecast.

3.13 Potential impacts of the work of this group on the MIDANPIRG MET SG included: assure SADIS 2G users acquire Secure SADIS FTP before termination of SADIS Satellite Broadcast (31 July 2016); and monitor developments related to IAVWOPSG tasks still open (e.g. improving dissemination of aircraft reports on volcanic ash to VAACs that could be included in regional guidance material in 2015-2016 timeframe).

REPORT ON AGENDA ITEM 4: PERFORMANCE FRAMEWORK FOR MET IMPLEMENTATION IN THE MID REGION

4.1 Review Implementation of the WAFS and SADIS

4.1.1 This subject was addressed in WP/10, WP11 and WP/12 presented by the SADIS Provider State. The meeting reviewed a summary of WAFS developments that included information on the current WAFS reporting structure. The WAFS Operations Group was disbanded in 2015, and the responsibility for overseeing the operational aspects of WAFS was transferred to the Meteorological Operations Group Working Group (WG-MOG) of the Meteorological Panel (METP). The first meeting of the METP WG-MOG was held from 8 to 11 September in Gatwick, United Kingdom. More information on this meeting can be found at the following website: http://www.icao.int/airnavigation/METP/MOG/Pages/default.aspx.

4.1.2 The meeting noted that several actions were suggested and included the following:

- Users to confirm with their software providers that their systems can process corrected WAFS data (corrections to WAFS SIGWX and WAFS GRIB2 forecasts in the event that errors or corruptions are identified - note, corrections are distinct from amendments. WAFS SIGWX and GRIB2 forecasts are not subject to amendment.)

- Users should regularly review guidance and training at http://www.icao.int/safety/meteorology/WAFSOPSG/Pages/GuidanceMaterial.aspx, which contains guidance on the use of WAFS gridded CB, icing and turbulence forecasts

- Users should contact their SADIS Workstation provider to ensure that software will be updated to take advantage of WAFS gridded upper air forecasts for additional flight levels (FL)080 (750hPa) , FL210 (450hPa) and FL480 (125hPa) associated with Amendment 77 to ICAO Annex 3 applicable 10 November 2016 (additional levels will be made available at 1200 UTC on 9 November 2016)

- Users were encouraged to establish and regularly test backup accounts with the alternative provider (WIFS in the case of MID region) to be used in the rare event that their normal service (Secure SADIS FTP as specified by Regional Air Navigation Plan) is unavailable

- Uses to regularly review verification data for harmonized WAFS gridded upper air forecasts for Clear Air Turbulence potential and Cumulonimbus cloud forecasts available at http://www.metoffice.gov.uk/aviation/responsibilities/icao (from WAFC London) and http://www.emc.ncep.noaa.gov/gmb/icao (WAFC Washington) in order to obtain the most benefit from these forecast fields

4.1.3 With reference to SADIS developments in addition to the WAFS developments already provided, the meeting noted that the SADIS 2G service would cease at 1200 UTC on 31 July 2016. This was determined by the SADIS Operations Group and agreed upon by the METP/1 meeting due to costs, benefits and risks associated with the replacement Intelsat satellite that would not have the capability to use the existing uplink/downlink frequencies used by the SADIS 2G service.

4.1.4 The meeting agreed that SADIS user States and SADIS users confirm the nature of their SADIS service as provided at **Appendix 4.1A**. For those users who do not use or have accounts for Secure SADIS FTP they are strongly encouraged to undertake actions to migrate to the Secure SADIS FTP service by 1 June 2016. Guidance on migrating to Secure SADIS FTP is provided at

Appendix 4.1B. The meeting concurred that the above should be communicated to States imminently and agreed to the following Draft Conclusion:

DRAFT CONCLUSION 6/1: PREPARATION FOR CESSATION OF SADIS 2G

*That, SADIS user States and SADIS users confirm the nature of their SADIS service as described in **Appendix 4.1A**, and where necessary ensure that they are prepared for the cessation of SADIS 2G by:*

*a) making arrangements at the earliest opportunity to migrate to Secure SADIS FTP as described in **Appendix 4.1B** for those SADIS 2G users who do not yet have access to Secure SADIS FTP; and*

b) ensuring that SADIS workstations are configured to use data from Secure SADIS FTP operationally for those SADIS 2G users who already have access to Secure SADIS FTP.

Note: Although the SADIS 2G service will continue until 31 July 2016, it is recommended that user's transition is complete by, and that SADIS 2G is not being used operationally after 1 June 2016.

4.1.5 With reference to **Appendix 4.1A**, the meeting noted that the entry for Abu Dhabi Airport - CAA, Secure SADIS FTP service was accessed in addition to SADIS 2G. In addition, entries for Egypt and Libya were added since they were originally under the AFI Region in this table. With reference to the Cairo Airport - NMS where SADIS 2G and Secure SADIS FTP Service were both accessed, the SADIS Provider suggested that their internal IT should be able to route the information received by the Secure SADIS FTP Service to anywhere within the border of Egypt, and this would ideally be implemented prior to 1 June 2016.

4.1.6 The meeting was made aware of an additional action related specifically to SADIS in that users were encouraged to confirm with their software providers that their systems can process one minute updates of traditional alphanumeric OPMET data via Secure SADIS FTP.

4.1.7 Other improvements to SADIS included the removal of redundant folders on Secure SADIS FTP, increase of Secure SADIS FTP individual client connections limit (from 512Kbit/sec to 2048Kbit/sec), ability to monitor round-trip quality of alphanumeric OPMET data, and the cessation of distribution of last T4 formatted Volcanic Ash Graphic product.

4.1.8 The meeting noted forthcoming developments related to SADIS such as the modification of GRIB2 concatenation processes that includes a requirement to post only if a) all required GRIB2 bulletins have been received and b) if the specified cut-off time threshold has been reached. In addition, the file LAST_18_HOURS_DATA will be removed from the Secure SADIS FTP since it is mainly redundant and rarely used.

REPORT ON AGENDA ITEM 4: PERFORMANCE FRAMEWORK FOR MET IMPLEMENTATION IN THE MID REGION

4.2 Review Implementation of the Meteorological Advisories and Warnings

4.2.1 The subject was addressed in WP/3 presented by the Secretariat. The meeting was apprised of participation of WS and WV SIGMET tests noting that two States (Saudi Arabia and Bahrain) had participated in these tests conducted on 2 and 3 September 2015, respectively. The meeting also recalled that this test was now conducted on an annual basis (METG of EANPG Decision 24/7 refers) on the first Wednesday (WS SIGMET test) and first Thursday (WV SIGMET test) in September.

4.2.2 With reference to the Asia/Pacific SIGMET test on tropical cyclone conducted on 4 November 2015, results were not yet available by the EUR Data Management Group. This information would be conveyed to the MID SIGMET focal points when it becomes available.

4.2.3 The meeting noted that Sudan provided SIGMET for both North and South Sudan; however, meteorological information such as OPMET data was not available from South Sudan. This information was considered necessary in the creation of SIGMET and therefore, the ICAO Secretariat agreed to coordinate with the ICAO Nairobi Regional Office in urging South Sudan to provide the required OPMET information internationally.

4.2.4 The meeting recalled SADISOPSG Conclusion 17/15, Inventory of WMO AHLs used by States to promulgate special air-reports, which were to be in accordance with WMO Publication No. 386, *Manual on the Global Telecommunications System*. Appendix E of the referenced MID Regional SIGMET Guide contains a list of headings in this regard to be used by States. Confirmation and/or updates to the entries in the MID Regional SIGMET Guide have not yet been received by Bahrain, Iran, Iraq, Jordan, Lebanon, Syria and Yemen.

4.2.5 The meeting noted guidance material in EUR Doc 014 related to formatting and disseminating of special air-reports. Given the complexity of reporting and various formats provided in provisions, special air-reports have not been successfully reported and transmitted. As a result, special air-report tests will be conducted by the EUR Region in 2016. The MID Region agreed that this test should be extended to MID States and guidance adapted for MID be provided in the associated invitation. Given the above, the meeting agreed to the following draft Conclusion:

DRAFT CONCLUSION 6/2: SPECIAL AIR-REPORT TEST

That, States be invited to participate in the EUR Special Air-Report Test in order to identify deficiencies and associated solutions in the reporting and dissemination of these reports.

Note: Guidance on the format and dissemination of special air-reports will be adapted for the MID Region and provided as an attachment to the invitation.

REPORT ON AGENDA ITEM 4: PERFORMANCE FRAMEWORK FOR MET IMPLEMENTATION IN THE MID REGION

4.3 Review of requirements for OPMET data and status of OPMET data exchange as well as the status of implementation of Regional OPMET Center (ROC) Jeddah and back-up ROC Bahrain

Implementation of ROC Jeddah and back-up ROC Bahrain

4.3.1 This subject was addressed in WP/4 presented by the Secretariat. The meeting was apprised of the status of implementation of ROC Jeddah and back-up ROC Bahrain in support to MIDANPIRG Conclusions 14/30 and 15/33.

4.3.2 ROC Jeddah provided a status on implementation regarding the OPMET exchange scheme necessary for States in supporting the MID Regional OPMET exchange hub as provided at **Appendix 4.3A**. As of 14 January 2016, eight States (Lebanon, Libya, Jordan, Oman, Qatar, Saudi Arabia, Sudan and United Arab Emirates) have fully implemented the appropriate OPMET exchange scheme. Five States (Bahrain, Egypt, Iran, Iraq and Kuwait) have partially implemented this scheme, while two States (Syria and Yemen) have not started implementation in this regard. Those States that have not fully implemented the appropriate OPMET exchange scheme present at the meeting were requested to provide an implementation plan as soon as possible. Specifically, OPMET data received by a State from ROC Jeddah should include their operators' destination and alternate aerodromes.

4.3.3 The meeting also noted progress related to back-up ROC Bahrain. In particular, routing tables for Lebanon, Jordan, Kuwait, Oman, Qatar and United Arab Emirates were completed. In addition, OPMET data was routed from Bahrain to Vienna for Iran, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia and Yemen.

4.3.4 The meeting noted OPMET issues that were identified by ROC Vienna. In particular, there were many occurrences when the same bulletin was being sent from different locations. ROC Jeddah should be the only location sending bulletins to other Regions. In addition, OPMET information for one location is being included in more than one bulletin in many cases. The steps States should take to reduce these OPMET issues are provided at **Appendix 4.3B**.

Implementation of AMHS Jeddah-Vienna and Bahrain-Vienna

4.3.5 The meeting recalled the MIDANPIRG/15 report relating to the MIDAMC STG plan to implement AMHS communication paths between Jeddah and Vienna as well as Bahrain and Vienna (reference Appendix 5.2.2F of the MIDANPIRG/15 Report). This plan was developed to enable the exchange of OPMET data in digital format between the MID and EUR Regions. It was noted that Athens and Nicosia, which are the entry/exit points between the MID and EUR Regions, had not yet implemented AMHS.

4.3.6 The meeting was informed that both Bahrain and Jeddah have CIDIN traffic and the transition from CIDIN to AMHS would require a significant amendment in AFTN, CIDIN and AMHS routing tables not only in the State itself but also in adjacent COM Centres and others in the Network. Therefore, the MIDANPIRG/15 agreed that concerned COM Centres and the MIDAMC should identify all dependencies when the CIDIN relay traffic is taken off a dedicated CIDIN connection in normal routing situations and in all alternate routing cases as well.

4.3.7 The meeting was provided the updated AMHS implementation communication paths in the MID Region as provided at **Appendix 4.3C**. This implementation plan indicated that Tunisia has already implemented the AMHS system and linked with Rome. Tunisia will also implement direct

link Tunis to Vienna by December 2016. The meeting noted that Cairo was in the process of migrating to AMHS, which has communication links to Jeddah, Tunis and Athens.

4.3.8 The meeting was also informed that guidance on ATS Extended Services Trial File Transfer Body Part (FTBP) Testing Document via AMHS, as provided at **Appendix 4.3D,** would assist in an intra-regional test that should be conducted in the next two months. Inter-regional testing would then occur between MID and EUR (via Tunis), MID and APAC (via Kuwait) and MID and AFI (via Sudan). ICAO would assist in coordinating these inter-regional tests at various ICAO forums (e.g. EUR Data Management Group). The testing platform guidance would also be shared with other Regions in due time.

Implementation of IWXXM – workshop for communication hubs

4.3.9 With reference to the implementation of the ICAO Meteorological Exchange Model (IWXXM), the meeting noted that inter-regional coordination was necessary as to harmonize implementation to the extent possible. The meeting noted EANPG Conclusion 57/23 and Action 14 of the Fourth Inter-Regional Coordination Meeting (IRCM/4) called for ICAO to conduct a *workshop on implementing the ICAO Meteorological Information Exchange Model (IWXXM) for the exchange of OPMET data* at the ICAO EUR/NAT Regional Office in 2016 that would involve regional OPMET data exchange hubs in all Regions, World Meteorological Organisation, Eurocontrol, other appropriate organisations and any other experts deemed necessary. The meeting was pleased to learn that the workshop would be conducted from 31 May 2016 to 2 June 2016 at the ICAO EUR/NAT Regional Office in Paris.

BMG ToRs

4.3.10 The meeting agreed to the suggested changes to the terms of reference of the MID OPMET Bulletin Management Group (BMG) as provided at **Appendix 4.3E**, which included: changing *MARIE-PT* with the *Information Management Panel and MET Panel Working Group on Meteorological Information Exchange (WG-MIE)* in paragraph 2f; replacing *FASID Table MET 1A* with *Table MET II-2, Aerodrome Meteorological Office, of the MID electronic Air Navigation Plan* in paragraph 2g; and 3) replacing *B0-MET* with *B0-AMET* in paragraph 2g. Consequently, the meeting agreed to the following MET SG/6 Decision:

DRAFT DECISION 6/3: REVISED BMG TERMS OF REFERENCE

That, the terms of reference of the Bulletin Management Group (BMG) of the MET Sub-Group to the MIDANPIRG be updated as at ***Appendix 4.3E****.*

REPORT ON AGENDA ITEM 4: PERFORMANCE FRAMEWORK FOR MET IMPLEMENTATION IN THE MID REGION

4.4 REVIEW AND UPDATE OF THE MID AIR NAVIGATION STRATEGY PARTS RELATED TO MET

4.4.1 This subject was addressed in WP/5 presented by the Secretariat. The meeting was apprised of the status of implementation related to ASBU B0-AMET – *Meteorology information supporting enhanced operational efficiency and safety*.

4.4.2 The meeting recalled that MIDANPIRG/14 endorsed the draft MID Region Air Navigation Strategy and tasked the different MIDANPIRG subsidiary bodies to further review and complete the Strategy (MIDANPIRG Conclusion 14/6 refers). The MSG/4 meeting updated and endorsed the MID Region Air Navigation Strategy based on inputs from MIDANPIRG subsidiary bodies and other inputs from States and international organization (MSG Conclusion 4/3 refers). The high level implementation indicator associated with this module includes the percent of States having implemented SADIS/WIFS and percent of States having implemented QMS.

4.4.3 The meeting also recalled that the revised MID Region Air Navigation Strategy was endorsed as the framework identifying the regional air navigation priorities, performance indicators and targets and was published on the ICAO Portal (https://portal.icao.int/RO_MID/Pages/MIDDocs.aspx) as MID Doc 002 (MIDANPIRG Conclusion 15/10 refers). MID States were also urged to i) develop their National Air Navigation Performance Framework, ensuring the alignment with and support to the MID Region Air Navigation Strategy; and ii) provide the ICAO MID Regional Office, on an annual basis (by the end of November), with relevant data necessary for regional air navigation planning, reporting and monitoring.

4.4.4 The meeting noted that Volume III of the new ANP implemented in February 2016 was linked to Key Performance Indicators (KPIs) that measure implementation that may assist in focusing resources in implementation efforts. Volume III should follow the performance based approach concept that indicates criteria for implementation (e.g. number of operations at an aerodrome).

4.4.5 The meeting agreed that in addition to measuring SADIS and QMS elements, OPMET and SIGMET elements should be included and measured by existing mechanisms (e.g. EUR Data Management Group monitors OPMET and SIGMET globally and provides statistics in this regard twice per year).

4.4.6 Expanding on the OPMET element, the meeting discussed what aerodromes should issue METAR every half hour. The meeting agreed that the criteria of aerodrome selection should include the number of operations at an aerodrome, frequency of significant weather changes and use in VOLMET. This element will be developed further in coordination with States and ICAO and presented to MSG/5 and MIDANPIRG/16 for consideration. This action is captured in Agenda Item 4.6 as it is related to the proposed changes to Volume III (and possibly Volume II) of the electronic Air Navigation Plan.

4.4.7 In accordance with the above, the meeting reviewed and updated the MID Region Air Navigation Strategy parts related to B0-AMET, including the agreement on the performance Targets as follows:

B0 – AMET: Meteorological information supporting enhanced operational efficiency and safety				
Elements	***Applicability***	***Performance Indicators/Supporting Metrics***	***Targets***	***Remarks***
SADIS 2G and Secure SADIS FTP	***All** States*	Indicator: % of States having implemented SADIS 2G satellite broadcast or Secure SADIS FTP service Supporting metric: number of States having implemented SADIS 2G satellite broadcast or Secure SADIS FTP service	90% By Dec. 2015 100% By Dec. 2017	Current status 12 out of 15 States (80%)
QMS	***All** States*	Indicator: % of States having implemented QMS for MET Supporting metric: number of States having implemented QMS for MET	60% By Dec. 2015 80% by Dec. 2017	Current status 9 out of 15 States (60%)
SIGMET	***All MWOs in the MID Region***	Indicator: % of FIRs in which SIGMET is implemented Supporting metric: number of FIRs SIGMET is implemented	90% by Dec. 2016 100% by Dec. 2018	Current status 12 out of 14 MWOs (86%)
OPMET	***Aerodromes to be determined and based on the following criteria:*** ***Number of operations at aerodrome; frequency of changing weather; use in VOLMET***	Indicator: % of applicable AOP aerodromes having implemented METAR with an update rate of 30 minutes Supporting metric: number of applicable aerodromes having implemented METAR with an update rate of 30 minutes	xx% by Dec. 2017	Current status xx of xx applicable AOP aerodromes (xx%)

4.4.8 The meeting noted that after 31 July 2016, implementation of SADIS only applies to Secure SADIS FTP service due to the cessation of the SADIS 2G satellite broadcast.

4.4.9 The meeting agreed to consider implementation of MET elements associated with Block 1 of AMET, and in particular, to the implementation of IWXXM. The BMG/6 meeting (Kuwait, December 6, 2016) is expected to develop a draft table in this regard.

REPORT ON AGENDA ITEM 4: PERFORMANCE FRAMEWORK FOR MET IMPLEMENTATION IN THE MID REGION

4.5 QUALITY MANAGEMENT SYSTEM

4.5.1 The subject was addressed in WP/6 presented by the Secretariat. The meeting was apprised of the status of implementation of Quality Management System related to MET in accordance to Annex 3, paragraph 2.2.3.

4.5.2 The meeting recalled that implementation of Quality Management System (QMS) was a key performance indicator expressed in percentage of States in the MID Region that meet QMS provisions in Annex 3. The associated key performance indicator is described in Agenda Item 4.4.

4.5.3 The meeting noted that eight States (Bahrain, Egypt, Iran, Jordan, Kuwait, Qatar, Saudi Arabia, Sudan and the United Arab Emirates) have been certified ISO 9001 meeting QMS provisions in Annex 3. The status of implementation is provided at **Appendix 4.5A**. The Secretariat will follow-up with WMO on any other States that may have received certification.

REPORT ON AGENDA ITEM 4: PERFORMANCE FRAMEWORK FOR MET IMPLEMENTATION IN THE MID REGION

4.6 REVIEW OF THE MET PROVISIONS IN THE MID ELECTRONIC AIR NAVIGATION PLAN

4.6.1 This subject was addressed in WP/7 presented by the Secretariat. The meeting was apprised of the recently approved MID electronic Air Navigation Plan Volumes I, II and III which were made available at http://www.icao.int/MID/MIDANPIRG/Pages/Final%20Report/MID-eANP.aspx.

4.6.2 The meeting reviewed the MET Part of VOL I, II and III as provided at **Appendices 4.6A**, **4.6B** and **4.6C**, respectively.

4.6.3 Sudan informed the meeting that Table MET II-2 should be updated to reflect 30-TAF at Obeid (implementation May 2016). Furthermore, all aerodromes should require METAR including OTHH in Qatar.

4.6.4 The meeting proposed to update Volume III to reflect the current status of SADIS implementation (Iran, Lebanon and Syria do not receive SADIS 2G or Secure SADIS FTP Service) and the current status of QMS for MET (Iran received ISO-9001 certification in 2015).

4.6.5 In addition, the meeting discussed updating the criteria for the issuance of METAR every 30 minutes in paragraph 2.2 of the MET Part of Volume II. Currently, the requirement states that METAR is issued every 30 minutes at RS and AS designated aerodromes in the MID Region. Egypt, Kuwait, Saudi Arabia and Sudan confirmed that this requirement was not appropriate and that the requirement should be performance based. Kuwait informed the meeting that METAR was issued every 30 minutes, but since weather conditions did not change frequently enough, one-hourly METAR was sufficient and re-implemented without any negative impacts to operations. Saudi Arabia noted that their operators requested METAR to be issued every 30 minutes during the winter season when the weather changes frequently.

4.6.6 The meeting agreed that criteria such as number of operations at an aerodrome, frequency of changing weather and use of METAR in VOLMET be considered when requiring an aerodrome to provide METAR every 30 minutes. Implementation in this regard could be reflected in Volume III of the electronic Air Navigation Plan for consideration by MSG/5. Accordingly, the meeting agreed to the following Draft Conclusion:

DRAFT CONCLUSION 6/4: MID REGIONAL REQUIREMENTS FOR HALF-HOURLY METAR

*That, States provide input to the proposed changes to the MET Part of Volume III element OPMET by **31 March 2016** using the following criteria in determining which AOP aerodromes should issue half-hourly METAR:*

a) volume of aircraft operations at an aerodrome;

b) frequency of significant weather changes; and

c) use of METAR in VOLMET.

4.6.7 Based on the responses to the above, the MET Part of Volume II of the eANP (paragraph 2.2) as provided at **Appendix 4.6B** may have to be updated and approved according to the established procedures.

4.6.8 Furthermore, the meeting agreed with the proposed inclusion of measuring the implementation of SIGMET in the MET Part of Volume III of the eANP as provided at **Appendix 4.6C**. The meeting agreed that the proposed changes to Volume III including input from States for the OPMET element and associated change to Volume II should be considered by MSG and agreed to the following Draft Conclusion:

DRAFT CONCLUSION 6/5: MID eANP VOLUMES II AND III – MET PART

*That, the proposed changes to the MID eANP Volumes II and III – MET Part as at **Appendices 4.6B** and **4.6C**, taking into consideration input from States, be processed in accordance with the standard procedure of amendment.*

REPORT ON AGENDA ITEM 5: REVIEW OF AIR NAVIGATION DEFICIENCIES IN THE MET FIELD

5.1 The meeting recalled that the MIDANPIRG/15 meeting agreed to include the following States to the list of deficiencies since Quality Management System (QMS) for MET had not been implemented as per paragraph 2.2 of Annex 3: Iran, Iraq, Lebanon, Libya, Oman, Syria and Yemen. The meeting also recalled that existing deficiencies remained such as not providing 30-hour TAF for HEOW (Egypt) and not providing 24-hour TAF for OSAP (Syria).

5.2 The meeting recalled MIDANPIRG 15/35 that urged States to use the MANDD for the submission of requests for addition, update, and elimination of Air Navigation Deficiencies, including the submission of a specific Corrective Action Plan (CAP) for each deficiency. In addition, that States submit a Formal Letter to the ICAO MID Regional Office containing the evidence(s) that mitigation measures have been implemented for the elimination of the deficiency(ies) when requesting the elimination of deficiency(ies) from the MANDD. For more information, the meeting noted that they may refer to the ICAO MID website at http://www.icao.int/MID/Pages/meetings.aspx. The list of deficiencies for MET are also provided at **Appendix 5A**.

5.3 With reference to providing TAF for HEOW, Egypt agreed to coordinate internally on meeting this requirement noting that this aerodrome was partly used for military operations.

5.4 The meeting noted that Iran, Lebanon and Syria were not listed in the SADIS Status of Implementation and consequential lack of WAFS forecasts deemed necessary for briefing and flight documentation (Annex 3 para 9.1.4, 9.3.1, 9.4.1 and Appendix 2, 2.1.1). If SADIS was not implemented by MIDANPIRG/16, this deficiency would be added to the MANDD.

5.5 The meeting reviewed the list of deficiencies as provided at **Appendix 5A** and proposed to remove Iran from the list of deficiencies since the Meteorological Organization of Iran became QMS compliant with ISO 9001 in October 2015. The Secretariat would also coordinate with WMO on updating the list of deficiencies in this regard before MIDANPIRG/16.

EPORT ON AGENDA ITEM 6: FUTURE WORK PROGRAMME

6.1 The meeting reviewed the MET SG Terms of References (TORs) and agreed that they are still valid and current.

6.2 Taking into consideration, the planned ICAO MID Regional events which are of relevance to the activity of the MET Sub-Group, in particular the MSG/5, ANSIG/2 and MIDANPIRG/16 meetings, it was agreed that the MET SG/7 meeting be held during the second half of 2017, preferably in November. The tentative venue will be Sharm El-Sheikh, Egypt.

REPORT ON AGENDA ITEM 7: ANY OTHER BUSINESS

7.1 The meeting encouraged States to attend the Second Meeting of the Global Aviation Dialogues (GLADs) on market-based measures to address carbon dioxide emissions from international aviation to be held in Cairo from 20 to 21 March 2016.

7.2 The meeting was also encouraged to attend the ICAO Workshop on System Wide Information Management (SWIM) to be held in Bangkok from 16 to 18 May 2016.

7.3 The meeting appreciated the presentation of MET services for civil international aviation provided by Sudan which highlighted aeronautical competency and QMS.

7.4 The meeting noted that the format of Sub-Groups will change during the next cycle of meetings such that States were expected to provide presentations related to implementation of MET provisions. Status of implementation, challenges and proposed actions would be addressed at Sub-Group meetings. A presentation template would be provided to the group well in advance of the next meeting.

APPENDICES

APPENDIX 2A

FOLLOW-UP ACTION PLAN ON MIDANPIRG/15 CONCLUSIONS AND DECISIONS

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC.15/10: MID REGION AIR NAVIGATION STRATEGY That, a) the revised MID Region Air Navigation Strategy: i. is endorsed as the framework identifying the regional air navigation priorities, performance indicators and targets; and ii. be published as MID Doc 002 b) MID States be urged to: i. develop their National Air Navigation Performance Framework, ensuring the alignment with and support to the MID Region Air Navigation Strategy; and ii. provide the ICAO MID Regional Office, on an annual basis (by the end of November), with relevant data necessary for regional air navigation planning, reporting and monitoring.	Implement the Conclusion	MIDANPIRG/15	Adopt and publish the revised MID Regional Air Navigation Strategy	June 2015	**COMPLETE with reference to (a)** **ONGOING with reference to (b)**
CONC. 15/11: ENDORSEMENT OF THE MID EANP That, a) the new MID ANP VOL I, II and III available at http://www.icao.int/MID/MIDANPIRG/Pages/Final%20Report/MID-eANP.aspx are endorsed; and b) the ICAO MID Regional Office process the necessary Proposals for Amendment, in accordance with the procedure for amendment approved by the Council, for formal approval by the end of 2015.	Implement the Conclusion	MIDANPIRG/15 ICAO MID	Adopt MID eANP Process Proposal for Amendment	June 2015 December 2015	**COMPLETE**

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC.15/20: MID REGION ATM CONTINGENCY PLAN That, the MID Region ATM Contingency Plan (Edition June 2015): a) is endorsed as MID Doc 003; and b) be used by States and concerned stakeholders to ensure the orderly flow of international air traffic in the event of disruptions of air traffic services and related supporting services and to preserve the availability of major world air routes within the air transportation system in such circumstances.	Implement the Conclusion	MIDANPIRG/15	Adopt MID Region ATM Contingency Plan	June 2015	**COMPLETE**
CONC. 15/33: OPMET EXCHANGE SCHEME That States be urged to update their OPMET exchange scheme in coordination with ROC Jeddah and back-up ROC Bahrain in order to complete MID ROC implementation by **30 September 2015**.	Implement the Conclusion	ICAO, MID States	Update OPMET exchange scheme	September 2015	**ONGOING**
CONC. 15/35: AIR NAVIGATION DEFICIENCIES That, States be urged to: a) use the MID Air Navigation Deficiency Database (MANDD) for the submission of requests for addition, update, and elimination of Air Navigation Deficiencies, including the submission of a specific Corrective Action Plan (CAP) for each deficiency; and b) submit a Formal Letter to the ICAO MID Regional Office containing the evidence(s) that mitigation measures have been implemented for the elimination of deficiency(ies) when requesting the elimination of deficiency(ies) from the MANDD.	Implement the Conclusion	ICAO MID States	Update MANDD State Letter	2015	**ONGOING**

APPENDIX 4.1A

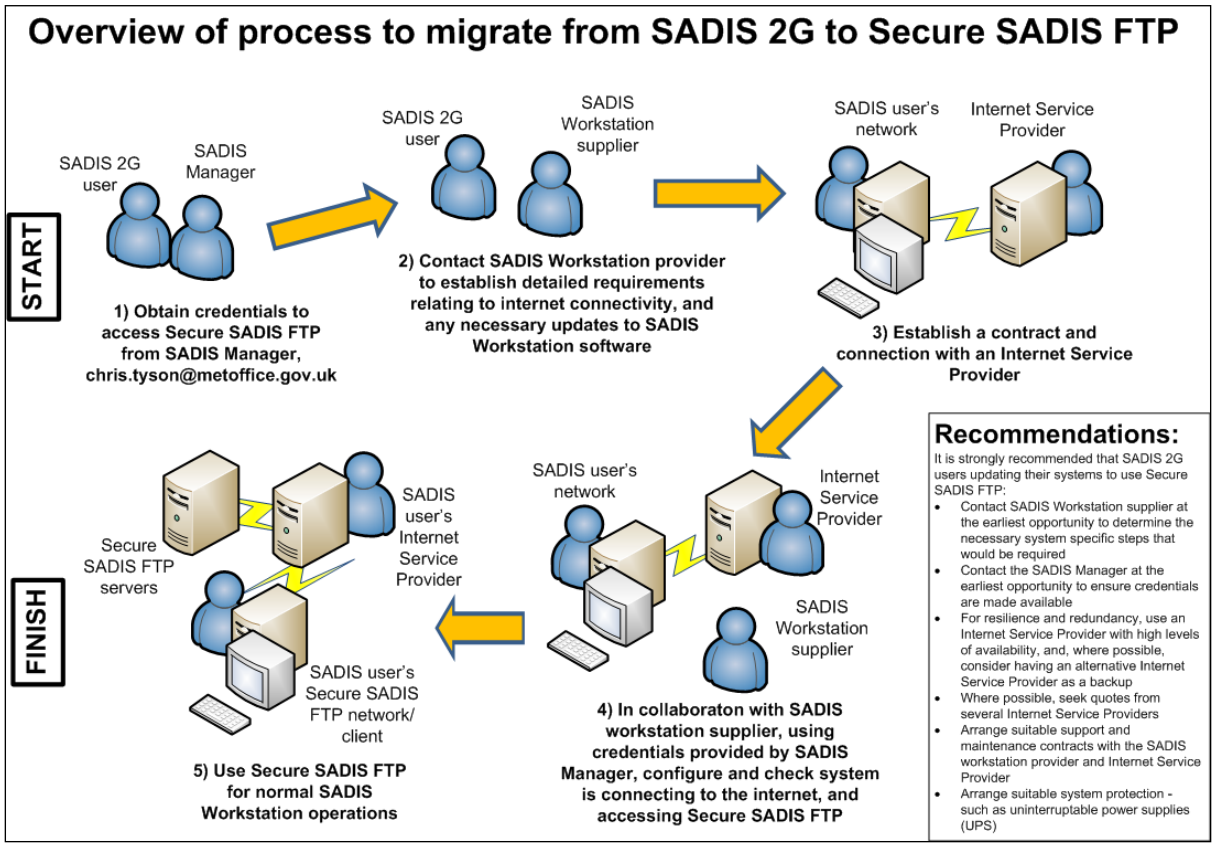
Status – as at 8 February 2016 – of SADIS 2G and Secure SADIS FTP access within MID region.

Note. — Non-operational approved users, or former users not currently receiving the service, are indicated in italics

Key:
SADIS 2G VSAT = operational user ('X') of SADIS second-generation (2G) VSAT service
Secure SADIS FTP = operational user ('X') of Secure SADIS FTP service

ICAO Contracting State		*User*		*Location*	*Type of service*	
No	*Name*	*No*	*Name*	*Name*	*SADIS 2G VSAT*	*Secure SADIS FTP*
MID REGION						
1.	Bahrain	1.	Civil Aviation Authority	Bahrain International Airport	X	X
2.	Egypt	2.	National Meteorological Service	Cairo Airport	X	X
	Egypt	3.	Main Military Weather Forecast Centre	Cairo	X	
3.	*Iran (Islamic Republic of)*		*National Meteorological Service*	*Teheran*	*X*	
4.	Iraq	4.	National Meteorological Service	Baghdad Airport	X	X
5.	Jordan	5.	National Meteorological Service	Queen Alia Airport		X
6.	Kuwait	6.	National Meteorological Service	Kuwait	X	X
7.	Libya	7.	National Meteorological Centre	NMC - Eswani	X	X
	Libya	8.	National Meteorological Centre	Tripoli Int. Airport	X	X
	Libya	9.	National Meteorological Centre	Binena Int. Airport	X	X
8.	Oman	10.	National Meteorological Service	Salalah Airport	X	X
	Oman	11.	National Meteorological Service	Seeb Airport	X	X
9.	Qatar	12.	Civil Aviation Authority	Doha Airport	X	
	Qatar	13.	Qatar Met Department of CAA	Doha	X	X
10.	Saudi Arabia	14.	Presidency of Meteorology and Environment (PME)	Jeddah	X	X
	Saudi Arabia	15.	Presidency of Meteorology and Environment (PME)	Jeddah Airport	X	
	Saudi Arabia	16.	Presidency of Meteorology and Environment (PME)	Riyadh Airport	X	
	Saudi Arabia		*Saudi Airlines*	*Jeddah Airport*		
11.	Sudan	17.	Sudan Meteorological Authority	Headquarter, Khartoum	X	X
12.	*Syrian Arab Republic*		*National Meteorological Service*	*Damascus*	*X*	
	Syrian Arab Republic		*National Meteorological Service*	*Aleppo*	*X*	
13.	United Arab Emirates	18.	Air Force and Air Defence Meteorological Department	Abu Dhabi (Al-Dhafra Air Base)	X	
	United Arab Emirates	19.	National Centre for Meteorology and Seismology (NCMS)	Abu Dhabi	X	X
	United Arab Emirates	20.	Civil Aviation Authority	Abu Dhabi Airport	X	X
	United Arab Emirates	21.	Civil Aviation Authority	Dubai Airport	X	X
	United Arab Emirates		*Civil Aviation Authority*	*Headquarters, Abu Dhabi*		
14.	Yemen	22.	Civil Aviation and Meteorological Authority (CAMA)	Sana'a Airport	X	X
	Yemen	23.	National Meteorological Service (YMS/CAMA)	Sana'a	X	X

APPENDIX 4.1B



APPENDIX 4.3A
MID ROC implementation plan

Following is a list of tasks to be fulfilled to progress on the transition, last update Jan-14-2016

No.	Task	Responsible	Prerequisite	Start Date	Estim. Time	Finish at
1	Implement Collective Addresses	ROC Jeddah	-	24.10.2014	1week	01.01.2015
2	Transition Bahrain	ROC Jeddah	-	27.10.2014	1 month	Part1 finished 15.1.2015, Part2, Pending
3	Transition Process with Kuwait	ROC Jeddah	-	06.01.2014	1 month	Part1, OK, 05/02/2015, Part2 Pending
4	Transition Process with Qatar	ROC Jeddah	-	06.01.2015	1month	Transition Patrt1 OK, 13/04/2015 Part2, OK, 20/04/2015
5	Transition Process with Oman	ROC Jeddah	-	06.01.2015	1 months	Part1, OK, 22/02/2015, Part2, OK, 01/05/2015
6	Transition Process with UAE	ROC Jeddah	-	06.01.2015	1 month	Part1, OK, 25.2.2015, Part2, OK, 15/05/2015
7	Send Saudi Arabian Compilations to BROC Bahrain (OBZZMMID)	Meteorological Communications Centre (MCC) Jeddah	Task No. 1 has to be finished	02.11.2014	1 day	01/03/2015
8	Continue and Finish Transition Sudan	ROC Jeddah	-	01.09.2014	11 months	Part1 and Part2, OK,01/08/2015
9	Develop Backup Procedure	ROC Jeddah & BROC Bahrain (inform MID-BMG)		23.10.2014	4 months	In progress
10	Develop Regional HB on OPMET Data Exchange	ROC Jeddah & BROC Bahrain (inform MID-BMG)		24.03.2015	3 months	Will be started soon

11	Develop first ideas for Training for operators	ROC Vienna		27.10.2014	2 weeks	Submitted to PME
12	Finalize Training for operators	ROC Jeddah & BROC Bahrain & ROC Vienna		10.11.2014	April 2016	An arrangement is in progress
13	Route GULF reports to ROC Jeddah	ROC Jeddah		27.10.2014	1 month	01/02/2015
14	Transition Process for Iran	ROC Jeddah		16.02.2015	2 months	Part1,OK, 25/11/2015 Part2, pending
15	Transition Process for Jordan	ROC Jeddah				Jordan, transition part1 OK, 19/04/2015, transition Part2 OK, 20/05/2015
16	Transition Process for Egypt	ROC Jeddah				Egypt, transition part1 OK, 17/05/2015, transition part2 Pending
17	Transition Process Iraq	ROC Jeddah		16.04.2015	2 months	Iraq, transition part1 OK (last update 28/8/2015), transition Part2 Pending
18	Transition Process Syria	ROC Jeddah				Syria (no contact information yet)
19	Transition Process Lebanon	ROC Jeddah				Transition part1&2 ,OK, 13/12/2015 **
20	Transition Process Libya	ROC Jeddah				Transition part1 OK, 25/03/2015, Transition part2 OK, 17/05/2015
21	Transition Process Yemen	ROC Jeddah				No Reply

Comments:

1- **Finish column in this attachment is filled based on what filled by states in the transition form, however we noticed some discrepancies between some Mid- States transition forms and routing table provided by ROC Vienna .**
2- **Some Mid-States still received OPMET data from outside ROC Jeddah, however, ROC Jeddah still working hard to contact OPMET data source to stop sending data to Mid-state directly with coordination with Mid-state.**

** **METRS sent to Jeddah as ROBEX through GTS, TAF sent through AFTN.**

APPENDIX 4.3B

OPMET exchange improvements

1) Eliminate double bulletins

Bahrain

- OBBI
  - Stop sending to ROC Vienna
    - FT BN 31 OBBI OBBIYFYX (stop sending twice)

Egypt

- HECA
  - Stop sending to ROC Vienna
    - FT AF 39 HECA HECAYMYX
    - FT EG 31 HECA HECAYMYX
    - TF EG 32 HECA HECAYMYX
    - SA AF 32 HECA HECAYMYX
    - SA EG 31 HECA HECAYMYX
    - SA EG 32 HECA HECAYMYX
    - WA EG 31 HECA HECAYMYX

Iran

- OIII
  - Stop sending to ROC Vienna
    - FC IR 32 OIII OIIIYPYX
    - FT IR 31 OIII OIIIYPYX
    - FT IR 32 OIII OIIIYPYX
    - FT IR 33 OIII OIIIYPYX
    - FT IR 34 OIII OIIIYPYX
    - WS IR 31 OIII should only be sent to Jeddah for onward transmission

Iraq

- ORBI
  - Stop sending to ROC Vienna
    - FT IQ 1 ORBI ORBIYMYX
    - SA IQ 1 ORBI ORBIYMYX
    - SP IQ 1 ORBI ORBIYMYX

- ORSU
  - Stop sending to ROC Vienna
    - FT IQ 1 ORSU ORSUYMYX
    - SA IQ 1 ORSU ORSUYMYX

Jordan

- OJAM

- WS JD 20 OJAM should only be sent to Jeddah for onward transmission

Kuwait

- OKBK
  - WS KW 10 OKBK should only be sent to Jeddah for onward transmission

Lebanon

- OLLL
  - Stop sending to ROC Vienna
    - FT IQ 1 ORBI OLLLYPYX
    - SA IQ 1 ORBI OLLLYPYX
- OLBA
  - Stop sending to ROC Vienna
    - FT LB 31 OLBA OLBAYMYX
    - WS LB 31 OLBA is only sent to Jeddah for onward transmission

Libya

- HLLM
  - Stop sending to ROC Vienna
    - FT LY 31 HLLM HLLMYMYX
    - FT LY 31 HLMC HLLMYMYX

United Arab Emirates

- OMAA
  - Stop sending to ROC Vienna
    - FT ER 21 OMAA OMAEYFYX

- OMAE
  - Stop sending to ROC Vienna
    - FT ER 32 OMAE OMAEYPYX
    - WS AE 20 OMAA should only be sent to Jeddah for onward transmission

2) Only provide one report for an aerodrome in one bulletin (do not place same report in different bulletins)

Reference the attached file which contains 532 entries and decide what bulletin OPMET information should be sent.

- Example:

  - In the attachment, SA for HEAL is provided in SAEG31 HECA as well as in SAEG32 HECA. The SA for HEAL should only be located in one of these bulletins.

Attachment – OPMET information for one location in more than one bulletin

LocInd	TT	AA	ii	CCCC	SA-SP	TAF	AOP
HEAL	SA	EG	31	HECA	N	N	N
HEAL	SA	EG	32	HECA	N	N	N
HEAR	SA	EG	31	HECA	Y	T	N
HEAR	SA	EG	32	HECA	Y	T	N
HEAT	SA	EG	31	HECA	Y	X	Y
HEAT	SA	EG	32	HECA	Y	X	Y
HEAX	FT	AF	39	HECA	Y	X	Y
HEAX	FT	EG	31	HECA	Y	X	Y
HEAX	SA	AF	11	KAWN	Y	X	Y
HEAX	SA	AF	32	HECA	Y	X	Y
HEAX	SA	EG	31	HECA	Y	X	Y
HEAX	SA	EG	32	HECA	Y	X	Y
HEBA	SA	EG	31	HECA	Y	T	N
HEBA	SA	EG	32	HECA	Y	T	N
HEBL	SA	EG	31	HECA	Y	T	N
HEBL	SA	EG	32	HECA	Y	T	N
HECA	FT	AF	32	OEJD	Y	X	Y
HECA	FT	AF	38	HECA	Y	X	Y
HECA	FT	AF	39	HECA	Y	X	Y
HECA	FT	EG	31	HECA	Y	X	Y
HECA	SA	AF	11	KAWN	Y	X	Y
HECA	SA	AF	32	HECA	Y	X	Y
HECA	SA	EG	31	HECA	Y	X	Y
HECA	SA	EG	33	HECA	Y	X	Y
HEGN	SA	AF	11	KAWN	Y	X	Y
HEGN	SA	EG	31	HECA	Y	X	Y
HEGN	SA	EG	32	HECA	Y	X	Y
HELX	FT	AF	32	OEJD	Y	X	Y
HELX	FT	AF	38	HECA	Y	X	Y
HELX	FT	AF	39	HECA	Y	X	Y
HELX	FT	EG	32	HECA	Y	X	Y
HELX	SA	AF	11	KAWN	Y	X	Y
HELX	SA	AF	32	HECA	Y	X	Y
HELX	SA	EG	31	HECA	Y	X	Y
HELX	SA	EG	32	HECA	Y	X	Y
HEMA	FT	EG	31	HECA	Y	X	Y
HEMA	FT	EG	32	HECA	Y	X	Y
HEMA	SA	EG	31	HECA	Y	X	Y
HEMA	SA	EG	32	HECA	Y	X	Y

HEMM	SA	AF	11	KAWN	Y	T	N
HEMM	SA	EG	31	HECA	Y	T	N
HEMM	SA	EG	32	HECA	Y	T	N
HEPS	SA	AF	11	KAWN	Y	T	N
HEPS	SA	EG	31	HECA	Y	T	N
HEPS	SA	EG	32	HECA	Y	T	N
HESC	FT	EG	31	HECA	Y	X	Y
HESC	FT	EG	32	HECA	Y	X	Y
HESC	SA	EG	31	HECA	Y	X	Y
HESC	SA	EG	32	HECA	Y	X	Y
HESG	SA	EG	31	HECA	N	N	N
HESG	SA	EG	32	HECA	N	N	N
HESH	SA	AF	11	KAWN	Y	X	Y
HESH	SA	EG	31	HECA	Y	X	Y
HESH	SA	EG	32	HECA	Y	X	Y
HESN	SA	AF	11	KAWN	Y	X	Y
HESN	SA	EG	31	HECA	Y	X	Y
HESN	SA	EG	32	HECA	Y	X	Y
HETB	FT	EG	31	HECA	Y	X	Y
HETB	FT	EG	32	HECA	Y	X	Y
HETB	SA	EG	31	HECA	Y	X	Y
HETB	SA	EG	32	HECA	Y	X	Y
HLGD	FT	LY	31	HLMC	N	N	N
HLGD	FT	LY	31	HLLM	N	N	N
HLGT	FT	LY	31	HLMC	N	N	N
HLGT	FT	LY	31	HLLM	N	N	N
HLKF	FT	LY	31	HLLM	N	T	N
HLKF	FT	LY	31	HLMC	N	T	N
HLLB	FT	AF	33	OEJD	Y	T	Y
HLLB	FT	AF	38	HECA	Y	T	Y
HLLB	FT	LY	31	HLLM	Y	T	Y
HLLB	FT	LY	31	HLMC	Y	T	Y
HLLB	FT	MP	31	LMMM	Y	T	Y
HLLB	SA	AL	31	DAAA	Y	T	Y
HLLB	SA	LY	31	HLMC	Y	T	Y
HLLB	SA	MP	31	LMMM	Y	T	Y
HLLM	FT	LY	31	HLMC	Y	T	N
HLLM	FT	LY	31	HLLM	Y	T	N
HLLM	SA	LY	31	HLLM	Y	T	N
HLLM	SA	LY	31	HLMC	Y	T	N
HLLQ	FT	LY	31	HLMC	N	N	N
HLLQ	FT	LY	31	HLLM	N	N	N
HLLS	FT	LY	31	HLMC	Y	N	Y
HLLS	FT	LY	31	HLLM	Y	N	Y

HLLT	FT	AF	33	OEJD	Y	T	Y
HLLT	FT	AF	38	HECA	Y	T	Y
HLLT	FT	LY	31	HLMC	Y	T	Y
HLLT	FT	LY	31	HLLM	Y	T	Y
HLLT	FT	MP	31	LMMM	Y	T	Y
HLLT	SA	AL	31	DAAA	Y	T	Y
HLLT	SA	LY	31	HLMC	Y	T	Y
HLLT	SA	MP	31	LMMM	Y	T	Y
HLMS	FT	LY	31	HLLM	N	N	N
HLMS	FT	LY	31	HLMC	N	N	N
HLON	FT	LY	31	HLMC	N	N	N
HLON	FT	LY	31	HLLM	N	N	N
HLTD	FT	LY	31	HLLM	N	N	N
HLTD	FT	LY	31	HLMC	N	N	N
HLTQ	FT	LY	31	HLMC	N	N	N
HLTQ	FT	LY	31	HLLM	N	N	N
HLUB	FT	LY	31	HLMC	N	N	N
HLUB	FT	LY	31	HLLM	N	N	N
HSSS	FT	AF	38	HECA	Y	T	Y
HSSS	FT	AF	39	HECA	Y	T	Y
HSSS	FT	EG	31	HECA	Y	T	Y
HSSS	SA	AF	11	KAWN	Y	T	Y
HSSS	SA	AF	32	HECA	Y	T	Y
HSSS	SA	SU	1	HSSS	Y	T	Y
OBBI	FT	AR	20	OEJD	Y	X	Y
OBBI	FT	BN	31	OBBI	Y	X	Y
OBBI	SA	AR	20	OEJD	Y	X	Y
OBBI	SA	BN	31	OBBI	Y	X	Y
OEAB	FT	SD	32	OEJD	Y	T	N
OEAB	FT	SD	40	OEJD	Y	T	N
OEAH	SP	SD	21	OEJD	N	N	N
OEAH	SP	SD	70	OEAH	N	N	N
OEBH	SP	SD	21	OEJD	Y	T	N
OEBH	SP	SD	70	OEBH	Y	T	N
OEDF	FT	BN	31	OBBI	Y	X	Y
OEDF	FT	SD	22	OEJD	Y	X	Y
OEDF	FT	SD	31	OEDF	Y	X	Y
OEDF	FT	SD	31	OEJD	Y	X	Y
OEDF	SA	BN	31	OBBI	Y	X	Y
OEDF	SA	SD	20	OEJD	Y	X	Y
OEDF	SA	SD	31	OEJD	Y	X	Y
OEDF	SP	SD	21	OEJD	Y	X	Y
OEDF	SP	SD	70	OEDF	Y	X	Y
OEDR	FT	BN	31	OBBI	N	N	N

OEDR	FT	SD	22	OEJD	N	N	N
OEDR	FT	SD	31	OEJD	N	N	N
OEDR	FT	SD	31	OEDF	N	N	N
OEDR	SA	BN	31	OBBI	N	N	N
OEDR	SA	SD	20	OEJD	N	N	N
OEDR	SA	SD	31	OEJD	N	N	N
OEDR	SP	SD	21	OEJD	N	N	N
OEDR	SP	SD	70	OEDR	N	N	N
OEGN	FT	SD	32	OEJD	Y	T	N
OEGN	FT	SD	40	OEJD	Y	T	N
OEJN	FT	SD	22	OEJD	Y	X	Y
OEJN	FT	SD	31	OEJD	Y	X	Y
OEJN	SA	SD	20	OEJD	Y	X	Y
OEJN	SA	SD	31	OEJD	Y	X	Y
OEKM	FT	SD	32	OEJD	N	N	N
OEKM	FT	SD	40	OEJD	N	N	N
OEMA	FT	SD	22	OEJD	Y	T	Y
OEMA	FT	SD	31	OEJD	Y	T	Y
OEMA	SA	SD	21	OEJD	Y	T	Y
OEMA	SA	SD	31	OEJD	Y	T	Y
OERF	SP	SD	21	OEJD	Y	T	N
OERF	SP	SD	70	OERF	Y	T	N
OERK	FT	SD	22	OEJD	Y	X	Y
OERK	FT	SD	31	OEJD	Y	X	Y
OERK	SA	SD	21	OEJD	Y	X	Y
OERK	SA	SD	31	OEJD	Y	X	Y
OERR	SP	SD	21	OEJD	Y	T	N
OERR	SP	SD	70	OERR	Y	T	N
OERY	SA	SD	21	OEJD	N	N	N
OERY	SA	SD	31	OEJD	N	N	N
OESH	SP	SD	21	OEJD	Y	T	N
OESH	SP	SD	70	OESH	Y	T	N
OESK	SP	SD	21	OEJD	Y	T	N
OESK	SP	SD	70	OESK	Y	T	N
OETB	FT	SD	32	OEJD	Y	T	N
OETB	FT	SD	40	OEJD	Y	T	N
OETF	FT	SD	32	OEJD	N	T	N
OETF	FT	SD	32	OETF	N	T	N
OETF	FT	SD	40	OEJD	N	T	N
OETF	SA	SD	21	OEJD	N	T	N
OETF	SA	SD	32	OEJD	N	T	N
OETR	SA	SD	21	OEJD	Y	T	N
OETR	SA	SD	70	ORTR	Y	T	N
OETR	SP	SD	21	OEJD	Y	T	N

OETR	SP	SD	70	OETR	Y	T	N
OEWD	SA	SD	21	OEJD	Y	T	N
OEWD	SA	SD	70	ORWD	Y	T	N
OEYN	FT	SD	32	OEJD	Y	C	N
OEYN	FT	SD	40	OEJD	Y	C	N
OIAA	SA	IR	20	OIII	Y	T	N
OIAA	SA	IR	31	OIII	Y	T	N
OIAA	SA	IR	32	OIII	Y	T	N
OIAA	SA	IR	77	OIII	Y	T	N
OIAA	SA	IR	78	OIII	Y	T	N
OIAG	SA	IR	31	OIII	N	N	N
OIAG	SA	IR	34	OIII	N	N	N
OIAG	SA	IR	77	OIII	N	N	N
OIAG	SA	IR	78	OIII	N	N	N
OIAH	SA	IR	31	OIII	N	N	N
OIAH	SA	IR	38	OIII	N	N	N
OIAH	SA	IR	77	OIII	N	N	N
OIAH	SA	IR	78	OIII	N	N	N
OIAI	SA	IR	31	OIII	N	N	N
OIAI	SA	IR	77	OIII	N	N	N
OIAI	SA	IR	78	OIII	N	N	N
OIAM	SA	IR	31	OIII	N	N	N
OIAM	SA	IR	34	OIII	N	N	N
OIAM	SA	IR	77	OIII	N	N	N
OIAM	SA	IR	78	OIII	N	N	N
OIAW	SA	IR	20	OIII	N	N	N
OIAW	SA	IR	31	OIII	N	N	N
OIAW	SA	IR	77	OIII	N	N	N
OIAW	SA	IR	78	OIII	N	N	N
OIBA	SA	IR	31	OIII	N	N	N
OIBA	SA	IR	36	OIII	N	N	N
OIBA	SA	IR	77	OIII	N	N	N
OIBA	SA	IR	78	OIII	N	N	N
OIBB	SA	IR	31	OIII	N	N	N
OIBB	SA	IR	33	OIII	N	N	N
OIBB	SA	IR	77	OIII	N	N	N
OIBB	SA	IR	78	OIII	N	N	N
OIBK	SA	IR	31	OIII	N	N	N
OIBK	SA	IR	32	OIII	N	N	N
OIBK	SA	IR	77	OIII	N	N	N
OIBK	SA	IR	78	OIII	N	N	N
OIBL	SA	IR	31	OIII	N	N	N
OIBL	SA	IR	37	OIII	N	N	N
OIBL	SA	IR	77	OIII	N	N	N

OIBL	SA	IR	78	OIII	N	N	N
OIBS	SA	IR	31	OIII	N	N	N
OIBS	SA	IR	35	OIII	N	N	N
OIBS	SA	IR	77	OIII	N	N	N
OIBS	SA	IR	78	OIII	N	N	N
OICC	SA	IR	31	OIII	N	N	N
OICC	SA	IR	32	OIII	N	N	N
OICC	SA	IR	77	OIII	N	N	N
OICC	SA	IR	78	OIII	N	N	N
OICI	SA	IR	31	OIII	N	N	N
OICI	SA	IR	34	OIII	N	N	N
OICI	SA	IR	77	OIII	N	N	N
OICI	SA	IR	78	OIII	N	N	N
OICJ	SA	IR	31	OIII	N	N	N
OICJ	SA	IR	77	OIII	N	N	N
OICJ	SA	IR	78	OIII	N	N	N
OICK	SA	IR	31	OIII	N	N	N
OICK	SA	IR	33	OIII	N	N	N
OICK	SA	IR	77	OIII	N	N	N
OICK	SA	IR	78	OIII	N	N	N
OICS	SA	IR	31	OIII	N	N	N
OICS	SA	IR	33	OIII	N	N	N
OICS	SA	IR	77	OIII	N	N	N
OICS	SA	IR	78	OIII	N	N	N
OIFK	SA	IR	31	OIII	N	N	N
OIFK	SA	IR	77	OIII	N	N	N
OIFK	SA	IR	78	OIII	N	N	N
OIFM	SA	IR	20	OIII	Y	X	Y
OIFM	SA	IR	31	OIII	Y	X	Y
OIFM	SA	IR	77	OIII	Y	X	Y
OIFM	SA	IR	78	OIII	Y	X	Y
OIFS	SA	IR	31	OIII	N	N	N
OIFS	SA	IR	36	OIII	N	N	N
OIFS	SA	IR	77	OIII	N	N	N
OIFS	SA	IR	78	OIII	N	N	N
OIGG	SA	IR	20	OIII	N	N	N
OIGG	SA	IR	31	OIII	N	N	N
OIGG	SA	IR	32	OIII	N	N	N
OIGG	SA	IR	77	OIII	N	N	N
OIGG	SA	IR	78	OIII	N	N	N
OIGK	SA	IR	31	OIII	N	N	N
OIGK	SA	IR	77	OIII	N	N	N
OIGK	SA	IR	78	OIII	N	N	N
OIHH	SA	IR	31	OIII	N	N	N

OIHH	SA	IR	33	OIII	N	N	N
OIHH	SA	IR	78	OIII	N	N	N
OIHM	SA	IR	31	OIII	N	N	N
OIHM	SA	IR	77	OIII	N	N	N
OIHM	SA	IR	78	OIII	N	N	N
OIIE	FT	IR	31	OIII	Y	X	Y
OIIE	FT	IR	32	OIII	Y	X	Y
OIIE	SA	IR	20	OIII	Y	X	Y
OIIE	SA	IR	31	OIII	Y	X	Y
OIIE	SA	IR	32	OIII	Y	X	Y
OIIE	SA	IR	77	OIII	Y	X	Y
OIIE	SA	IR	78	OIII	Y	X	Y
OIII	SA	IR	20	OIII	Y	T	Y
OIII	SA	IR	31	OIII	Y	T	Y
OIII	SA	IR	77	OIII	Y	T	Y
OIII	SA	IR	78	OIII	Y	T	Y
OIIK	SA	IR	31	OIII	N	N	N
OIIK	SA	IR	37	OIII	N	N	N
OIIK	SA	IR	77	OIII	N	N	N
OIIK	SA	IR	78	OIII	N	N	N
OIIP	SA	IR	31	OIII	N	N	N
OIIP	SA	IR	36	OIII	N	N	N
OIIP	SA	IR	77	OIII	N	N	N
OIIS	SA	IR	31	OIII	N	N	N
OIIS	SA	IR	77	OIII	N	N	N
OIIS	SA	IR	78	OIII	N	N	N
OIKB	SA	IR	20	OIII	Y	T	Y
OIKB	SA	IR	31	OIII	Y	T	Y
OIKB	SA	IR	77	OIII	Y	T	Y
OIKB	SA	IR	78	OIII	Y	T	Y
OIKK	SA	IR	31	OIII	N	N	N
OIKK	SA	IR	77	OIII	N	N	N
OIKK	SA	IR	78	OIII	N	N	N
OIKO	SA	IR	31	OIII	N	N	N
OIKO	SA	IR	77	OIII	N	N	N
OIKO	SA	IR	78	OIII	N	N	N
OIKQ	SA	IR	31	OIII	N	N	N
OIKQ	SA	IR	34	OIII	N	N	N
OIKQ	SA	IR	77	OIII	N	N	N
OIKQ	SA	IR	78	OIII	N	N	N
OIMB	SA	IR	31	OIII	N	N	N
OIMB	SA	IR	36	OIII	N	N	N
OIMB	SA	IR	77	OIII	N	N	N
OIMB	SA	IR	78	OIII	N	N	N

OIMC	SA	IR	31	OIII	N	N	N
OIMC	SA	IR	37	OIII	N	N	N
OIMC	SA	IR	77	OIII	N	N	N
OIMC	SA	IR	78	OIII	N	N	N
OIMD	SA	IR	31	OIII	N	N	N
OIMD	SA	IR	37	OIII	N	N	N
OIMD	SA	IR	77	OIII	N	N	N
OIMD	SA	IR	78	OIII	N	N	N
OIMM	SA	IR	20	OIII	Y	T	Y
OIMM	SA	IR	31	OIII	Y	T	Y
OIMM	SA	IR	77	OIII	Y	T	Y
OIMM	SA	IR	78	OIII	Y	T	Y
OIMN	SA	IR	36	OIII	N	N	N
OIMN	SA	IR	77	OIII	N	N	N
OIMN	SA	IR	78	OIII	N	N	N
OINB	SA	IR	31	OIII	N	N	N
OINB	SA	IR	77	OIII	N	N	N
OINB	SA	IR	78	OIII	N	N	N
OING	SA	IR	31	OIII	N	N	N
OING	SA	IR	35	OIII	N	N	N
OING	SA	IR	77	OIII	N	N	N
OING	SA	IR	78	OIII	N	N	N
OINK	SA	IR	31	OIII	N	N	N
OINK	SA	IR	77	OIII	N	N	N
OINN	SA	IR	31	OIII	N	N	N
OINN	SA	IR	34	OIII	N	N	N
OINN	SA	IR	77	OIII	N	N	N
OINN	SA	IR	78	OIII	N	N	N
OINR	SA	IR	31	OIII	N	N	N
OINR	SA	IR	34	OIII	N	N	N
OINR	SA	IR	77	OIII	N	N	N
OINR	SA	IR	78	OIII	N	N	N
OISA	SA	IR	31	OIII	N	N	N
OISA	SA	IR	77	OIII	N	N	N
OISA	SA	IR	78	OIII	N	N	N
OISF	SA	IR	31	OIII	N	N	N
OISF	SA	IR	38	OIII	N	N	N
OISF	SA	IR	77	OIII	N	N	N
OISF	SA	IR	78	OIII	N	N	N
OISL	SA	IR	31	OIII	N	N	N
OISL	SA	IR	34	OIII	N	N	N
OISL	SA	IR	77	OIII	N	N	N
OISL	SA	IR	78	OIII	N	N	N
OISS	SA	IR	20	OIII	Y	X	Y

OISS	SA	IR	31	OIII	Y	X	Y
OISS	SA	IR	77	OIII	Y	X	Y
OISS	SA	IR	78	OIII	Y	X	Y
OISY	SA	IR	31	OIII	N	N	N
OISY	SA	IR	34	OIII	N	N	N
OISY	SA	IR	77	OIII	N	N	N
OISY	SA	IR	78	OIII	N	N	N
OITL	SA	IR	31	OIII	N	N	N
OITL	SA	IR	33	OIII	N	N	N
OITL	SA	IR	77	OIII	N	N	N
OITR	SA	IR	31	OIII	N	T	N
OITR	SA	IR	32	OIII	N	T	N
OITR	SA	IR	77	OIII	N	T	N
OITR	SA	IR	78	OIII	N	T	N
OITT	SA	IR	20	OIII	Y	X	Y
OITT	SA	IR	31	OIII	Y	X	Y
OITT	SA	IR	77	OIII	Y	X	Y
OITT	SA	IR	78	OIII	Y	X	Y
OITU	SA	IR	31	OIII	N	N	N
OITU	SA	IR	77	OIII	N	N	N
OITU	SA	IR	78	OIII	N	N	N
OIYY	SA	IR	20	OIII	N	N	N
OIYY	SA	IR	31	OIII	N	N	N
OIYY	SA	IR	32	OIII	N	N	N
OIYY	SA	IR	77	OIII	N	N	N
OIYY	SA	IR	78	OIII	N	N	N
OIZB	SA	IR	31	OIII	N	N	N
OIZB	SA	IR	35	OIII	N	N	N
OIZB	SA	IR	77	OIII	N	N	N
OIZB	SA	IR	78	OIII	N	N	N
OIZC	SA	IR	31	OIII	N	N	N
OIZC	SA	IR	33	OIII	N	N	N
OIZC	SA	IR	77	OIII	N	N	N
OIZC	SA	IR	78	OIII	N	N	N
OIZH	SA	IR	20	OIII	Y	T	Y
OIZH	SA	IR	31	OIII	Y	T	Y
OIZH	SA	IR	77	OIII	Y	T	Y
OIZH	SA	IR	78	OIII	Y	T	Y
OIZI	SA	IR	31	OIII	N	N	N
OIZI	SA	IR	35	OIII	N	N	N
OIZI	SA	IR	77	OIII	N	N	N
OIZI	SA	IR	78	OIII	N	N	N
OIZJ	SA	IR	31	OIII	N	N	N
OIZJ	SA	IR	36	OIII	N	N	N

OIZJ	SA	IR	77	OIII	N	N	N
OIZJ	SA	IR	78	OIII	N	N	N
OJAI	FT	JD	20	OJAM	Y	X	Y
OJAI	FT	JD	31	OJAM	Y	X	Y
OJAI	FT	JD	31	OJAI	Y	X	Y
OJAI	FT	JD	50	OJAM	Y	X	Y
OJAI	FT	JD	55	OJAI	Y	X	Y
OJAI	FT	ME	31	OEJD	Y	X	Y
OJAI	SA	JD	20	OJAM	Y	X	Y
OJAI	SA	JD	31	OJAM	Y	X	Y
OJAI	SA	ME	31	OLBA	Y	X	Y
OJAM	FT	JD	20	OJAM	Y	T	Y
OJAM	FT	JD	31	OJAM	Y	T	Y
OJAM	FT	JD	31	OJAI	Y	T	Y
OJAM	FT	JD	50	OJAM	Y	T	Y
OJAM	FT	JD	55	OJAI	Y	T	Y
OJAM	FT	ME	31	OEJD	Y	T	Y
OJAM	SA	JD	20	OJAM	Y	T	Y
OJAM	SA	JD	31	OJAM	Y	T	Y
OJAM	SA	JD	50	OJAM	Y	T	Y
OJAM	SA	ME	31	OLBA	Y	T	Y
OJAQ	FT	JD	20	OJAM	Y	N	Y
OJAQ	FT	JD	31	OJAI	Y	N	Y
OJAQ	FT	JD	31	OJAM	Y	N	Y
OJAQ	FT	JD	50	OJAM	Y	N	Y
OJAQ	FT	JD	55	OJAI	Y	N	Y
OJAQ	FT	ME	31	OEJD	Y	N	Y
OJAQ	SA	JD	20	OJAM	Y	N	Y
OJAQ	SA	JD	31	OJAM	Y	N	Y
OJAQ	SA	ME	31	OLBA	Y	N	Y
OKBK	FT	AR	20	OEJD	Y	X	Y
OKBK	FT	BN	31	OBBI	Y	X	Y
OKBK	FT	KW	31	OKBK	Y	X	Y
OKBK	SA	AR	20	OEJD	Y	X	Y
OKBK	SA	BN	31	OBBI	Y	X	Y
OKBK	SA	KW	20	OKBK	Y	X	Y
OKBK	SA	KW	31	OKBK	Y	X	Y
OKBK	SP	KW	21	OKBK	Y	X	Y
OKBK	SP	KW	31	OKBK	Y	X	Y
OLBA	FT	LB	31	OLBA	Y	X	Y
OLBA	FT	ME	31	OEJD	Y	X	Y
OMAA	FT	AR	20	OEJD	Y	X	Y
OMAA	FT	BN	32	OBBI	Y	X	Y
OMAA	FT	ER	21	OMAA	Y	X	Y

OMAA	FT	ER	32	OMAA	Y	X	Y
OMAA	FT	ER	32	OMAE	Y	X	Y
OMAA	SA	AR	20	OEJD	Y	X	Y
OMAA	SA	BN	32	OBBI	Y	X	Y
OMAA	SA	ER	20	OMAA	Y	X	Y
OMAA	SA	ER	32	OMAE	Y	X	Y
OMAD	FT	AR	20	OEJD	N	X	Y
OMAD	FT	BN	32	OBBI	N	X	Y
OMAD	FT	ER	21	OMAA	N	X	Y
OMAD	FT	ER	32	OMAE	N	X	Y
OMAD	FT	ER	32	OMAA	N	X	Y
OMAD	SA	AR	20	OEJD	N	X	Y
OMAD	SA	BN	32	OBBI	N	X	Y
OMAD	SA	ER	32	OMAE	N	X	Y
OMAL	FT	BN	32	OBBI	Y	X	Y
OMAL	FT	ER	32	OMAE	Y	X	Y
OMAL	SA	AR	20	OEJD	Y	X	Y
OMAL	SA	BN	32	OBBI	Y	X	Y
OMAL	SA	ER	32	OMAE	Y	X	Y
OMDB	FT	AR	20	OEJD	Y	X	Y
OMDB	FT	BN	32	OBBI	Y	X	Y
OMDB	FT	ER	31	OMDB	Y	X	Y
OMDB	FT	ER	32	OMAE	Y	X	Y
OMDB	SA	AR	20	OEJD	Y	X	Y
OMDB	SA	BN	32	OBBI	Y	X	Y
OMDB	SA	ER	32	OMAE	Y	X	Y
OMDW	FT	BN	32	OBBI	N	X	Y
OMDW	FT	ER	31	OMDB	N	X	Y
OMDW	FT	ER	32	OMAE	N	X	Y
OMDW	SA	BN	32	OBBI	N	X	Y
OMDW	SA	ER	32	OMAE	N	X	Y
OMFJ	FT	BN	32	OBBI	Y	X	Y
OMFJ	FT	ER	21	OMFJ	Y	X	Y
OMFJ	FT	ER	32	OMAE	Y	X	Y
OMFJ	SA	AR	20	OEJD	Y	X	Y
OMFJ	SA	BN	32	OBBI	Y	X	Y
OMFJ	SA	ER	20	OMFJ	Y	X	Y
OMFJ	SA	ER	32	OMAE	Y	X	Y
OMRK	FT	AR	20	OEJD	Y	X	Y
OMRK	FT	BN	32	OBBI	Y	X	Y
OMRK	FT	ER	31	OMDB	Y	X	Y
OMRK	FT	ER	32	OMAE	Y	X	Y
OMRK	SA	AR	20	OEJD	Y	X	Y
OMRK	SA	BN	32	OBBI	Y	X	Y

OMRK	SA	ER	20	OMRK	Y	X	Y
OMRK	SA	ER	32	OMAE	Y	X	Y
OMSJ	FT	AR	20	OEJD	Y	X	Y
OMSJ	FT	BN	32	OBBI	Y	X	Y
OMSJ	FT	ER	31	OMDB	Y	X	Y
OMSJ	FT	ER	32	OMAE	Y	X	Y
OMSJ	SA	AR	20	OEJD	Y	X	Y
OMSJ	SA	BN	32	OBBI	Y	X	Y
OMSJ	SA	ER	32	OMAE	Y	X	Y
OOMS	FT	AR	20	OEJD	Y	X	Y
OOMS	FT	BN	32	OBBI	Y	X	Y
OOMS	FT	ER	32	OMAE	Y	X	Y
OOMS	FT	OM	21	OOMS	Y	X	Y
OOMS	FT	OM	32	OOMS	Y	X	Y
OOMS	SA	AR	20	OEJD	Y	X	Y
OOMS	SA	BN	32	OBBI	Y	X	Y
OOMS	SA	OM	32	OOMS	Y	X	Y
OOSA	FT	AR	20	OEJD	Y	X	Y
OOSA	FT	BN	32	OBBI	Y	X	Y
OOSA	FT	BN	32	823	Y	X	Y
OOSA	FT	ER	32	OMAE	Y	X	Y
OOSA	FT	OM	21	OOMS	Y	X	Y
OOSA	FT	OM	32	OOMS	Y	X	Y
OOSA	SA	AR	20	OEJD	Y	X	Y
OOSA	SA	BN	32	OBBI	Y	X	Y
OOSA	SA	OM	32	OOMS	Y	X	Y
ORSU	FT	IQ	1	ORBI	Y	T	Y
ORSU	FT	IQ	1	ORSU	Y	T	Y
ORSU	SA	IQ	1	ORBI	Y	T	Y
ORSU	SA	IQ	1	ORSU	Y	T	Y
OSDI	FT	ME	31	OEJD	Y	X	Y
OSDI	FT	SY	31	OSDI	Y	X	Y
OSLK	FT	ME	31	OEJD	Y	T	Y
OSLK	FT	SY	31	OSDI	Y	T	Y
OTBD	FT	AR	20	OEJD	Y	X	Y
OTBD	FT	BN	31	OBBI	Y	X	Y
OTBD	FT	QT	21	OTBD	Y	X	Y
OTBD	SA	AR	20	OEJD	Y	X	Y
OTBD	SA	BN	31	OBBI	Y	X	Y
OTBD	SA	QT	88	OTBD	Y	X	Y
OTBD	SA	QT	98	OTBD	Y	X	Y
OTBD	SA	QT	99	OTBD	Y	X	Y
OTHH	FT	BN	31	OBBI	N	N	Y
OTHH	FT	QT	11	OTHH	N	N	Y

OTHH	SA	AR	20	OEJD	N	N	Y
OTHH	SA	BN	31	OBBI	N	N	Y
OTHH	SA	QT	20	OTHH	N	N	Y
OTHH	SA	QT	88	OTBD	N	N	Y
OYAA	FT	AR	20	OEJD	Y	X	Y
OYAA	FT	SD	31	OEJD	Y	X	Y
OYSN	FT	AR	20	OEJD	Y	T	Y
OYSN	FT	SD	31	OEJD	Y	T	Y

APPENDIX 4.3C

AMHS Plan for ROC in Jeddah and Bahrain					
	Task	**Timeframe**	**Assigned to**	**Champion**	**Status**
	AMHS Intra-regional Trunk Connections				
1	Establish Jeddah – Beirut IP Network	Jul 2015	Saudi Lebanon	IM MS	
2	Establish Bahrain – Beirut IP Network	Feb 2016	Bahrain Lebanon	YH MS	Already in progress
3	Establish Cairo – Beirut IP Network	Jun 2016	Egypt Lebanon	AF//MR MS	
4	Establish Bahrain – Jeddah IP Network	Mar 2016	Bahrain Saudi	IM YH	
5	Perform the Interoperability test between Jeddah and Beirut COM centers	July 2015	Saudi Lebanon	IB MS	DONE
6	Perform the Interoperability test between Bahrain and Beirut COM centers	Feb 2016	Bahrain Lebanon	MS YH	
7	Perform the Interoperability test between Cairo and Beirut COM centers	June 2016	Egypt Lebanon	AF/TZ/MR MS/EK	Depends on IP network availability
8	Perform the Interoperability test between Bahrain and Jeddah COM centers	Mar 2016	Bahrain Saudi	YH IM	
9	Perform the Pre-operational test between Jeddah and Beirut COM centers	July2015	Saudi Lebanon	IM MS	Done
10	Perform the Pre-operational test between Bahrain and Beirut COM centers	Feb 2016	Bahrain Lebanon	YH MS	
11	Perform the Pre-operational test between Cairo and Beirut COM centers	July 2016	Egypt Lebanon	AF/ /MR MS/EK	
12	Perform the Pre-operational test between Bahrain and Saudi COM centers	July 2016	Bahrain Saudi	YH IM	
13	Place the AMHS link into operation between Jeddah and Beirut COM centers, and updating the Routing tables	Jul 2015	Saudi Lebanon MID AMC	IM MS/EK MN	Done
14	Place the AMHS link into operation between Bahrain and Beirut COM centers , and updating the Routing tables	Mar 2016	Bahrain Lebanon MID AMC	YH MS/EK MN	
15	Place the AMHS link into operation between Cairo and Beirut COM centers, and updating the Routing tables	Aug 2016	Egypt Lebanon MID AMC	AF/TZ/MR MS/EK MN	
16	Evaluate the Trunks connections bandwidth and increase it if required between (Bahrain, Beirut, Cairo and Jeddah)	Jun 2016	Bahrain Beirut Cairo Jeddah	YH MS/EK AF/TZ IM	Depends on testing of digital data exchanged

	The AMHS Interconnection with EUR Region Depends on Nicosia and Athens				
17	Establish Cairo – Tunis IP Network	*March2016 July 2016*		AF/TZ/MR IB/MA	Both Egypt and Tunisia Ready Coordination in process to implement
18	Establish Nicosia – Beirut IP Network	*Awaiting reply from EUR*		MS/EK	Lebanon ready
19	Establish Nicosia – Jeddah IP Network	Dec 2016		IM	Saudi Arabia ready
20	Establish Bahrain – Nicosia IP Network	Dec 2016		YH	
21	Establish Cairo – Athens IP Network	Dec 2016		AF/TZ/MR	Egypt Ready Link is ready as same CIDIN link will be used
22	Perform the Interoperability test between Cairo and Tunis COM centers	*April 2016 August 2016*		AF/ /MR IB/MA	Both Egypt and Tunisia Ready Coordination in process to implement
23	Perform the pre operational test between Cairo and Tunis COM centers	*Q2 2016*		AF/ /MR IB/MA	Both Egypt and Tunisia Ready Coordination in process to implement
24	Place the AMHS link into operation between Cairo and Tunis COM centers, and updating the Routing tables	*May 2016*		AF/ /MR IB/MA	Both Egypt and Tunisia Ready Coordination in process to implement
25	Perform the Interoperability test between Athens and Cairo COM centers	Mar 2017		AF/TZ/MR IB/MA	Athens advised that their system will be installed by Dec. 2016
26	Perform the Interoperability test between Bahrain and Nicosia COM centers	Q1 2017		YH	
27	Perform the Interoperability test between Nicosia and Jeddah COM centers	Q1 2017		IM	
28	Perform the Interoperability test between Nicosia and Beirut COM centers	Q1 2017		MS/EK	Nicosia in tender process
29	Perform the Pre-operational test between Athens and Cairo COM centers	Mar 2017		AF/TZ/MR	Athens advised that their system will be installed by Dec 2016
30	Perform the Pre-operational test between Bahrain and Nicosia	Q1 2017		YH	

	COM centers				
31	Perform the Pre-operational test between Nicosia and Beirut COM centers	Q1 2017		MS/EK	
32	Perform the Pre-operational test between Nicosia and Jeddah COM centers	Q1 2017		IM	
33	Place the AMHS link into operation between Athens and Cairo COM centers, and updating the Routing tables	Q1 2017		MIDAMC AF/ /MR	same
34	Place the AMHS link into operation between Bahrain and Nicosia COM centers , and updating the Routing tables	Q1 2017		MID AMC YH	
35	Place the AMHS link into operation between Nicosia and Jeddah COM centers, and updating the Routing tables	Q1 2017		MID AMC IM	
36	Place the AMHS link into operation between Nicosia and Beirut COM centers, and updating the Routing tables	Q1 2017		MS/EK	
37	Evaluate the inter-region connections bandwidth and increase it if required	Q1 2017		MID AMC	
38	Transition of all regional AFTN/CIDIN Connections to AMHS	Q2 2017	All MID States		

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

APPENDIX 4.3D

ATS Extended Services Trial
File Transfer Body Part (FTBP) Testing Document

Author: ATS extended Services Trial Team (ASTT)
Date: 10/1/2016
Version: 0.1 (Initial Draft)

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References

[1] ICAO Annex 10 – Aeronautical Telecommunication; Vol.II, Communication Procedure

[2] ICAO doc 9880- Manual on Detailed Technical Specifications for the Aeronautical Telecommunication Network (ATN) using ISO/OSI Standards and Protocols, Part II – Ground-Ground Applications - Air Traffic Services Message Handling Services (ATSMHS), First Edition – 2010

[3] EUR Doc 020 – AMHS Manual

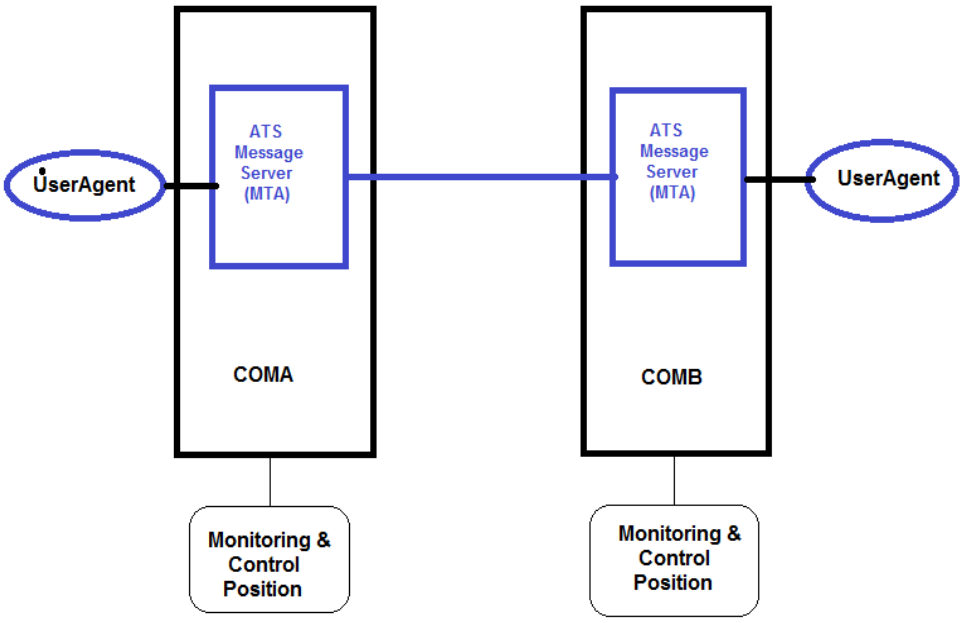
1. Introduction

The Message Handling service provided in the ATN is called the ATS Message Handling Service (ATSMHS). This service is specified using X.400 standards. There are two levels of ATSMHS service: Basic ATS Message Service and Extended ATS Message Service. Basic ATS Message Service provides a nominal capability equivalent from a user perspective to those provided by AFTN. And Extended ATS Message Service provides enhanced features such as supporting transfer of more complex message structures (body parts), use of the directory service, and support for security.

The purpose of this document is to define the functional tests for ATS Extended Service handling specially File Transfer body part (FTBP) in order to ensure the end-to-end capability of AMHS systems and network to exchange this type of messages. These tests are performed after the successful operation of AMHS basic services, through which the compliance of all systems to the AMHS technical specifications has been demonstrated and proved.

2. Test Environment

Both test systems should have operational AMHS link, and P1 connection setup. Two User Agents should be used to exchange traffic with File Transfer Body Part. The testing environment is as shown in the figure below:



The test can be performed in AMHS Network and unnecessary to have direct AMHS link between the two COM centers, the traffic can be exchanged via intermediary(ies) COM center(s), which should be involved in the test activities.

The User Agent address at COM A could be "COMAASTT", and at COM B "COMBASTT". The User Agent can be either P3 or P7 User Agent.

Network Analysis software can be used to monitor X.400 traffic and its effect on network Bandwidth. The software can be agreed on prior the test.

3. Test Procedure

Before the tests, the test partners should coordinate and document the type of body part used in IPMs submitted by their User Agents when submitting text messages, either as:

- IPMs containing a basic ia5-text body part, or
- IPMs containing an extended ia5-text body part, or
- IPMs containing a general-text body part with ISO646 repertoire.

3.1 Submission, Transfer and Delivery of a message including Binary file from UserAgent to UserAgent.

Test01	**Submission of Binary file**
Test Criteria	**The Test is successful if COMB receive the message with Binary file attached with text message from COMA**
Scenario Description	From the UA of COMA send a sequence of five ATS messages (IPMs) to the COMB addressing the COMBASTT. • Message 1 (Test011) shall have ATS-message-priority KK and binary file • Message 2 (Test012) shall have ATS-message-priority GG and binary file • Message 3 (Test013) shall have ATS-message-priority FF and binary file • Message 4 (Test014) shall have ATS-message-priority DD and binary file attached • Message 5 (Test015) shall have ATS-message-priority SS and binary file attached Each message shall have different ATS-filing-time and ATS-message-text. Verify the messages received by the remote UA. In particular, verify: • ATS-message-priority, • ATS-message-filing-time, • ATS-message-text. • The Binary file
Reference	**9880**

Test02	Submission of Binary file
Test Criteria	The Test is successful if COMA receive the message with Binary file attached with text message from COMB
Scenario Description	From the UA of COMB send a sequence of five ATS messages (IPMs) to the COMA addressing the COMAASTT. • Message 1 (Test021) shall have ATS-message-priority KK and binary file • Message 2 (Test022) shall have ATS-message-priority GG and binary file • Message 3 (Test023) shall have ATS-message-priority FF and binary file • Message 4 (Test024) shall have ATS-message-priority DD and binary file attached • Message 5 (Test025) shall have ATS-message-priority SS and binary file attached Each message shall have different ATS-filing-time and ATS-message-text. Verify the messages received by the remote UA. In particular, verify: • ATS-message-priority, • ATS-message-filing-time, • ATS-message-text. • The Binary file
Reference	9880

3.2 Submission, Transfer and Delivery of a message including Binary file from UserAgent to AFTN User

Test031	**Submission of Binary file to AFTN User**
Test Criteria	**The Test is successful if COMA receive Non Delivery report (NDR) from the Gateway of COMB**
Scenario Description	From the UA of COMB send an ATS messages (IPMs) with binary file attached to the COMA addressing an AFTN user like the control tower COMAZTZX. • Message 1 (Test031) shall have ATS-message-priority FF and binary file Verify the messages not received by the remote AFTN User and that the sender receive NDR
Reference	**9880**

Test032	**Submission of Binary file to AFTN User**
Test Criteria	**The Test is successful if COMB receive Non Delivery report (NDR) from the Gateway of COMA**
Scenario Description	From the UA of COMA send an ATS messages (IPMs) with binary file attached to the COMB addressing an AFTN user like the control tower COMBZTZX. • Message 1 (Test032) shall have ATS-message-priority FF and binary file Verify the messages not received by the remote AFTN User and that the sender receive NDR
Reference	**9880**

4. Test Summary

Use the Network Analysis software to analyze the traffic overhead occurred when sending binary files with the message. Also document the message size on system hard disks. Monitor any warning message or alarm during the tests.

Stress tests can be performed, by sending 20, 50 messages repeating test Test01 and Test02. Network and system response should be carefully monitored in order not affecting the life traffic.

5. ATS Extended Services Trial Team (ASTT)

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APPENDIX 4.3E

Terms of Reference of the MID OPMET Bulletin Management Group

(OPMET BMG)

1. Terms of Reference

a. Review the OPMET exchange schemes to the MID Region and develop proposals for their optimization taking into account the current trends in the global OPMET exchange;

b. Develop monitoring and management procedures related to the ROBEX exchange and other exchanges of OPMET information;

c. Keep up-to-date the regional guidance material related to OPMET exchange;

d. Develop capabilities to support the ICAO Meteorological Exchange Model (IWXXM);

e. Develop key performance indicators for OPMET and keep under review;

f. Liaise with similar groups in the adjacent ICAO Regions in order to ensure harmonized and seamless OPMET exchange; and

g. The group will report to the MET Sub-Group of MIDANPIRG.

2. Work Programme

The work to be addressed by the MID OPMET BMG includes:

a. Examine the existing requirements and any new requirements for the OPMET exchange in MID region and to assess the feasibility of satisfying these requirements, taking into account the availability of the data;

b. Review the ROBEX scheme and other OPMET exchange schemes and prepare proposal for updating and optimizing of the schemes;

c. Review and update the procedures for interregional exchange and for transmission of the regional OPMET data to SADIS;

d. Review and amend the regional guidance materials on the OPMET exchange and include procedures for the exchange of all required OPMET message types: SA, SP, FC, FT WS, WC, WV, FK, FV, UA;

e. Develop procedures for monitoring and management of the OPMET information, based on similar procedures used in the EUR and APAC Regions; and

f. Support ~~MARIE PT or any subsequent governance group appointed by ICAO~~ the Information Management Panel and MET Panel Working Group on Meteorological Information Exchange (WG-MIE) in Regional implementation of IWXXM within

MID. The initial implementation emphasis will be placed on States hosting ROCs/RODBs. Progress report to be provided to MID MET SG;

g. Use results from monitoring to measure OPMET (METAR and TAF) availability in MID Region against the required data listed in ~~FASID Table MET 1A~~ Table MET II-2, Aerodrome Meteorological Offices, of the MID electronic Air Navigation Plan to support key performance index for OPMET component of ~~BO-MET~~ B0-AMET of the new implementation methodology called Aviation System Block Upgrade (ASBU) and keep under review; and

h. Provide regular progress reports to MET SG meetings.

3. Composition

a. The OPMET/BMG is composed of Bahrain, Egypt, Iran, Kuwait (co-rapporteur), Libya, Oman, Qatar, Saudi Arabia (co-rapporteur) and United Arab Emirates; and

b. Experts from the EUR BMG, the VAAC Toulouse, APAC OPMET/M Task force and IATA are invited to participate in the work of the MID OPMET BMG.

4. Working Arrangements

It is expected that most of the work of the group will be conducted via correspondence by fax, e-mail or telephone. The group should establish a network of OPMET focal points at all MID COM/MET Centres dealing with OPMET data. When necessary, the Rapporteur, in coordination with the Regional Office, Cairo, will call teleconferences or meetings to discuss important issues.

APPENDIX 4.5A

STATUS OF QUALITY MANAGEMENT SYSTEM IMPLEMENTATION IN MID REGION

State	Status	Implementation/Certification Date	Planned Implementation Date
MID Region			
Bahrain	QMS implemented	2008	
Egypt	QMS implemented	23 May 2012	
Iran, Islamic Republic of	QMS implemented	**Oct 2015**	
Iraq			Implementation plan not received
Jordan	QMS implemented	2 Apr 2014	
Kuwait	QMS implemented	23 Aug 2013	
Lebanon			Implementation plan not received
Libya			Implementation plan not received
Oman	New organizational structure, expects to make progress – possibly 80% completed by the end of 2014		TBD
Qatar	QMS implemented	Dec 2011	
Saudi Arabia	QMS implemented	Aug 2014	
Sudan	QMS implemented	5 Jun 2014	
Syrian Arab Republic			Implementation plan not received
United Arab Emirates	QMS implemented	19 Dec 2012	
Yemen			Implementation plan not received

APPENDIX 4.6A

MID AIR NAVIGATION PLAN

VOLUME I

MID AIR NAVIGATION PLAN

VOLUME I

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MID ANP, VOLUME I
PART 0 – INTRODUCTION

1. GENERAL

1.1 On ***18 June 2014***, the ICAO Council decided that the regional air navigation plans (ANPs) should be published in three volumes.

1.2 ANP Volume I contains stable plan elements whose amendment necessitates approval by the Council such as the assignment of responsibilities to States for the provision of aerodrome and air navigation facilities and services in accordance with Article 28 of the *Convention on International Civil Aviation* (Doc 7300); and the current to medium term mandatory regional requirements related to aerodrome and air navigation facilities and services to be implemented by States in accordance with regional air navigation agreements and requirements specific to the region which are not covered in the ICAO Standards and Recommended Practices (SARPs) and Procedures for Air Navigation Services (PANS). The material to be included in Volume I should minimise the requirement for frequent amendment. The following is a non-exhaustive list of such elements:

- Flight Information Regions (FIR) boundaries (Table and Charts);
- Search and Rescue Regions (SRR) boundaries (Table and Charts);
- Volcanic Ash Advisory Centres (VAAC);
- Tropical Cyclone Advisory Centres (TCAC); and
- Volcano Observatories (VO).

1.3 ANP Volume II contains dynamic plan elements material related to the assignment of responsibilities to States for the provision of aerodrome and air navigation facilities and services and the current to medium term mandatory regional requirements related to aerodrome and air navigation facilities and services to be implemented by States in accordance with regional air navigation agreements involving the relevant PIRG. The amendment of these elements does not require approval by the Council. The following is a non-exhaustive list of such elements:

- Major traffic flows;
- ATS route network;
- Meteorological Watch Offices (MWO);
- Secondary Surveillance Radar (SSR) codes;
- Five-letter name-codes; and
- VOLMET Broadcasts.

1.4 ANP Volume III contains dynamic/flexible plan elements providing implementation planning guidance for air navigation systems and their modernization taking into consideration emerging programmes such as the ICAO Aviation System Block Upgrades (ASBUs) and associated technology roadmaps described in the *Global Air Navigation Plan* (GANP) (Doc 9750). The ANP Volume III would also include appropriate additional guidance, particularly with regard to implementation, to complement the material contained in the ANP Volumes I and II. The amendment of Volume III would not require approval by the Council (approval of Part II is under the responsibility of the relevant PIRG).

Note 1: The ANP does not list all facilities in the region(s) but only those required for international civil aviation operations. Documents from the Integrated Aeronautical Information Package and other States publications should be consulted for information on additional facilities and for operational information in general.

Note 2: The general structure of the regional plans for the parts which concern an air navigation field in Volumes I and II consists of an "Introduction", "General Regional Requirements" and "Specific Regional Requirements". Only Tables shown under "General Regional Requirements" are harmonized for all Regions. Should a Region require a Table for a specific field, this should be reflected under "Specific Regional Requirements" of the subject concerned. The naming convention for such tables consists of the technical field concerned (AOP, CNS, ATM, MET, SAR and AIM), the ANP Volume number

(I or II), the Region (APAC, AFI, CAR/SAM, EUR, MID, NAM and NAT) and the consecutive number of the table. Examples are as follows: Table ATM I-EUR-1, Table CNS II-MID-1 or Table MET I-AFI-2.

1.5 Guidance material on the detail of programmes or concepts should be contained in supplementary material referenced appropriately or adopted as MID Documents.

2. RELATIONSHIP BETWEEN THE GLOBAL AND REGIONAL AIR NAVIGATION PLANS

2.1 The ANPs represent the bridge between, on one side, the global provisions in the ICAO SARPs and the GANP, and on the other side, the States' air navigation plans and implementation status.

2.2 The GANP represents a rolling, 15-year strategic methodology which leverages existing technologies and anticipates future developments based on State/industry-agreed operational objectives. The GANP is an overarching framework that includes key aviation policy principles to assist ICAO Regions, sub-regions and States with the preparation of their regional and State air navigation plans and to support the establishment of air navigation priorities.

3. OBJECTIVE AND PURPOSE OF REGIONAL AIR NAVIGATION PLANS

3.1 The ANPs provide for the planning and implementation of air navigation systems within a specified area, in accordance with the agreed global and regional planning framework. They are developed to meet those needs of specific areas not covered in the worldwide provisions. The development and maintenance of the ANPs is undertaken by ICAO PIRGs with the assistance of the ICAO Secretariat.

3.2 The ANPs are used as a repository Document for the assignment of responsibilities to States for the provision of air navigation facilities and services within a specified area in accordance with Article 28 of the *Convention on International Civil Aviation* (Doc 7300).

3.3 The ANPs contain requirements related to the facilities and services to be implemented by States in accordance with regional air navigation agreements. The procedural parts of ANPs are published in the *ICAO Regional Supplementary Procedures* (SUPPs) (Doc 7030).

3.4 The ANPs contain provisions that States can follow in the planning of aerodrome and air navigation facilities and services activities, with the assurance that facilities and services furnished in accordance with the plan will form with those of other States an integrated system adequate for the foreseeable future.

3.5 The ANPs may serve as a legal basis for air navigation services charges which are levied for services provided or made available to users, in accordance with ICAO's *Policies on Charges for Airports and Air Navigation Services* (Doc 9082) and *ICAO Manual on Air Navigation Services Economics* (Doc 9161).

3.6 The ANPs support the performance-based approach to planning adopted by ICAO to measure the efforts made by States in implementing the agreed requirements.

4. MANAGEMENT AND AMENDMENT OF REGIONAL AIR NAVIGATION PLANS

4.1 The elements of the existing planning system and the planning principles, operational requirements and planning criteria as developed for the MID Region are kept under constant review by the MIDANPIRG in accordance with its schedule of meetings, in consultation with provider and user States and with the assistance of the ICAO MID Regional Office.

4.2 The detailed amendment procedure of the three ANP Volumes is described in paragraph 5 below.

5. PROCEDURE FOR THE AMENDMENT OF REGIONAL AIR NAVIGATION PLANS

5.1 The procedure for the amendment of regional air navigation plans in three Volumes as approved by the Council is shown in **Appendix A**.

6. ABBREVIATIONS

6.1 The abbreviations used in this document are contained in the *Procedures for Air Navigation Services — ICAO Abbreviations and Codes (PANS-ABC)* (Doc 8400), with the exception of those used in the explanations of any tables appearing herein, which also give their meaning.

7. ESTABLISHMENT AND PROVISION OF A MULTINATIONAL ICAO AIR NAVIGATION FACILITY/SERVICE

7.1 The operation of multinational air navigation services is well established within the MID Region. The ICAO *Manual on Air Navigation Services Economics* (Doc 9161) details the ICAO policies on charges for air navigation services and provides additional information on the various models adopted globally. The introduction of multinational air navigation services does not dilute the principle that a State has the responsibility of overseeing the provision of air navigation services and that it shall maintain that responsibility within its sovereign airspace as well as within the airspace over the high seas for which it has accepted the responsibility for the provision of services. Where there is no intention to change or modify the FIR boundaries nor the facilities and services currently listed in the ANP there is not a requirement to amend the ANP. However, should changes to the FIR boundaries or to the facilities and services provided be required, such changes are likely to be subject to the ANP amendment procedure and should therefore be examined on a case-by-case basis. Advice on this issue can be obtained from the ICAO Regional Office(s). Any multinational arrangements for the provision of air navigation services should be registered with ICAO (Article 83 of the Convention (Doc 7300) and *Rules for Registration with ICAO of Aeronautical Agreements and Arrangements* (Doc 6685)).

APPENDIX A - PROCEDURE FOR THE AMENDMENT OF REGIONAL AIR NAVIGATION PLANS

*(Approved by Council on **18 June 2014**)*

1. Introduction

1.1. The procedure outlined below has been evolved to provide a means of maintaining the regional air navigation plans using an ANP web based platform.

2. General criteria

2.1. The Assembly has resolved that regional plans should be revised when it becomes apparent that they are no longer consistent with current and foreseen requirements of international civil aviation and that, when the nature of a required change permits, the associated amendment of the regional plan should be undertaken by correspondence between the Organization and the States and international organizations concerned.

2.2. When a State cannot immediately implement a particular part or a specific detail of a regional plan although it intends to do so, when practicable, this in itself should not lead to the State proposing an amendment to the plan.

2.3. The general structure of the regional plans for the parts which concern an air navigation field in Volumes I and II consists of an “Introduction”, “General Regional Requirements” and “Specific Regional Requirements”. As the section “General Regional Requirements” is harmonized for all regions, an amendment of the provisions (text) in “General Regional Requirements” will lead to amendment of Volumes I and II of the regional plans of all regions.

2.4. The amendment process of Volume III is under the responsibility of the relevant Planning and Implementation Regional Group (PIRG). The Parts 0 (Introduction) and I (General Planning Aspects) of Volume III are harmonized for all regions and the amendment of these parts should be made following inter-regional coordination.

3. User rights

3.1. Access to the ANP web based platform to develop and submit amendment proposals to the regional plan and to comment on an officially issued amendment proposal should be provided through controlled access by the State’s or international organization’s designated Focal Points. The State or international organization should officially inform their respective Regional Office of the registration of their designated Focal Points.

4. States and international organizations to be consulted

4.1. The Secretary General, through the relevant Regional Office, will determine the States and international organizations to be consulted on the amendment proposal. These will generally only include the provider and user States and international organizations that have a direct and obvious interest in the amendment in question.

PART A — AIR NAVIGATION PLANS, VOLUME I

5. Procedure for amendment of Volume I

5.1. If, in the light of the above general criteria, any State (or group of States) wishes to effect a change in the approved air navigation plan for that region, it should propose to the Secretary General, through the Regional Office accredited to that State, an appropriate amendment to the plan, adequately documented; the proposal should include the facts that lead the State (or group of States) to the conclusion that the amendment is necessary. Such amendments may include additions, modifications or deletions. (This procedure does not preclude a State having previous consultation with other States before submitting an amendment proposal to the Regional Office.) This proposed amendment should be submitted via the web based tool and/or by correspondence to the Regional Office.

5.2. Upon studying the proposal, if the Secretary General considers that the proposed amendment requires further coordination through the relevant Planning and Implementation Regional Group (PIRG), the proposal will be presented, adequately documented, to the PIRG. The views of the PIRG will be coordinated with the originating State and the proposed amendment will be uploaded via the ANP web based platform for processing proposals for amendment for approval by the Council.

5.3. If the proposal concerns an amendment of the provisions (text) in "General Regional Requirements", the Secretary General will coordinate and circulate, through all Regional Offices, an amendment of all the regional plans.

5.4. If the Secretary General considers that the proposed amendment conflicts with established ICAO policy, or that it raises questions which the Secretary General considers should be brought to the attention of the Air Navigation Commission, the proposal will be presented, adequately documented, to the Commission. In such cases, the Commission will decide the action to be taken on the proposal.

5.5. The Secretary General, through the Regional Office, will circulate the proposal, adequately documented, with a request for comments to all provider and user States of the region considered affected as well as to user States outside the region and international organizations which may be invited to attend suitable ICAO meetings and which may be concerned with the proposal. The States and international organizations concerned should either send their comments/agreement/objection via the ANP web based platform and/or by correspondence to the Regional Office. Any comment or objection should be adequately supported by reasons for the comment or objection.

5.6. If, in reply to the Secretary General's inquiry, no objection is raised to the proposal by a specified date, the proposal should be submitted to the President of the Council, who is authorized to approve the amendment on behalf of the Council. The approved amendment should be incorporated into Volume I of the regional plan.

5.7. If, in reply to the Secretary General's inquiry, any objection is raised, and if objection remains after further consultation, the matter will be documented for discussion by the respective planning and implementation regional group (PIRG) and, ultimately for formal consideration by the Air Navigation Commission, if it remains unresolved. If the Commission concludes that the amendment is acceptable in its original or other form, it will present appropriate recommendations to the Council.

5.8. Proposals for the amendment of Volume I of the regional plan submitted by international organizations directly concerned with the operation of aircraft, which may be invited to attend suitable ICAO meetings and which attended the meeting(s) where the relevant regional plan is managed, will be dealt with in the same manner as those received from States, except that, before circulating a proposal to States and selected international organizations, the Secretary General will ascertain whether it has adequate support from the State or States whose facilities will be affected. If such support is not forthcoming, the proposal will be presented to the Commission, and the Commission will decide on the action to be taken on the proposal.

5.9. Proposals for the amendment of Volume I of the regional plan may also be initiated by the Secretary General, through the Regional Office accredited to that State, provided that the State or States whose facilities will be affected have expressed their concurrence with the proposal.

5.10. Amendments to Volume I of the regional plan which have been approved in accordance with the above procedure will be published in the ANP web based platform at convenient intervals.

PART B — AIR NAVIGATION PLANS, VOLUME II

6. Procedure for amendment of Volume II

6.1. Amendments of Volume II of the regional plan should be effected on the basis of an adequately documented proposal submitted by a State (or a group of States) or the relevant PIRG to the Secretary General, through the Regional Office accredited to that State. The proposal should include the facts that lead to the conclusion that the amendment is necessary. Such amendments may include additions, modifications or deletions to Volume II of the regional plan. (This procedure does not preclude a State having previous consultation with other States before submitting an amendment proposal to the Regional Office.) This proposed amendment should be submitted via the ANP web based platform and/or by correspondence to the Regional Office.

6.2. If the proposal concerns an amendment of the provisions (text) in "General Regional Requirements", the Secretary General will coordinate and circulate, through all Regional Offices, an amendment of all the regional plans.

6.3. The ICAO Regional Office will circulate the proposal, adequately documented, with a request for comments to all provider and user States of the region considered affected as well as to user States outside the region and international organizations which may be invited to attend suitable ICAO meetings and which may be concerned with the proposal. The States and international organizations concerned should either send their comments/agreement/objection via the ANP web based platform and/or by correspondence to the Regional Office. Any comment or objection should be adequately supported by reasons for the comment or objection.

6.4. If, in reply to the ICAO Regional Office's inquiry, no objection is raised to the proposal by a specified date, it will be deemed that a regional agreement (involving the relevant PIRG) on the subject has been reached and the proposed amendment should be incorporated into Volume II of the regional plan.

6.5. If, in reply to the ICAO Regional Office's inquiry, any objection is raised, and if objection remains after further consultation, the matter will be documented for discussion by the respective planning and implementation regional group (PIRG) and, ultimately for formal consideration by the Air Navigation Commission, if it remains unresolved. If the Commission concludes that the amendment is acceptable in its original or other form, it will present appropriate recommendations to the Council.

6.6. Proposals for the amendment of Volume II of the regional plan submitted by international organizations directly concerned with the operation of aircraft, which may be invited to attend suitable ICAO meetings, where the relevant regional plan is managed, will be dealt with in the same manner as those received from States, except that, before circulating a proposal to States and selected international organizations, the Secretary General will ascertain whether the proposal has adequate support from the State or States whose facilities or services will be affected. If such support is not forthcoming, the proposal will not be pursued.

6.7. Proposals for the amendment of Volume II of the regional plan may also be initiated by the Secretary General, through the Regional Office accredited to that State, provided that the State or States whose facilities or services will be affected have expressed their concurrence with the proposal.

6.8. Amendments to Volume II of the regional plan which have been approved in accordance with the above procedure will be published in the ANP web based platform at convenient intervals.

PART C — AIR NAVIGATION PLANS, VOLUME III

7. Procedure for amendment of Volume III

7.1. Amendments of Volume III of the regional plan are under the responsibility of the relevant Planning and Implementation Regional Group (PIRG) and not subject to a formal application of the procedure for amendment of the ANP described in Parts A and B above. However, the amendment of the provisions of Part 0 - "Introduction" and Part I - "General Planning Aspects" needs special coordination, as specified in 7.4 below. Since these two Parts are harmonized for all regions, an amendment of the provisions contained there-in will lead to amendment of Parts 0 and I of Volume III of the regional plans of all regions.

7.2. Amendments of Volume III of the regional plan should be effected on the basis of an adequately documented proposal submitted to the ICAO Regional Office concerned by:

- a State (or a group of States); or
- the relevant Planning and Implementation Regional Group (PIRG) of the region(s); or
- the ICAO Secretariat; or
- international organisations directly concerned with the operation of aircraft, which may be invited to attend suitable ICAO meetings and/or which attended the meeting(s) where the relevant Volume III amendments were agreed.

7.3. This procedure does not preclude a State (or group of States) having previous consultation with other States before submitting an amendment proposal to the Regional Office. Such amendments may include additions, modifications or deletions to Volume III of the regional plan. In addition, the facts that led to the conclusion that the amendment should be included.

7.4. If the proposal concerns an amendment of the provisions in Part 0 - "Introduction" or Part I - "General Planning Aspects", the ICAO Regional Office concerned will submit the proposal to ICAO Headquarters (Air Navigation Bureau) for coordination with all ICAO Regional Offices. The views of the ICAO Regional Offices will be taken into consideration in the consolidation/approval of the amendment by the ANB. The approved amendment will be published in Volume III of all regional plans at convenient intervals.

7.5. The mechanism for the amendment of Part II of Volume III of the regional plan should be developed, agreed by the relevant PIRG and reflected in the corresponding PIRG Handbook.

MID ANP, VOLUME I

PART V – METEOROLOGY (MET)

1. INTRODUCTION

1.1 This part of the MID ANP constitutes the agreed regional requirements considered to be the minimum necessary for effective planning and implementation of aeronautical meteorology (MET) facilities and services in the MID Region and complements the provisions of the ICAO SARPs and PANS related to MET. It contains stable plan elements related to the assignment of responsibilities to States for the provision of MET facilities and services within the ICAO MID Region in accordance with Article 28 of the *Convention on International Civil Aviation* (Doc 7300) and mandatory requirements related to the MET facilities and services to be implemented by States in accordance with regional air navigation agreements.

1.2 The dynamic plan element related to the assignment of responsibilities to States for the provision of MET facilities and services and the mandatory requirements based on regional air navigation agreements related to MET are contained in the MID ANP Volume II, Part V - MET.

1.3 The MID ANP Volume III contains dynamic/flexible plan elements related to the implementation of air navigation systems and their modernization in line with the ICAO Aviation System Block Upgrades (ASBUs) methodology and associated technology roadmaps described in the Global Air Navigation Plan. The ASBU modules are aimed at increasing capacity and improving efficiency of the aviation system whilst maintaining or enhancing safety level, and achieving the necessary harmonization and interoperability at regional and global level. This includes the regionally agreed ASBU modules applicable to the specified ICAO region/sub-region and associated elements/enablers necessary for the monitoring of the status of implementation of these ASBU modules.

Standards and Recommended Practices and Procedures for Air Navigation Services

1.4 The SARPs and PANS and related guidance material applicable to the provision of MET are contained in:

a) Annex 3 — *Meteorological Service for International Air Navigation*;

b) *Regional Supplementary Procedures* (Doc 7030)*;*

c) *Handbook on the IAVW* (Doc 9766);

d) *Manual on Volcanic Ash, Radioactive Material and Toxic Chemical Clouds* (Doc 9691); and

e) *Manual of Aeronautical Meteorological Practice* (Doc 8896).

2. GENERAL REGIONAL REQUIREMENTS

World area forecast system (WAFS) and meteorological offices

2.1 In the MID Region, WAFC London has been designated as the centre for the operation of the aeronautical fixed service satellite distribution system / WAFS Internet File Service (SADIS and/or WIFS) and the Internet-based Secure SADIS FTP service. The status of implementation of SADIS/WIFS by States in the MID Region is detailed in Volume III.

2.2 In the MID Region, WAFS products in digital form should be disseminated by WAFC London using the SADIS 2G satellite broadcast and the Secure SADIS FTP service and/or WIFS.

Volcanic Ash

2.3 Volcanic ash advisory centres (VAACs) Toulouse has been designated to prepare volcanic ash advisory information for the MID Region, as indicated below. The status of implementation of volcanic ash advisory information is detailed in Volume III.

2.4 Selected State volcano observatories have been designated for notification of significant pre-eruption volcanic activity, a volcanic eruption and/or volcanic ash in the atmosphere for the MID Region to their corresponding ACC/FIC, MWO and VAAC, as indicated at **Table MET I-1**. The status of implementation of volcano observatory notice for aviation (VONA) is detailed in Volume III.

Note – States volcano observatories and associated Table MET I-1 are not applicable for the MID Region.

Tropical Cyclone

2.5 Tropical cyclone advisory centre (TCAC) New Delhi has been designated to prepare tropical cyclone advisory information for the MID Region, as indicated below. The status of implementation of tropical cyclone advisory information is detailed in Volume III.

3. SPECIFIC REGIONAL REQUIREMENTS

None.

TABLE MET I-1 - STATE VOLCANO OBSERVATORIES

Not Applicable in the MID Region

APPENDIX 4.6B

MID AIR NAVIGATION PLAN

VOLUME II

MID AIR NAVIGATION PLAN

VOLUME II

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MID ANP, VOLUME II

PART 0 – INTRODUCTION

1. GENERAL

1.1 The background to the publication of ANPs in three volumes is explained in the Introduction in Volume I. The procedure for amendment of Volume II is also described in Volume I.

1.2 Volume II contains dynamic plan elements related to:

a) the assignment of responsibilities to States for the provision of aerodrome and air navigation facilities and services; and

b) the mandatory requirements related to aerodrome and air navigation facilities and services to be implemented by States in accordance with regional air navigation agreements.

1.3 Volume II does not list all facilities in the region but only those required for international civil aviation operations in accordance with regional air navigation agreements. A regional air navigation agreement indicates a commitment on the part of the State(s) concerned to implement the requirement(s) specified. Documents from the Integrated Aeronautical Information Package and other publications should be consulted for information on additional facilities and for operational information in general. Detailed guidance material or concepts, complementary to the material in Volumes I, II and III are contained in documents that are referenced as MID Documents.

2. MANAGEMENT OF REGIONAL AIR NAVIGATION PLANS

2.1 The elements in Volume II are reviewed by the MIDANPIRG in accordance with its schedule of meetings, in consultation with provider and user States, and with the assistance of the ICAO MID Regional Office.

2.2 The information on States' facilities and services included in Volume II, should be updated following the process of regional air navigation agreements.

2.3 The development and maintenance of region-specific documents that provide detailed guidance material or concepts that are complementary to the material in Volumes I, II and III is the responsibility of the MIDANPIRG.

PART V – METEOROLOGY (MET)

1. INTRODUCTION

1.1 This part of the MID ANP, Volume II, complements the provisions in the ICAO SARPs and PANS related to aeronautical meteorology (MET). It contains dynamic plan elements related to the assignment of responsibilities to States for the provision of MET facilities and services within a specified area in accordance with Article 28 of the *Convention on International Civil Aviation* (Doc 7300); and mandatory requirements related to the MET facilities and services to be implemented by States in accordance with regional air navigation agreements. Such agreement indicates a commitment on the part of the States concerned to implement the requirements specified.

2. GENERAL REGIONAL REQUIREMENTS

Meteorological offices

2.1 In the MID Region, meteorological watch offices (MWO) have been designated to maintain continuous watch on meteorological conditions affecting flight operations within their area(s) of responsibility, as indicated at **Table MET II-1**.

Meteorological observations and reports

2.2 In the MID Region, routine observations, issued as a METAR, should be made throughout the 24 hours of each day at intervals of one hour or, for RS and AS designated aerodromes[1], at intervals of one half-hour at aerodromes as indicated in **Table MET II-2**. For aerodromes included on the VHF VOLMET broadcast as indicated in **Table MET II-3**, routine observations, issued as METAR, should be made throughout the 24 hours of each day.

2.3 At aerodromes that are not operational throughout 24 hours, METAR should be issued at least 3 hours prior to the aerodrome resuming operations in the MID Region.

Forecasts

2.4 In the MID Region, an aerodrome forecast, issued as a TAF, should be for the aerodromes indicated in **Table MET II-2**.

2.5 In the MID Region, the period of validity of a routine TAF should be of 9-, 24-, or 30-hours to meet the requirements indicated in **Table MET II-2**.

2.6 In the MID Region, the forecast maximum and minimum temperatures expected to occur during the period of validity, together with their corresponding day and time of occurrence, should be included in TAF at aerodromes indicated in **Table MET II-2**.

2.7 In the MID Region, landing forecasts (prepared in the form of a trend forecast) should be provided at aerodromes indicated in **Table MET II-2**.

[1] Refer to Table AOP II-1

Requirements for and use of communications

2.8 Operational meteorological information prepared as METAR, SPECI and TAF for aerodromes indicated in **Table MET II-2**, and SIGMET messages prepared for flight information regions or control areas indicated in **Table MET II-1**, should be disseminated to the international OPMET databanks designated for the MID Region (namely Jeddah and Bahrain (backup) Regional OPMET Centres) and to the centre designated for the operation of the aeronautical fixed service satellite distribution system (SADIS) and the Internet-based service (Secure SADIS FTP) and/or WIFS in the MID Region.

2.9 SIGMET messages should be disseminated to other meteorological offices in the MID Region.

2.10 Special air-reports that do not warrant the issuance of a SIGMET should be disseminated to other meteorological offices in the MID Region.

2.11 In the MID Region, meteorological information for use by aircraft in flight should be supplied through VOLMET broadcasts.

2.12 In the MID Region, the aerodromes for which METAR and SPECI are to be included in VOLMET broadcasts, the sequence in which they are to be transmitted and the broadcast time, is indicated in **Table MET II-3**.

3. SPECIFIC REGIONAL REQUIREMENTS

3.1 In the MID Region, operational meteorological information during the Pilgrimage Season should be issued as indicated in **Table II-MID-1**.

TABLE MET II-1 - METEOROLOGICAL WATCH OFFICES

EXPLANATION OF THE TABLE

Column

1 Name of the State where meteorological service is required

2 Name of the flight information region (FIR) or control area (CTA) where meteorological service is required

Note: The name is extracted from the ICAO Location Indicators (Doc 7910) updated quarterly. If a State wishes to change the name appearing in Doc 7910 and this table, ICAO should be notified officially.

3 ICAO location indicator of the FIR or CTA

4 Name of the meteorological watch office (MWO) responsible for the provision of meteorological service for the FIR or CTA

Note: The name is extracted from the ICAO Location Indicators (Doc 7910) updated quarterly. If a State wishes to change the name appearing in Doc 7910 and this table, ICAO should be notified officially.

5 ICAO location indicator of the responsible MWO

6 Requirement for SIGMET information (excluding for volcanic ash and for tropical cyclones) to be provided by the MWO for the FIR or CTA concerned, where:

Y – Yes, required
N – No, not required

7 Requirement for SIGMET information for volcanic ash to be provided by the MWO for the FIR or CTA concerned, where:

Y – Yes, required
N – No, not required

8 Requirement for SIGMET information for tropical cyclone to be provided by the MWO for the FIR or CTA concerned, where:

Y – Yes, required
N – No, not required

9 Requirement for AIRMET information to be provided by the MWO for the FIR or CTA concerned, where

Y – Yes, required
N – No, not required

State	FIR or CTA Where Meteorological Service is Required		Responsible Meteorological Watch Office		Meteorological Service To Be Provided			
	Name	ICAO Location Indicator	Name	ICAO Location Indicator	SIGMET (WS)	SIGMET (WV)	SIGMET (WC)	AIRMET (WA)
1	2	3	4	5	6	7	8	9
BAHRAIN	BAHRAIN FIR	OBBB	BAHRAIN INTL	OBBI	Y	Y	Y	
EGYPT	CAIRO FIR	HECC	CAIRO INTL	HECA	Y	Y		Y
IRAN (ISLAMIC REPUBLIC OF)	TEHRAN FIR	OIIX	TEHRAN/ MEHRABAD INTL	OIII	Y	Y	Y	
IRAQ	BAGHDAD FIR	ORBB	BAGHDAD INTL	ORBI	Y	Y		
JORDAN	AMMAN FIR	OJAC	AMMAN/QUEEN ALIA	OJAI	Y	Y		
KUWAIT	KUWAIT FIR	OKAC	KUWAIT INTL	OKBK	Y	Y	Y	
LEBANON	BEIRUT FIR	OLBB	BEIRUT/BEIRUT INTL	OLBA	Y	Y		
LIBYA	TRIPOLI FIR	HLLL*	TRIPOLI/TRIPOLI INTL	HLLT	Y	Y		
OMAN	MUSCAT FIR	OOMM	MUSCAT/MUSCAT INTL	OOMS	Y	Y	Y	
SAUDI ARABIA	JEDDAH FIR	OEJD	JEDDAH/KING ABDULAZIZ INTL	OEJN	Y	Y	Y	
SUDAN	KHARTOUM FIR	HSSS	KHARTOUM	HSSS	Y	Y		
SYRAIN ARAB REPUBLIC	DAMASCUS FIR	OSDI	DAMASCUS INTL	OSDI	Y	Y		
UNITED ARAB EMIRATES	EMIRATES FIR	OMAE	ABU DHABI INTL	OMAA	Y	Y	Y	
YEMEN	SANAA’ FIR	OYSN	SANAA’ INTL	OYSN	Y	Y	Y	

TABLE MET II-2 - AERODROME METEOROLOGICAL OFFICES

EXPLANATION OF THE TABLE

Column

1 Name of the State where meteorological service is required

2 Name of the AOP aerodrome where meteorological service is required

Note: The name is extracted from the ICAO Location Indicators (Doc 7910) updated quarterly. If a State wishes to change the name appearing in Doc 7910 and this table, ICAO should be notified officially.

3 ICAO location indicator of the AOP aerodrome

4 Designation of AOP aerodrome:

RG - international general aviation, regular use
RS - international scheduled air transport, regular use
RNS - international non-scheduled air transport, regular use
AS - international scheduled air transport, alternate use
ANS - international non-scheduled air transport, alternate use

5 Name of the aerodrome meteorological office responsible for the provision of meteorological service

Note: The name is extracted from the ICAO Location Indicators (Doc 7910) updated quarterly. If a State wishes to change the name appearing in Doc 7910 and this table, ICAO should be notified officially.

6 ICAO location indicator of the responsible aerodrome meteorological office

7 Requirement for METAR/SPECI from the aerodrome concerned, where:

Y – Yes, required
N – No, not required

8 Requirement for information on the state of the runway provided by the appropriate airport authority to be included as supplementary information in METAR/SPECI from the aerodrome concerned, where:

Y – Yes, required
N – No, not required

9 Requirement for trend forecast to be appended to METAR/SPECI from the aerodrome concerned, where

Y – Yes, required
N – No, not required

10 Requirement for TAF from the aerodrome concerned, where

C - Requirement for 9-hour validity aerodrome forecasts in TAF code (9H)
T - Requirement for 18/24-hour validity aerodrome forecasts in TAF code (18/24H)
X - Requirement for 30-hour validity aerodrome forecasts in TAF code (30H)
N – No, not required

11 Requirement for maximum and minimum temperature (expected to occur during the period of validity of the TAF) to be included in TAF from the aerodrome concerned, where:

Y – Yes, required
N – No, not required

12 Availability of METAR/SPECI and TAF from the aerodrome concerned, where:

F – Full availability : OPMET information as listed issued for the aerodrome all through the 24-hour period

P – Partial availability: OPMET information as listed not issued for the aerodrome for the entire 24-hour period

State	AOP Aerodrome where meteorological service is to be provided			Responsible aerodrome meteorological office		Observations and forecasts to be provided					METAR/SPECI and TAF availability
	Name	ICAO Location Indicator	Use	Name	ICAO Location Indicator	METAR/SPECI	State of the runway	Trend forecast	TAF	Temperature Tx/Tn	
1	2	3	4	5	6	7	8	9	10	11	12
BAHRAIN	BAHRAIN INTL	OBBI	RS	BAHRAIN INT'L	OBBI	Y	N	Y	X	N	F
EGYPT	ALEXANDRIA/BORG EL-ARAB INTL	HEBA	RS	CAIRO INTL	HECA	Y		Y	X		F
	ASWAN INTL	HESN	RS	CAIRO INTL	HECA	Y		Y	X		F
	CAIRO INTL	HECA	RS	CAIRO INTL	HECA	Y		Y	X		F
	HURGHADA INTL	HEGN	RS	CAIRO INTL	HECA	Y		Y	X		F
	LUXOR INTL	HELX	RS	CAIRO INTL	HECA	Y		Y	X		F
	MARSA ALAM INTL	HEMA	RS	CAIRO INTL	HECA	Y		Y	X		F
	SHARM EL SHEIKH INTL	HESH	RS	CAIRO INTL	HECA	Y		Y	X		F
IRAN (ISLAMIC REPUBLIC OF)	BANDAR ABBASS INTL	OIKB	RS	TEHRAN/ MEHRABAD INTL	OIII	Y			T		F
	ESFAHAN / SHAHID BEHESHTI INTL	OIFM	RS	TEHRAN/ MEHRABAD INTL	OIII	Y			X		F
	MASHHAD/ SHAHID HASHEMI NEJAD INTL	OIMM	RS	TEHRAN/ MEHRABAD INTL	OIII	Y			T		F
	SHIRAZ/ SHAHID DASTGHAIB INTL	OISS	RS	SHIRAZ/ SHAHID DASTGHAIB INTL	OISS	Y		Y	X		F
	TABRIZ INTL	OITT	RNS	TABRIZ/ INTL	OITT	Y			X		F
	TEHRAN/ IMAM KHOMAINI INTL	OIIE	RS	TEHRAN/ MEHRABAD INTL	OIII	Y		Y	X		F
	TEHRAN/ MEHRABAD INTL	OIII	RS	TEHRAN/ MEHRABAD INTL	OIII	Y		Y	T		F
	YAZD/SHAHID SADOOGHI INTL*	OIYY	RS			Y					F
	ZAHEDAN INTL	OIZH	RS	TEHRAN/ MEHRABAD INTL	OIII	Y			T		F
IRAQ	AL NAJAF	ORNI	RNS			Y			T		F
	BAGHDAD INTL	ORBI	RS	BAGHDAD INTL	ORBI	Y		Y	T		F
	BASRAH INTL	ORMM	RS	BAGHDAD	ORBI	Y		Y	T		F

				INTL					
	ERBIL INTL	ORER	RS			Y		T	F
	MOSUL INTL	ORBM	RS	BAGHDAD INTL	ORBI		Y	T	F
	SULAYMANIYAH INTL	ORSU	RS			Y		T	F
JORDAN	AMMAN/ MARKA	OJAM	AS	AMMAN/ MARKA	OJAM	Y	Y	T	F
	AMMAN/ QUEEN ALIA	OJAI	RS	AMMAN/ MARKA	OJAM	Y	Y	X	F
	AQABA/ KING HUSSEIN	OJAQ	RNS	AMMAN/ MARKA	OJAM	Y			F
KUWAIT	KUWAIT INTL	OKBK	RS	KUWAIT/ INTL	OKBK	Y	Y	X	F
LEBANON	BEIRUT/ BEIRUT INTL	OLBA	RS	BEIRUT/ BEIRUT INTL	OLBA	Y	Y	X	F
LIBYA	BENGHAZI / BENINA INTL	HLLB	RS	BENGHAZI / BENINA INTL	HLLB	Y	Y	T	F
	SEBHA / SEBHA INTL	HLLS	RS	BENGHAZI / BENINA INTL	HLLB	Y			F
	TRIPOLI / TRIPOLI INTL	HLLT	RS	TRIPOLI / TRIPOLI INTL	HLLT	Y	Y	T	F
OMAN	MUSCAT/ MUSCAT INTL.	OOMS	RS	MUSCAT/ MUSCAT INTL.	OOMS	Y	Y	X	F
	SALALAH	OOSA	AS	SALALAH	OOSA	Y		X	F
QATAR	DOHA INTL	OTBD	RS	DOHA INTL	OTBD	Y	Y	T	F
	HAMAD INTL	OTHH	RS	DOHA INTL	OTBD	Y	Y	X	F
SAUDI ARABIA	DAMMAM/ KING FAHD INTL	OEDF	RS			Y		X	F
	JEDDAH/ KING ABDULAZIZ INTL	OEJN	RS	JEDDAH/ KING ABDULAZIZ INTL	OEJN	Y	Y	X	F
	MADINAH/ PRINCE MOHAMMAD BIN ABDULAZIZ INTL	OEMA	RS	JEDDAH/ KING ABDULAZIZ INTL	OEJN	Y	Y	T	F
	RIYADH/ KING KHALED INTL	OERK	RS	JEDDAH/ KING ABDULAZIZ INTL	OEJN	Y	Y	X	F
SOUTH SUDAN	JUBA	HSSJ	RS	KHARTOUM	HSSS	Y	Y		F
SUDAN	EL OBEID/EL OBEID	HSOB	AS			Y		X	F
	KHARTOUM	HSSS	RS	KHARTOUM	HSSS	Y	Y	X	F
	NYALA/NYALA	HSNN	AS			Y			F
	PORT SUDAN	HSPN	RS	WADI HALFA	HSSW	Y		X	F
SYRIAN ARAB	ALEPPO INTL	OSAP	RS	DAMASCUS INTL	OSDI	Y		T	F

REPUBLIC									
	BASSEL AL-ASSAD INTL LATTAKIA	OSLK	RS	DAMASCUS INTL	OSDI	Y		T	F
	DAMASCUS INTL	OSDI	RS	DAMASCUS INTL	OSDI	Y	Y	X	F
UNITED ARAB EMIRATES	ABU DHABI INTL	OMAA	RS	ABU DHABI INTL	OMAA	Y	Y	X	F
	AL AIN INTL	OMAL	RS	ABU DHABI INTL	OMAA	Y	Y	X	F
	ABU DHABI/ AL BATEEN EXECUTIVE	OMAD	RS	ABU DHABI INTL	OMAA	Y	Y	X	F
	DUBAI INTL	OMDB	RS	DUBAI INTL	OMDB	Y	Y	X	F
	DUBAI/ AL MAKTOUM INTL	OMDW	RS	DUBAI INTL	OMDB	Y	Y	X	F
	FUJAIRAH INTL	OMFJ	RS	DUBAI INTL	OMDB	Y		X	F
	RAS AL KHAIMAH INTL	OMRK	RS	DUBAI INTL	OMDB	Y		X	F
	SHARJAH INTL	OMSJ	RS	DUBAI INTL	OMDB	Y		X	F
YEMEN	ADEN INTL	OYAA	RS	SANAA/ INTL	OYSN	Y	Y	X	F
	HODEIDAH INTL	OYHD	RS	SANAA/ INTL	OYSN	Y		T	F
	MUKALLA INTL	OYRN	RS	SANAA/ INTL	OYSN	Y		T	F
	SANAA INTL	OYSN	RS	SANAA/ INTL	OYSN	Y		T	F
	TAIZ INTL	OYTZ	RS	SANAA/ INTL	OYSN	Y		T	F

TABLE MET II-3 – VOLMET BROADCASTS

EXPLANATION OF THE TABLE

The transmitting station appears at the top of each block.
Names in lower case letters indicate aerodromes for which reports (routine or selected special) are required.
Names in upper-case letters indicate aerodromes for which forecasts are required.

Istanbul 25B30 55B60	Shiraz 20B25 50B55	Tehran 15B20 45B50
Istanbul Ankara Athinai Thessaloniki Roma Tehran ISTANBUL	Tehran Shiraz Isfahan Kuwait Bandar Abbass Bahrain Muscat Dubai SHIRAZ	Tehran Shiraz Mashhad Karachi Ashgabat Baku Yerevan Tashkent TEHRAN

TABLE MET II-MID-1 - EXCHANGE OF OPERATIONAL METEOROLOGICAL INFORMATION DURING THE PILGRIMAGE SEASON

EXPLANATION OF THE TABLE

Column

1 Name of the State in which the operational meteorological information should be available.
2 Location from which, or related to which, the operational meteorological information refers.
3 TF – Aerodrome forecasts X: Seasonal requirement
4 RF – Route forecasts

To be available in	From or related to	Information required	
		TF	RF
1	2	3	4
LIBYA	DHAHRAN	X	
	MADINAH	X	
	RIYADH	X	
	ALGER (Route CASABLANCA-TRIPOLI)		X
	CAIRO (Route TRIPOLI-JEDDAH)		X
SAUDI ARABIA	ABIDJAN	X	
	ACCRA	X	
	AKTYUBINSK	X	
	ALGER (Route CASABLANCA-TRIPOLI)		X
	ALMATY	X	
	ASKHABAT	X	
	BAMAKO	X	
	BANGUI	X	
	BRAZZAVILLE		X
	CAIRO (Route TRIPOLI-JEDDAH)	X	
	CONAKRY	X	
	COTONOU	X	
	DAKAR	X	
	DOUALA	X	
	DUSHANBE		X
	KHARTOUM (Route KHARTOUM-GENEINA)	X	
	KYIV	X	
	NOUADHIBOU	X	
	OUAGADOUGOU	X	
	SAL ISLAND	X	
	SAMARKAND	X	
	TASHKENT		
SUDAN	BAMAKO	X	
	CONAKRY	X	
	DAKAR	X	
	NOUADHIBOU	X	
	OUAGADOUGOU	X	
	SAL ISLAND	X	
	JEDDAH (Route JEDDAH-KHARTOUM)		X

APPENDIX 4.6C

MID AIR NAVIGATION PLAN

VOLUME III

Endorsed by MIDANPIRG/15 (8-11 June 2015)

MID AIR NAVIGATION PLAN

VOLUME III

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MID ANP, VOLUME III

PART 0 – INTRODUCTION

1. INTRODUCTION

1.1 The background to the publication of ANPs in three volumes is explained in the Introduction in Volume I. The procedure for amendment of Volume III is also described in Volume I. Volume III contains dynamic/flexible plan elements related to the implementation of the air navigation system and its modernization in line with the ICAO Aviation System Block Upgrades (ASBUs) and associated technology roadmaps described in the Global Air Navigation Plan (GANP).

1.2 The information contained in Volume III is related mainly to:

- Planning: objectives set, priorities and targets planned at regional or sub-regional levels;
- Implementation monitoring and reporting: monitoring of the progress of implementation towards targets planned. This information should be used as the basis for reporting purposes (i.e.: global and regional air navigation reports and performance dashboards); and/or
- Guidance: providing regional guidance material for the implementation of specific system/procedures in a harmonized manner.

1.3 The management of Volume III is the responsibility of the MIDANPIRG.

1.4 Volume III should be used as a tool for monitoring and reporting the status of implementation of the elements planned here above, through the use of tables/databases and/or references to online monitoring tools, as endorsed by MIDANPIRG. The status of implementation is updated on a regular basis as endorsed by MIDANPIRG.

2. AVIATION SYSTEM BLOCK UPGRADES (ASBUs), MODULES AND ROADMAPS

2.1. The ASBU Modules and Roadmaps form a key component to the GANP, noting that they will continue to evolve as more work is done on refining and updating their content and in subsequent development of related provisions, support material and training.

2.2. Although the GANP has a worldwide perspective, it is not intended that all Block Upgrade Modules are required to be applied in every State, sub-region and/or region. Many of the Block Upgrade Modules contained in the GANP are specialized packages that should be applied only where the specific operational requirement exists or corresponding benefits can be realistically projected. Accordingly, the Block Upgrade methodology establishes an important flexibility in the implementation of its various Modules depending on a region, sub-region and/or State's specific operational requirements. Guided by the GANP, ICAO MID regional, sub-regional and State planning should identify Modules which best provide the needed operational improvements.

MID ANP, VOLUME III

PART I - GENERAL PLANNING ASPECTS (GEN)

1. PLANNING METHODOLOGY

1.1 Guided by the GANP, the regional planning process starts by identifying the homogeneous ATM areas, major traffic flows and international aerodromes. An analysis of this data leads to the identification of opportunities for performance improvement. Modules from the Aviation System Block Upgrades (ASBUs) are evaluated to identify which of those modules best provide the needed operational improvements. Depending on the complexity of the module, additional planning steps may need to be undertaken including financing and training needs. Finally, regional plans would be developed for the deployment of modules by drawing on supporting technology requirements. This is an iterative planning process which may require repeating several steps until a final plan with specific regional targets is in place. This planning methodology requires full involvement of States, service providers, airspace users and other stakeholders, thus ensuring commitment by all for implementation.

1.2 Block 0 features Modules characterized by technologies and capabilities which have already been developed and implemented in many parts of the world today. It therefore features a near-term availability milestone, or Initial Operating Capability (IOC), of 2013 for high density based on regional, sub-regional and State operational need. Blocks 1 through 3 are characterized by both existing and projected performance area solutions, with availability milestones beginning in 2018, 2023 and 2028 respectively.

2. REVIEW AND EVALUATION OF AIR NAVIGATION PLANNING

2.1. The progress and effectiveness against the priorities set out in the regional air navigation plans should be annually reported, using a consistent reporting format, to ICAO.

2.2. Performance monitoring requires a measurement strategy. Data collection, processing, storage and reporting activities supporting the identified global/regional performance metrics are fundamental to the success of performance-based approaches.

2.3. The air navigation planning and implementation performance framework prescribes reporting, monitoring, analysis and review activities being conducted on a cyclical, annual basis. An Air Navigation Reporting Form (ANRF) reflecting selected key performance areas as defined in the Manual on Global Performance of the Air Navigation System (ICAO Doc 9883) has been developed for each ASBU Module. The ANRF is a customized tool which is recommended for the application of setting planning targets, monitoring implementation, and identifying challenges, measuring implementation/performance and reporting. If necessary, other reporting formats that provide more details may be used but should contain as a minimum the elements described in the ANRF template. A sample of the ANRF is provided in **Appendix A**. A sample Template of a planning table which may be used to show the elements planned in an ICAO region is provided in **Appendix B**.

3. REPORTING AND MONITORING RESULTS

3.1 Reporting and monitoring results will be analyzed by the PIRGs, States and ICAO Secretariat to steer the air navigation improvements, take corrective actions and review the allocated objectives, priorities and targets if needed. The results will also be used by ICAO and aviation partner stakeholders to develop the annual Global Air Navigation Report. The report results will provide an opportunity for the international civil aviation community to compare progress across different ICAO regions in the establishment of air navigation infrastructure and performance-based procedures.

3.2 The reports will also provide the ICAO Council with detailed annual results on the basis of which tactical adjustments will be made to the performance framework work programme, as well as triennial policy adjustments to the GANP and the Block Upgrade Modules.

3.3 **Table GEN III-1** contains a minimum set of Implementation Indicator(s) for each of the eighteen ASBU Block 0 Modules necessary for the monitoring of these Modules (if identified as a priority for implementation at regional or sub-regional level). These indicators are intended to enable comparison between ICAO Regions with respect to ASBU Block 0 Modules and will apply only to commonly selected ASBU Modules. All regions/PIRGs reserve the right to select the ASBU Modules relevant to their needs and to endorse additional indicators, as deemed necessary. No reporting is required for ASBU Block 0 Modules that have not been selected.

Note: The priority for implementation as well as the applicability area of each selected ASBU Block 0 Module is to be defined by the MIDANPIRG.

TABLE GEN III-1 – IMPLEMENTATION INDICATOR(S) FOR EACH ASBU BLOCK 0 MODULE

Explanation of the Table

1 Block 0 Module Code
2 Block 0 Module Title
3 Implementation Indicator
4 Remarks

Module Code	Module Title	Implementation Indicator	Remarks
1	2	3	4
B0-APTA	Optimization of Approach Procedures including vertical guidance	% of international aerodromes having at least one runway end provided with APV Baro-VNAV or LPV procedures	
B0-WAKE	Increased Runway Throughput through Optimized Wake Turbulence Separation	% of applicable international aerodromes having implemented increased runway throughput through optimized wake turbulence separation	1. Not to be considered for the first reporting cycles due to lack of maturity. 2. List of ADs to be established through regional air navigation agreement.
B0-RSEQ	Improve Traffic flow through Runway Sequencing (AMAN/DMAN)	% of applicable international aerodromes having implemented AMAN / DMAN	1. Not to be considered for the first reporting cycles due to lack of maturity. 2. List of ADs to be established through regional air navigation agreement.
B0-SURF	Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)	% of applicable international aerodromes having implemented A-SMGCS Level 2	List of ADs to be established through regional air navigation agreement.
B0-ACDM	Improved Airport Operations through Airport-CDM	% of applicable international aerodromes having implemented improved airport operations through airport-CDM	List of ADs to be established through regional air navigation agreement.
B0-FICE	Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration	% of FIRs within which all applicable ACCs have implemented at least one interface to use AIDC / OLDI with neighbouring ACCs	
B0-DATM	Service Improvement through Digital Aeronautical Information Management	- % of States having implemented an AIXM based AIS database - % of States having implemented QMS	
B0-AMET	Meteorological information supporting enhanced operational efficiency and safety	- % of States having implemented SADIS / WIFS - % of States having implemented QMS	

Module Code	Module Title	Implementation Indicator	Remarks
1	2	3	4
B0-FRTO	Improved Operations through Enhanced En-Route Trajectories	% of FIRs in which FUA is implemented	
B0-NOPS	Improved Flow Performance through Planning based on a Network-Wide view	% of FIRs within which all ACCs utilize ATFM systems	
B0-ASUR	Initial capability for ground surveillance	% of FIRs where ADS-B OUT and/or MLAT are implemented for the provision of surveillance services in identified areas.	Not to be considered for the first reporting cycles due to lack of maturity.
B0-ASEP	Air Traffic Situational Awareness (ATSA)	% of States having implemented air traffic situational awareness	Not to be considered for the first reporting cycles due to lack of maturity.
B0-OPFL	Improved access to optimum flight levels through climb/descent procedures using ADS-B	% of FIRs having implemented in-trail procedures	Not to be considered for the first reporting cycles due to lack of maturity.
B0-ACAS	ACAS Improvements	% of States requiring carriage of ACAS (with TCAS 7.1 evolution)	
B0-SNET	Increased Effectiveness of Ground-Based Safety Nets	% of States having implemented ground-based safety-nets (STCA, APW, MSAW, etc.)	
B0-CDO	Improved Flexibility and Efficiency in Descent Profiles (CDO)	- % of international aerodromes / TMAs with PBN STAR implemented - % of international aerodromes/TMA where CDO is implemented	
B0-TBO	Improved Safety and Efficiency through the initial application of Data Link En-Route	% of FIRs utilising data link en-route in applicable airspace	
B0-CCO	Improved Flexibility and Efficiency Departure Profiles - Continuous Climb Operations (CCO)	- % of international aerodromes / TMAs with PBN SID implemented - % of international aerodromes/TMA where CCO is implemented	

Appendix A

SAMPLE TEMPLATE

1. AIR NAVIGATION REPORT FORM (ANRF)

(This template demonstrates how ANRF to be used.
The data inserted here refers to ASBU B0-05/CDO as an example only)

Regional and National planning for ASBU Modules

2. REGIONAL/NATIONAL PERFORMANCE OBJECTIVE – B0-05/CDO: Improved Flexibility and Efficiency in Descent Profiles

Performance Improvement Area 4: Efficient Flight Path – Through Trajectory-based Operations

3. ASBU B0-05/CDO: Impact on Main Key Performance Areas (KPA)

	Access & Equity	Capacity	Efficiency	Environment	Safety
Applicable	N	N	Y	Y	Y

4. ASBU B0-05/CDO: Planning Targets and Implementation Progress

5. Elements	6. Targets and implementation progress (Ground and Air)
1. CDO	
2. PBN STARs	

7. ASBU B0-05/CDO: Implementation Challenges

Elements	Implementation Area			
	Ground system Implementation	Avionics Implementation	Procedures Availability	Operational Approvals
1. CDO				
2. PBN STARs				

8. Performance Monitoring and Measurement
8A. ASBU B0-05/CDO: Implementation Monitoring

Elements	Performance Indicators/Supporting Metrics
1. CDO	Indicator: Percentage of international aerodromes/TMAs with CDO implemented Supporting metric: Number of international aerodromes/TMAs with CDO implemented
2. PBN STARs	Indicator: Percentage of international aerodromes/TMAs with PBN STARs implemented Supporting metric: Number of international aerodromes/TMAs with PBN STARs implemented

8. Performance Monitoring and Measurement **8 B. ASBU B0-05/CDO: Performance Monitoring**	
Key Performance Areas (Out of eleven KPAs, for the present until experienced gained, only five have been selected for reporting through ANRF)	**Where applicable, indicate qualitative Benefits,**
Access & Equity	Not applicable
Capacity	Not applicable
Efficiency	Cost savings through reduced fuel burn. Reduction in the number of required radio transmissions.
Environment	Reduced emissions as a result of reduced fuel burn
Safety	More consistent flight paths and stabilized approach paths. Reduction in the incidence of controlled flight into terrain (CFIT).
9. Identification of performance metrics: It is not necessary that every module contributes to all of the five KPAs. Consequently, a limited number of metrics per type of KPA, serving as an example to measure the module(s)' implementation benefits, without trying to apportion these benefits between module, have been identified on page 5. For the family of ASBU modules selected for air navigation implementation, States/Region to choose the applicable performance (benefit) metrics from the list available on page 5. This approach would facilitate States in collecting data for the chosen performance metrics. States/Region, however, could add new metrics for different KPAs based on maturity of the system and ability to collect relevant data.	

_____

AIR NAVIGATION REPORT FORM
HOW TO USE - EXPLANATORY NOTES

1. **Air Navigation Report Form (ANRF):** This form is nothing but the revised version of Performance Framework Form that was being used by Planning and Implementation Regional Groups (PIRGs)/States until now. The ANRF is a customized tool for Aviation System Block Upgrades (ASBU) Modules which is recommended for application for setting planning targets, monitoring implementation, identifying challenges, measuring implementation/performance and reporting. Also, the PIRGs and States could use this report format for any other air navigation improvement programmes such as Search and Rescue. If necessary, other reporting formats that provide more details may be used but should contain as a minimum the elements described in this ANRF template. The results will be analysed by ICAO and aviation partners and utilized in the Regional Performance Dashboards and the Annual Air Navigation Report. The conclusions from the Air Navigation Report will serve as the basis for future policy adjustments, aiding safety practicality, affordability and global harmonization, amongst other concerns.

2. **Regional/National Performance objective:** In the ASBU methodology, the performance objective will be the title of the ASBU module itself. Furthermore, indicate alongside corresponding Performance Improvement area (PIA).

3. **Impact on Main Key Performance Areas:** Key to the achievement of a globally interoperable ATM system is a clear statement of the expectations/benefits to the ATM community. The expectations/benefits are referred to eleven Key Performance Areas (KPAs) and are interrelated and cannot be considered in isolation since all are necessary for the achievement of the objectives established for the system as a whole. It should be noted that while safety is the highest priority, the eleven KPAs shown below are in alphabetical order as they would appear in English. They are access/equity; capacity; cost effectiveness; efficiency; environment; flexibility; global interoperability; participation of ATM community; predictability; safety; and security. However, out of these eleven KPAs, for the present, only five have been selected for reporting through ANRF, which are Access & Equity, Capacity, Efficiency, Environment and Safety. The KPAs applicable to respective ASBU module are to be identified by marking Y (Yes) or N (No). The impact assessment could be extended to more than five KPAs mentioned above if maturity of the national system allows and the process is available within the State to collect the data.

4. **Planning Targets and Implementation Progress:** This section indicates planning targets and status of progress in the implementation of different elements of the ASBU Module for both air and ground segments.

5. **Elements related to ASBU module:** Under this section list elements that are needed to implement the respective ASBU Module. Furthermore, should there be elements that are not reflected in the ASBU Module (example: In ASBU B0-80/ACDM, Aerodrome certification and data link applications D-VOLMET, D-ATIS, D-FIS are not included; Similarly in ASBU B0-30/DAIM, note that WGS-84 and eTOD are not included) but at the same time if they are closely linked to the module, ANRF should specify those elements. As a part of guidance to PIRGs/States, every Regional ANP will have the complete list of all 18 Modules of ASBU Block 0 along with corresponding elements, equipage required on the ground and in the air as well as metrics specific to both implementation and performance (benefits).

6. **Targets and implementation progress (Ground and Air):** Planned implementation date (month/year) and the current status/responsibility for each element are to be reported in this section. Please provide as much details as possible and should cover both avionics and ground systems. This ANRF being high level document, develop necessary detailed action plan separately for each element/equipage.

7. **Implementation challenges**: Any challenges/problems that are foreseen for the implementation of elements of the Module are to be reported in this section. The purpose of the section is to identify in advance any issues that will delay the implementation and if so, corrective action is to be initiated by the concerned person/entity. The four areas, under which implementation issues, if any, for the ASBU Module to be identified, are as follows:

- Ground System Implementation:
- Avionics Implementation:
- Procedures Availability:
- Operational Approvals:

Should be there no challenges to be resolved for the implementation of ASBU Module, indicate as "NIL".

8. **Performance Monitoring and Measurement:** Performance monitoring and measurement is done through the collection of data for the supporting metrics. In other words, metrics are quantitative measure of system performance – how well the system is functioning. The metrics fulfil three functions. They form a basis for assessing and monitoring the provision of ATM services, they define what ATM services user value and they can provide common criteria for cost benefit analysis for air navigation systems development. The Metrics are of two types:

A. **Implementation Monitoring**: Under this section, the indicator supported by the data collected for the metric reflects the status of implementation of elements of the Module. For example- Percentage of international aerodromes with CDO implemented. This indicator requires data for the metric "number of international aerodromes with CDO".

B. **Performance Monitoring**: The metric in this section allows to asses benefits accrued as a result of implementation of the module. The benefits or expectations, also known as Key Performance Areas (KPAs), are interrelated and cannot be considered in isolation since all are necessary for the achievement of the objectives established for the system as a whole. It should be noted that while safety is the highest priority, the eleven KPAs shown below are in alphabetical order as they would appear in English. They are access/equity; capacity; cost effectiveness; efficiency; environment; flexibility; global interoperability; participation of ATM community; predictability; safety; and security. However, out of these eleven KPAs, for the present until experienced gained, only five have been selected for reporting through ANRF, which are Access & Equity, Capacity, Efficiency, Environment and Safety. Where applicable, mention qualitative benefits under this section.

9. **Identification of performance metrics:** It is not necessary that every module contributes to all of the five KPAs. Consequently, a limited number of metrics per type of KPA, serving as an example to measure the module(s)' implementation benefits, without trying to apportion these benefits between module, have been identified on page 6. For the family of ASBU modules selected for air navigation implementation, States/Region to choose the applicable performance (benefit) metrics from the list available on page 6. This approach would facilitate States in collecting data for the chosen performance metrics. States/Region, however, could add new metrics for different KPAs based on maturity of the system and ability to collect relevant data.

Appendix B - Main Planning Table Template

	Objectives					Priorities and targets			Reference
Block	**ASBU modules and elements Enablers**	**Performance Improvement Area**	**Applicable or not in [Region] (Yes/No)**	**Regional planning elements**	**Enablers**	**Priority allocated in [Region]**	**Target(s) in [Region]**	**Indicator(s) / Metric(s)**	**Supporting Planning Document (ANRF, other)**

MID ANP, VOLUME III

PART II – AIR NAVIGATION SYSTEM IMPLEMENTATION

1. INTRODUCTION

1.1 The planning and implementation of the ICAO Aviation System Block Upgrades (ASBUs) should be undertaken within the framework of the MIDANPIRG with the participation and support of all stakeholders, including regulatory personnel.

1.2 The ASBU Blocks and Modules adopted by the MID Region should be followed in accordance with the specific ASBU requirements to ensure global interoperability and harmonization of air traffic management. The MIDANPIRG should determine the ASBU Block Upgrade Modules, which best provide the needed operational improvements in the ICAO MID Region.

2. ICAO MID REGION AIR NAVIGATION OBJECTIVES, PRIORITIES AND TARGETS

2.1 In accordance with Recommendation 6/1 of the Twelfth Air Navigation Conference (AN-Conf/12), PIRGs are requested to establish priorities and targets for air navigation, in line with the ASBU methodology.

2.2 The achievement of the intended benefits along each routing or within each area of affinity is entirely dependent on the coordinated implementation of the required elements by all provider and user stakeholders concerned.

2.3 Considering that some of the block upgrade modules contained in the GANP are specialized packages that may be applied where specific operational requirements or corresponding benefits exist, States and PIRGs should clarify how each Block Upgrade module would fit into the national and regional plans.

2.4 As Block 0 modules in many cases provide the foundation for future development, all Block 0 modules should be assessed, as appropriate, for early implementation by States in accordance with their operational needs.

2.5 In establishing and updating the MID air navigation plan, the MIDANPIRG and States should give due consideration to the safety priorities set out in the Global Aviation Safety Plan (GASP) and MID Region safety strategy.

2.6 States in the MID Region through the MIDANPIRG should establish their own air navigation objectives, priorities and targets to meet their individual needs and circumstances in line with the global and regional air navigation objectives, priorities and targets.

3. MONITORING OF ASBU MODULES IMPLEMENTATION

3.1 The monitoring of air navigation performance and its enhancement should be carried out through identification of relevant air navigation Metrics and Indicators as well as the adoption and attainment of air navigation system Targets.

3.2 The monitoring of the regional implementation progress and performance metrics/indicators should be done for all elements planned by MIDANPIRG. The monitoring should allow global correlation of status and expectations, appreciation of benefits achieved for the airspace users, as well as corrective actions to be taken by the PIRG on implementation plans.

3.3 The MIDANPIRG should determine appropriate mechanisms and tools for the monitoring and the collection of necessary data at national and regional levels.

MID Region ASBU Block 0 Modules Prioritization and Monitoring

3.4 On the basis of operational requirements and taking into consideration the associated benefits, MID Region has prioritized the implementation of the Block "0" Modules**,** also agreed on the subsidiary bodies that will be monitoring and supporting the implementation of the modules as in Table below:

MID REGION ASBU BLOCK 0 MODULES PRIORITIZATION AND MONITORING

Module Code	Module Title	Priority	Monitoring		Remarks
			Main	Supporting	
Performance Improvement Areas (PIA) 1: **Airport Operations**					
B0-APTA	Optimization of Approach Procedures including vertical guidance	1	PBN SG	ATM SG, AIM SG, CNS SG	
B0-WAKE	Increased Runway Throughput through Optimized Wake Turbulence Separation	2			
B0-RSEQ	Improve Traffic flow through Runway Sequencing (AMAN/DMAN)	2			
B0-SURF	Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)	1	ANSIG	CNS SG	Coordination with RGS WG
B0-ACDM	Improved Airport Operations through Airport-CDM	1	ANSIG	CNS SG, AIM SG, ATM SG	Coordination with RGS WG
Performance Improvement Areas (PIA) 2 **Globally Interoperable Systems and Data Through Globally Interoperable System Wide Information Management**					
B0-FICE	Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration	1	CNS SG	ATM SG	
B0-DATM	Service Improvement through Digital Aeronautical Information Management	1	AIM SG	-	

B0-AMET	Meteorological information supporting enhanced operational efficiency and safety	1	MET SG	-	
Performance Improvement Areas (PIA) 3 **Optimum Capacity and Flexible Flights – Through Global Collaborative ATM**					
B0-FRTO	Improved Operations through Enhanced En-Route Trajectories	1	ATM SG		
B0-NOPS	Improved Flow Performance through Planning based on a Network-Wide view	1	ATM SG	AIM SG, CNS SG	
B0-ASUR	Initial capability for ground surveillance	2			
B0-ASEP	Air Traffic Situational Awareness (ATSA)	2			
B0-OPFL	Improved access to optimum flight levels through climb/descent procedures using ADS-B	2			
B0-ACAS	ACAS Improvements	1	CNS SG		
B0-SNET	Increased Effectiveness of Ground-Based Safety Nets	2			
Performance Improvement Areas (PIA) 4 **Efficient Flight Path – Through Trajectory-based Operations**					
B0-CDO	Improved Flexibility and Efficiency in Descent Profiles (CDO)	1	PBN SG		
B0-TBO	Improved Safety and Efficiency through the initial application of Data Link En-Route	2			
B0-CCO	Improved Flexibility and Efficiency Departure Profiles - Continuous Climb Operations (CCO)	1	PBN SG		

Note:

Priority 1*: Modules that have the highest contribution to the improvement of air navigation safety and/or efficiency in the MID Region. These modules should be implemented where applicable and will be used for the purpose of regional air navigation monitoring and reporting for the period 2013-2014.*

***Priority 2**: Modules recommended for implementation based on identified operational needs and benefits.*

APPENDIX – ASBU BLOCK 0 MODULES APPLICABLE IN THE MID REGION

B0 – AMET: Meteorological information supporting enhanced operational efficiency and safety

Description and purpose

Global, regional and local meteorological information:

a) forecasts provided by world area forecast centres (WAFC), volcanic ash advisory centres (VAAC) and tropical cyclone advisory centres (TCAC);
b) aerodrome warnings to give concise information of meteorological conditions that could adversely affect all aircraft at an aerodrome including wind shear; and
c) SIGMETs to provide information on occurrence or expected occurrence of specific en-route weather phenomena which may affect the safety of aircraft operations and other operational meteorological (OPMET) information, including METAR/SPECI and TAF, to provide routine and special observations and forecasts of meteorological conditions occurring or expected to occur at the aerodrome.

This module includes elements which should be viewed as a subset of all available meteorological information that can be used to support enhanced operational efficiency and safety.

Main performance impact:

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

Applicability consideration:
Applicable to traffic flow planning, and to all aircraft operations in all domains and flight phases, regardless of level of aircraft equipage.

B0 – AMET: Meteorological information supporting enhanced operational efficiency and safety			
Elements	***Applicability***	***Performance Indicators/Supporting Metrics***	***Targets***
SADIS 2G and Secure SADIS FTP	*All States*	Indicator: % of States having implemented SADIS 2G satellite broadcast or Secure SADIS FTP service Supporting metric: number of States having implemented SADIS 2G satellite broadcast or Secure SADIS FTP service	90% by Dec. 2015 100% by Dec. 2017
QMS	*All States*	Indicator: % of States having implemented QMS for MET Supporting metric: number of States having implemented QMS for MET	60% by Dec. 2015 80% by Dec. 2017
SIGMET	*All MWOs in MID Region*	Indicator: % of FIRs in which SIGMET is implemented Supporting metric: number of FIRs SIGMET is implemented	90% by Dec. 2016 100% by Dec. 2018

OPMET	*Aerodromes to be determined and based on the following criteria: Number of operations at aerodrome; frequency of changing weather; use in VOLMET*	Indicator: % of applicable AOP aerodromes having implemented METAR with an update rate of 30 minutes Supporting metric: number of applicable aerodromes having implemented METAR with an update rate of 30 minutes	xx% by Dec. 2017

Table B0-AMET 3-1

SADIS 2G and Secure SADIS FTP

EXPLANATION OF THE TABLE

Column

1 Name of the State
2, 3 Status of implementation of SADIS 2G and/or Secure SADIS FTP, where:
Y – Yes, implemented
N – No, not implemented

State	Implementation	
	SADIS 2G	Secure SADIS FTP
1	2	3
BAHRAIN	Y	Y
EGYPT	Y	Y
IRAN (ISLAMIC REPUBLIC OF)	~~Y~~ N	N
IRAQ	Y	Y
JORDAN	N	Y
KUWAIT	Y	Y
LEBANON	N	N
LIBYA	Y	Y
OMAN	Y	Y
QATAR	Y	~~N~~ Y
SAUDI ARABIA	Y	Y
SUDAN	Y	Y
SYRIAN ARAB REPUBLIC	~~Y~~ N	N
UNITED ARAB EMIRATES	Y	Y
YEMEN	~~Y~~	N Y

Table B0-AMET 3-2

Volcanic Ash Advisory Centers

EXPLANATION OF THE TABLE

Column

1 Name of the State responsible for the provision of a volcanic ash advisory centre (VAAC)

2 Name of the VAAC

Note: The name is extracted from the ICAO Location Indicators (Doc 7910).

3 ICAO location indicator of the VAAC

4 Status of implementation of volcanic ash advisory information, where:

FC – Fully compliant
PC – Partially compliant
NC – Not compliant

5 Status of implementation of volcanic ash advisory information in graphical format, where:

FC – Fully compliant
PC – Partially compliant
NC – Not compliant

State	Volcanic Ash Advisory Centre (VAAC)	ICAO Location Indicator	Status of Implementation	
			VAA	VAG
1	2	3	4	5
FRANCE	Toulouse	LFPW	FC	FC

Table B0-AMET 3-3

Tropical Cyclone Advisory Centers

EXPLANATION OF THE TABLE

Column

1 Name of the State responsible for the provision of a tropical cyclone advisory centre (TCAC)

2 Name of the TCAC

Note: The name is extracted from the ICAO Location Indicators (Doc 7910).

3 ICAO location indicator of the TCAC

4 Status of implementation of tropical cyclone advisory information, where:

FC – Fully compliant
PC – Partially compliant
NC – Not compliant

5 Status of implementation of tropical cyclone advisory information in graphical format, where:

FC – Fully compliant
PC – Partially compliant
NC – Not compliant

State	Tropical Cyclone Advisory Centre (TCAC)	ICAO Location Indicator	Status of Implementation	
			TCA	TCG
1	2	3	4	5
INDIA	New Delhi	VIDP	FC	FC

Table B0-AMET 3-4

Quality Management System

EXPLANATION OF THE TABLE

Column

1 Name of the State

2, 3, 4, 5 Status of implementation of Quality Management System of meteorological information – QMS: not started/ planning, ongoing/ partially implemented, Implemented/ISO 9001 Certified, Date of Certification.

6 Action Plan

7 Remarks

State	Not started/ planning	Ongoing/ partially implemented	Implemented/ ISO 9001 Certified		Action Plan	Remarks
			Status	Date of Certification		
1	2	3	4	5	6	7
BAHARAIN			√	2008		
EGYPT			√	23 May 2012		
IRAN, ISLAMIC REPUBLIC OF		~~√~~	√	Oct 2015	~~No Action Plan~~	
IRAQ	√				No Action Plan	
JORDAN			√	2 Apr 2014		
KUWAIT			√	23 Aug 2013		
LEBANON	√				No Action Plan	
LIBYA	√				No Action Plan	
OMAN		√			TBD	
QATAR			√	Dec 2011		
SAUDI ARABIA			√	Aug 2014		
SUDAN			√	5 June 2014		
SYRIAN ARAB REPUBLIC	√				No Action Plan	
UNITED ARAB EMIRATES			√	19 Dec 2012		
YEMEN	√				No Action Plan	

APPENDIX 5A

Deficiencies in the MET 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

No Deficiencies Reported

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

Deficiencies in the MET 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	MID FASID Table MET 1A	HEOW METAR and 30-hour TAF	~~not available internationally~~ HEOW METAR and 30-hour TAF not available internationally	Nov, 2013	~~newly reported~~ -	O	~~HEOW OPMET Data to be routed to ROC Vienna (LOZZMMID)~~ No corrective action plan submitted by the State	Egypt	~~May, 2014~~ Dec, 2014	A

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

Deficiencies in the MET 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	QMS - MET Para 2.2 of Annex 3	Meteorological information to be supplied to users listed in 2.1.2 of Annex 3	Confirmation of QMS for MET not yet received	Sep, 2014	(USOAP - CMA finding)	O	No corrective action plan submitted by the State	Iran	Dec, 2015	A

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

Deficiencies in the MET 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~~	~~MID FASID Table MET 1A~~	~~ORSU METAR~~	~~ORSU METAR not available internationally~~	~~Nov, 2013~~	~~-~~	~~O~~	~~ORSU METAR to be routed to ROC Vienna (LOZZMMID)~~	~~Iraq~~	~~May, 2014~~	~~A~~
2	QMS - MET para 2.2 of Annex 3	Meteorological information to be supplied to users listed in 2.1.2 of Annex 3	confirmation of QMS for MET not yet received	Sep, 2014	-	O	no corrective action plan submitted by the State	Iraq	Dec, 2015	A

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

Deficiencies in the MET 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

No Deficiencies Reported

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

Deficiencies in the MET 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

No Deficiencies Reported

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

Deficiencies in the MET 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	QMS - MET para 2.2 of Annex 3	Meteorological information to be supplied to users listed in 2.1.2 of Annex 3	confirmation of QMS for MET not yet received	Sep, 2014	(USOAP - CMA finding)	O	no corrective action plan submitted by the State	Lebanon	Dec, 2015	A

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

Deficiencies in the MET Field

LIBYA

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	QMS - MET para 2.2 of Annex 3	Meteorological information to be supplied to users listed in 2.1.2 of Annex 3	confirmation of QMS for MET not yet received	Sep, 2014	(USOAP - CMA finding)	O	no corrective action plan submitted by the State	Libya	Dec, 2015	A

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

Deficiencies in the MET 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
1	QMS - MET para 2.2 of Annex 3	Meteorological information to be supplied to users listed in 2.1.2 of Annex 3	confirmation of QMS for MET not yet received	Sep, 2014	(USOAP-CMA finding)	O	no corrective action plan submitted by the State	Oman	Dec, 2015	A

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

Deficiencies in the MET 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

No Deficiencies Reported

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

Deficiencies in the MET 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

No Deficiencies Reported

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

Deficiencies in the MET Field

SUDAN

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

No Deficiencies Reported

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

Deficiencies in the MET 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	MID FASID Table MET 1A	OSAP METAR and 24-hour TAF	OSAP METAR and 24-hour TAF not available internationally	Nov, 2013	~~newly reported~> -	O	~~OSAP OPMET data to be routed to ROC Vienna (LOZZMMID)~> no corrective action plan submitted by the State	Syria	~~Aug, 2014~> Dec, 2014	A
2	QMS - MET para 2.2 of Annex 3	Meteorological information to be supplied to users listed in 2.1.2 of Annex 3	confirmation of QMS for MET not yet received	Sep, 2014	(USOAP - CMA finding)	O	no corrective action plan submitted by the State	Syria	Dec, 2015	A

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

Deficiencies in the MET 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

No Deficiencies Reported

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

Deficiencies in the MET 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	QMS - MET para 2.2 of Annex 3	Meteorological information to be supplied to users listed in 2.1.2 of Annex 3	confirmation of QMS for MET not yet received	Sep, 2014	-	O	no corrective action plan submitted by the State	Yemen	Dec, 2015	A

(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

ATTACHMENT

LIST OF PARTICIPANTS

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