International Civil Aviation Organization

MIDANPIRG ATM Sub-Group

First Meeting (ATM SG/1)
(Cairo, Egypt, 1 - 3 April 2014)

Agenda Item 4: **Airspace Management Issues**

REVIEW AND UPDATE THE DRAFT MID AIR NAVIGATION STRATEGY PARTS
RELATED TO ATM

(Presented by the Secretariat)

SUMMARY
The aim of this paper is to review and update the Draft MID Air Navigation Strategy Parts Related to ATM. The meeting is expected to agree on the applicability of the Aviation System Block Upgrades (ASBU) Block 0 Modules FICE, FRTO and TBO and their associated Targets.   Action by the meeting is at paragraph 3.
REFERENCES
- Draft MID Air Navigation Strategy   - MIDANPIRG/14 Report

1. **INTRODUCTION**

1.1   The meeting may wish to recall that the Global Air Navigation Plan (GANP) established a framework for incremental implementations based on the specific operational profiles and traffic densities of each Region and State, which is accomplished through the evaluation of the Aviation System Block Upgrades (ASBU) modules to identify which of those modules best provide the needed operational improvements.

1.2   The meeting may wish to note that MIDANPIRG/14 agreed that as first step, it would be necessary to agree on the prioritization of the ASBU Block 0 Modules. It was emphasized that the initial prioritization would not signify that the rest of the modules could not be assigned higher priority by specific States based on the local operational requirements. It would also not mean that the rest of the modules would be given lower importance by ICAO in pursuing standardization activities. In the same vein, it was highlighted that the ASBU Implementation Plan should be a living document to be reviewed and updated on regular basis. The future objectives would be to include all 18 Block 0 Modules and gradually Block 1 Modules, for regional planning, reporting and monitoring mechanisms, as part of the future revisions.

2. **DISCUSSION**

2.1   MIDANPIRG/14 endorsed the ASBU Block 0 Modules prioritization Table and the Draft MID Air Navigation Strategy and agreed to the following Conclusions:

CONCLUSION 14/5:   MID REGION AIR NAVIGATION PRIORITIES

That,

a)   *the ASBU Block 0 Modules prioritization Table at Appendices 4.1E to the Report on Agenda Item 4.1 (**Appendix A** to this WP) be endorsed as the initial version of the MID ASBU Implementation Plan; and*

b)   *the ASBU Block 0 Modules prioritization Table be reviewed on regular basis and be extended to cover Block 1 Modules, as appropriate.*

CONCLUSION 14/6:   DRAFT MID REGION AIR NAVIGATION STRATEGY

That,

a)   *the Draft MID Region Air Navigation Strategy at Appendix 4.1F to the Report on Agenda Item 4.1 (**Appendix B** to this WP) be:*

   i.   *endorsed as the initial version of the MID Region Air Navigation Strategy; and*

   ii. *further reviewed and completed by the different MIDANPIRG subsidiary bodies*

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;*

   ii.   *incorporate the agreed MID Region Performance Metrics into their National reporting and monitoring mechanisms; and*

   iii. *provide the ICAO MID Regional Office, on annual basis, with relevant data necessary for regional air navigation planning and monitoring.*

2.2   The meeting may wish to note that ICAO MID Regional Office issued State Letter Ref.: AN 1/7–14/123 dated 5 May 2014 requesting States to implement the provisions of the above mentioned MIDANPIRG Conclusions and to:

a)   take all necessary measures to develop/update their National Air Navigation Performance Framework and provide the ICAO MID Regional Office a copy, preferably not later than **30 June 2014;** and

b)   provide the relevant data to the ICAO MID Regional Office on annual basis.

2.3   In accordance with the above, the meeting is invited to review, discuss and agree to the applicability of the Aviation System Block Upgrades (ASBU) Block 0 Modules FICE, FRTO and TBO and their associated Targets. The Tables below are extracted from the Draft MID Air Navigation Strategy to be used by the meeting:

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

Description and purpose

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

Main performance impact:

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

Applicability consideration:

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

B0 – FICE: Increased Interoperability, Efficiency and Capacity through Ground‑Ground Integration				
Elements	*Applicability*	*Performance Indicators/Supporting Metrics*	*Targets*	*Remarks*
AMHS capability	*All States*	Indicator: % of States with AMHS capability Supporting metric: Number of States with AMHS capability	50 % of States with AMHS capability by December 2014	Final Targets to be agreed by the CNS SG/6 and MSG/*4*
AMHS implementation /interconnection	*All States*	Indicator: % of States with AMHS implemented (interconnected with other States AMHS) Supporting metric: Number of States with AMHS implemented (interconnections with other States AMHS)	4 States with AMHS interconnected December 2014	Final Targets to be agreed by the CNS SG/6 and MSG/*4*
Implementation of AIDC/OLDI between adjacent ACCs	*All ACCs*	Indicator: % of FIRs within which all applicable ACCs have implemented at least one interface to use AIDC/OLDI with neighboring ACCs Supporting metric: Number of AIDC/OLDI interconnections implemented between adjacent ACCs	50% by December 2016	Final Targets to be agreed by the ATM SG/1, CNS SG/6 and MSG/*4*

B0 – FRTO: Improved Operations through Enhanced En-Route Trajectories

Description and purpose

To allow the use of airspace which would otherwise be segregated (i.e. special use airspace) along with flexible routing adjusted for specific traffic patterns. This will allow greater routing possibilities, reducing potential congestion on trunk routes and busy crossing points, resulting in reduced flight length and fuel burn.

Main performance impact:

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

Applicability consideration:

Applicable to en-route and terminal airspace. Benefits can start locally. The larger the size of the concerned airspace the greater the benefits, in particular for flex track aspects. Benefits accrue to individual flights and flows. Application will naturally span over a long period as traffic develops. Its features can be introduced starting with the simplest ones.

B0 – FRTO: Improved Operations through Enhanced En-Route Trajectories				
Elements	*Applicability*	*Performance Indicators/Supporting Metrics*	*Targets*	*Remarks*
Flexible use of airspace (FUA)	*All States*	Indicator: % of States implementing FUA Supporting metric: number of States implementing FUA	50% by December 2017	Implementation should be based on the published aeronautical information Targets to be agreed by ATM SG/1 and MSG/4
Flexible routing	*All States*	Indicator: % of required Routes that are not implemented due military restrictions (segregated areas) Supporting metric 1: total number of ATS Routes in the Mid Region Supporting metric 2: number of required Routes that are not implemented due military restrictions (segregated areas)	by December 2017	Based on published aeronautical information Targets to be agreed by ATM SG/1 and MSG/4

B0 –TBO: Improved Safety and Efficiency through the initial application of Data Link En-Route

Description and purpose
To implement an initial set of data link applications for surveillance and communications in ATC, supporting flexible routing, reduced separation and improved safety.

Main performance impact:

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

Applicability consideration:

Requires good synchronization of airborne and ground deployment to generate significant benefits, in particular to those equipped. Benefits increase with the proportion of equipped aircraft.

Improved Safety and Efficiency through the initial application of Data Link En-Route				
Elements	*Applicability*	*Performance Indicators/Supporting Metrics*	*Targets*	*Remarks*
ADS-C and CPDLC	TBD	Indicator: % of FIRs having implemented data link en-route, as and where required Supporting Metric: Number of FIRs having implemented data link en-route, as and where required	40% by December 2017	List of FIRs to be established through regional air navigation agreement. Targets to be agreed by MSG/4

2.4   The meeting may wish to note that the MID Air Navigation Strategy will be further reviewed and updated by the ASBU implementation Workshop (Dubai, UAE, 21-25 September 2014) with a view to present the final version of the Strategy to the MSG/4 meeting for endorsement on behalf of MIDANPIRG.

3.   ACTION BY THE MEETING

3.1   The meeting is invited to:

a) review and update the Tables related to the Aviation System Block Upgrades (ASBU) Block 0 Modules FICE, FRTO and TBO at para. 2.3;

b) urge States to:

   i.   take all necessary measures to develop/update their National Air Navigation Performance Framework and provide the ICAO MID Regional Office a copy, preferably not later than **30 June 2014;** and

   ii. provide the relevant data to the ICAO MID Regional Office on annual basis; and

c) invite States to actively participate in the ASBU implementation Workshop (Dubai, UAE, 21-25 September 2014).

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