



INTERNATIONAL CIVIL AVIATION ORGANIZATION

THE THIRD MEETING OF THE AERODROMES OPERATIONS AND
PLANNING – WORKING GROUP (AOP/WG/3)

Malaysia, 2 – 4 June 2015

Agenda Item 2: Review of APANPIRG/25 Action Plan

REVIEW OF APANPIRG/25 ACTION PLAN

(Presented by the Secretariat)

SUMMARY

This paper presents information relevant to the Aerodromes Operations and Planning Working Group (AOPWG) from the Twenty Fifth Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/25, Kuala Lumpur, Malaysia, 8 to 11 September 2014).

This paper relates to – **Strategic Objectives:**

- A: **Safety** – Enhance global civil aviation safety*
- B: **Air Navigation Capacity and Efficiency** – Increase Capacity and improve efficiency of the global civil aviation system*
- E: **Environmental Protection** – Minimize the adverse environmental effects of civil aviation activities*

1. INTRODUCTION

1.1 The Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG) was established by the ICAO Council in 1991 [C-MIN.133/18, 26 June 1991]. The Terms of Reference of APANPIRG was approved by the Council of ICAO in 6th Meeting of its 171 Session on 27 February 2004 and revised consequent to the decision of the Council [C-DEC183/9, March/April 2008 and C-WP/13558, C190/4, 25 May 2010]. APANPIRG is composed of all APAC Member States providing air navigation services in the Asia and Pacific Regions.

1.2 The Twenty Fifth Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/25) was held in Kuala Lumpur, Malaysia from 8 to 11 September 2014.

1.3 The meeting was attended by 122 participants from 23 Member States, 2 Special Administrative Regions of China and 4 International Organizations (CANSO, IATA, IBAC and IFALPA). APANPIRG/25 agreed to 41 Conclusions and 10 Decisions. The final report of APANPIRG/25 Meeting is available at <http://www.icao.int/APAC/Meetings/2014%20APANPIRG25/Final%20Report.pdf>.

1.4 APANPIRG/25 adopted the Action Plan table which provides for each Conclusion/Decision, the related ICAO strategic objective (s), the follow-up action to be taken, Organisation responsible to initiate action, expected deliverable (s) and the target date for completion. The format is in line with the ICAO Business Planning and Performance Based Approach.

2. DISCUSSION

2.1 The Air Navigation Commission (ANC) referred the Report of the APANPIRG/25 Meeting to its Working Group of the Whole for Strategic Review and Planning (WG/SRP) for review. The AN-WG/SRP reviewed the report on 21 January 2015 and was approved by the ANC on 26 February 2015. A Summary Table of APANPIRG/25 Conclusions and Decisions related to the AOP WG is placed at **Attachment A** to this Working Paper.

2.2 APANPIRG/25 noted that the First APANPIRG and RASG APAC Coordination Meeting was held in Kuala Lumpur on 9th September 2014 attended by APANPIRG Chair, APRAST Co Chairs, ATM, CNS and MET Sub Group chairs and secretariat. APANPIRG reviewed the outcomes of the coordination meeting and approved the Coordination Mechanism and Framework placed at **Attachment B** to this Working Paper.

2.3 APANPIRG/25 in Conclusion 25/2 adopted the 10 Regional Priorities and targets and in Conclusion 25/3 adopted the Air Navigation Reporting Forms for the 18 ASBU Modules (except BO-RSEQ, BO-OPEL and BO-WAKE) which included BO-ACDM related to AOPWG and the responsibility matrix for the ASBU Modules and 45 Seamless items placed at **Attachment C** to this Working Paper.

2.4 APANPIRG 25 in Conclusion 25/5 urged States/Administrations to report on their seamless ATM implementation progress at least once a year through the online reporting process from November 2014 onwards. The online application is accessible only to the States/Administrations in APAC Region, and the URL is https://portal.icao.int/RO_APAC/Reporting/Pages/default.aspx

2.5 APANPIRG/25 noted that in light of the performance based approach to air navigation planning and implementation there is a need to align the work programme of States, regions and ICAO and that a project based approach for ASBUs should be applied to APANPIRG Contributory bodies. APANPIRG/25 in Decision 25/50 established a Task Force to review the Terms of Reference and propose rationalization of APANPIRG structure.

3. ACTION BY THE MEETING

3.1 The Meeting is invited to note the relevant follow-up actions related to AOP taken by ICAO APAC Office, and the States on the Decisions/Conclusions adopted by APANPIRG at its Twenty Fifth Meeting as shown in the **Attachment A**.

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Responsibility	Deliverable	Target date	Status as of 31 December 2014	ANC recommendation
C 25/6 A & B	Seminar/Workshop on the Aerodrome related Aspects of the Seamless ATM Plan Implementation	Recognizing the need for promoting, understanding and active involvement of the APAC States/Administration in taking forward the regional initiative, ICAO be invited to organize a seminar/workshop on the Seamless ATM Plan with a focus on aerodrome related elements.	ICAO APAC Office	Seminar conducted	2015	June 2015	Noted
C 25/7 A & B	Amendment to Figure 3-1 of Annex 14, Volume II	Recognizing that the Figure 3-1 in Annex 14, Volume II was not consistent with the standard in Para 3.1.22 and 3.2.21 of Annex 14, Volume II, ICAO be invited to review and revise the Figure as appropriate.	ICAO APAC Office	IOM submitted to ICAO HQ	October 2014	COMPLETE IOM AN 3/3:AP- AGA0165/14 24 October 2014	Noted, included in next ICAO Annex 14 amendment cycle
C 25/8 A & B	Guidance on Airport Operations in Thunderstorm/Lightni ng Conditions	Recognizing that guidance on airport operations in thunderstorm/lightning conditions, which are commonly experienced in tropical countries, was not available, ICAO be invited to consult with ACI and consider providing guidance material as a reference document for States and airport operators.	ICAO APAC Office	IOM submitted to ICAO HQ	October 2014	COMPLETE IOM AN 3/3:AP- AGA0164/14 24 October 2014	Noted

AOP/WG/3–WP/2
Attachment A

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Responsibility	Deliverable	Target date	Status as of 31 December 2014	ANC recommendation
C 25/9 A & B	ACI APEX (Airport for Excellence) Programme	that States: a) Support the ACI APEX in Safety Programme at aerodromes in the APAC Region; and b) Encourage airport operators to approach ACI for assistance through the APEX in Safety Programme if deemed necessary; and to participate in the APEX Safety Reviews Programme.	ICAO APAC Office	State Letter	November 2014	COMPLETE SL AN 3/3- AP155/14 (AGA) 6 Nov. 2014	Noted
C 25/49 A & B	Update of ATM/AIS/SAR, AOP, CNS and MET Deficiency List	That, the list of air navigation deficiencies reported and identified in ATM/AIS/SAR, AOP, CNS and MET Deficiency List be updated as detailed in Appendices A to D to APANPIRG Working Paper 11.	ICAO APAC Office	Updated deficiency list	January 2015	COMPLETE SL AN 3/3- AP013/15 dt 22/1/2015	Noted

Coordination Mechanism and Framework

1.0 Coordination Mechanism Principles

- PIRG and RASG shall coordinate and support each other to achieve the agreed targets for the established regional priorities and implementation plans endorsed by the respective group (e.g. Review and support implementation of subsequent versions of the Asia/Pacific Seamless ATM Plan by the RASG);
- Continuous coordination by Secretariat for both PIRG and RASG to avoid duplication and gaps and to ensure alignment and harmonization of priorities, plans and actions;
- Secretariat will present a paper reporting on regional group coordination activities at each regional group plenary meeting and their key subsidiary bodies as appropriate;
- Chairs of APANPIRG and RASG will attend a coordination meeting at the ICAO Regional Office once a year and hold periodic coordination web meetings in between the face-to-face meetings if deemed necessary;
- Chairs will agree which regional group shall lead on each coordination topic and ensure coordination, information sharing and cross-reporting to the other group Chair, and if there is any change in lead regional group responsible, plan and ensure a smooth transition. Each group leading a coordination topic should identify any implications on the activities of the other group and highlight them to the other group and the Secretariat;
- Safety management, safety oversight system and flight operations safety aspects will usually fall under the RASG;
- Air navigation facilities and services implementation aspects will usually fall under the PIRG;
- Areas of coordination between PIRG and RASG is primarily in AGA and ANS safety areas;
- OPS (Annex 6) deficiencies listed under ATM air navigation deficiencies will be shared with RASG for further monitoring and resolution if deemed necessary;
- Cooperation to ensure that the priority ASBUs are implemented in the most efficient and safe manner; and
- ICAO will update the Procedural Handbooks of the regional groups to incorporate the coordination mechanism; and

Note: Examples of possible future coordination actions between RASG-APAC and APANPIRG include, but are not limited to, the following:

- Involvement of RASG-APAC APRAST and APANPIRG RASMAG in each other's activities;
- Establishment of an analysis body (similar to the RMA/EMA models that report to RASMAG for vertical and horizontal safety analysis) that manages ATS safety incidents/concerns/occurrences for onward reporting to RASG-APAC APRAST for further action;

Attachment B**2.0 Lead Regional Group Responsibilities**

2.1 Aerodromes related topics

Coordination Item	PIRG	RASG
Aerodrome Infrastructure and Adjacent Land Use	X	
Runway Safety Programmes		X
Runway Safety Teams		X
Bird/Wildlife Management Programmes/Strike Incidents		X
Ground Operations, FOD, Ramp Procedures		X

2.2 ANS related topics

Coordination Item	PIRG	RASG
RVSM/LHDs (RASMAG)	X	
Other ATS Incidents	X	
ATS Phraseology	X	
Civil/Military Coordination	X	
SAR	X	

2.3 Other topics

Coordination Item	PIRG	RASG
Safety Management Systems (SMS)		X
Language Proficiency Requirements (LPR)		X
Airborne Collision Avoidance System II (ACAS II)		X
Pressure Altitude Responding Transponder		X

3.0 Next Steps

- Present coordination mechanism to APANPIRG
- Present coordination mechanism to AP-RAST and RASG-APAC
- Update PIRG and RASG procedural handbooks
- 2nd Global PIRG-RASG Coordination meeting will be held on the morning of Friday 6 February 2015 in conjunction with the High Level Safety Conference
- Present coordination mechanism to PIRG-RASG coordination meeting
- RASG to consider proposing to the HLSC that the GASP update should incorporate a link to the GANP
- RASG to present a paper to HLSC which is a progress report against its priorities and targets, along with any unique information they wish to provide

Responsibility matrix for ASBU modules and corresponding Seamless items

Seamless ATM Specification title	Seamless Reference	Regional Priority	ASBU Module	ASBU - Module title	Endorsing body
Airport Collaborative Decision-Making (ACDM)	70	2	B0-ACDM	Improved Airport Operations through Airport-CDM	ATM SG
Air Traffic Flow Management/Collaborative Decision-Making (ATFM/CDM)	80	1	B0-NOPS	Improved Flow Performance through Planning based on a Network-Wide view	ATM SG
Arrival Manager/Departure Management (AMAN/DMAN)	50	2	B0-RSEQ	Improve Traffic flow through Sequencing (AMAN/DMAN)	ATM SG
Aeronautical Information Management	300	1	B0-DATM	Service Improvement through Digital Aeronautical Information Management	ATM SG
Civil Military use of SUA	360	1	B0-FRTO	Improved Operations through Enhanced En-Route Trajectories	ATM SG
Continuous Descent Operations (CDO)	90	2	B0-CDO	Improved Flexibility and Efficiency in Descent Profiles using Continuous Descent Operations (CDOs)	CNS SG
Continuous Climb Operations (CCO)	100	2	B0-CCO	Improved Flexibility and Efficiency Departure Profiles – Continuous Climb Operations (CCO)	CNS SG
Performance-based Navigation (PBN) Routes	140	2	B0-FRTO	Improved Operations through Enhanced En-Route Trajectories	CNS SG
ATM systems enabling optimal PBN/ATC operations	250	2	B0-APTA	Optimization of Approach Procedures including vertical guidance	CNS SG
UPR and DARP	290	3	B0-FRTO	Improved Safety and Efficiency through the initial application of Data Link En-Route	ATM SG
Nil	440	3	B0-WAKE	Improved Access to Optimum Flight Levels through Climb/Descent Procedures using ADS-B	ATM SG
Nil	450	3	B0-OPFL	Increased Runway Throughput through Optimized Wake Turbulence Separation	ATM SG

Performance-based Navigation (PBN) Approach	110	1	B0-APTA	Optimization of Approach Procedures including vertical guidance	CNS SG
ATS Surveillance	180	1	B0-ASUR	Initial Capability for Ground Surveillance	CNS SG
ATS Inter-facility Data-link Communications (AIDC)	220	1	B0-FICE	Increased Interoperability Efficiency & Capacity through Ground-Ground Integration	CNS SG
ATS surveillance with data integrated	270	1	B0-ASUR	Initial Capability for Ground Surveillance	CNS SG
ADS-C and CPDLC	280	1	B0-TBO	Improved Safety and Efficiency through the initial application of Data Link En-Route	CNS SG
Standard Instrument Departures/Standard Terminal Arrivals (SID/STAR)	120	2	B0-CCO B0-CDO	Optimization of Approach Procedures including vertical guidance	CNS SG
Safety Nets	160	2	B0-SNET	Increased effectiveness of ground-based safety nets	CNS SG
Airborne Safety Systems	170	2	B0-ACAS	Airborne Collision Avoidance Systems (ACAS) Improvements	CNS SG
Nil	430	2	B0-ASEP	Air Traffic Situational Awareness (ATSA)	CNS SG
Safety and Efficiency of Surface Operations	40	3	B0-SURF	Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)	CNS SG
Meteorological Information	310	2	B0-AMET	Meteorological information supporting enhanced operational efficiency and safety	MET SG

Responsibility matrix for all Seamless items

Seamless ATM Specification title	Seamless Reference	Regional Priority	Regional/ ASBU/ Module	ASBU - Module title	Endorsing body
Apron Management	10	3	Regional	-	ATM SG
ATM-Aerodrome Coordination	20	3	Regional	-	ATM SG
Aerodrome capacity	30	3	Regional	-	ATM SG
Safety and Efficiency of Surface Operations	40	3	B0-SURF	Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)	CNS SG
Arrival Manager/Departure Management (AMAN/DMAN)	50	2	B0-RSEQ	Improve Traffic flow through Sequencing (AMAN/DMAN)	ATM SG
ATC Sector Capacity	60	2	Regional	-	ATM SG
Airport Collaborative Decision-Making (ACDM)	70	2	B0-ACDM	Improved Airport Operations through Airport-CDM	ATM SG
Air Traffic Flow Management/Collaborative Decision-Making (ATFM/CDM)	80	1	B0-NOPS	Improved Flow Performance through Planning based on a Network-Wide view	ATM SG
Continuous Descent Operations (CDO)	90	2	B0-CDO	Improved Flexibility and Efficiency in Descent Profiles using Continuous Descent Operations (CDOs)	CNS SG
Continuous Climb Operations (CCO)	100	2	B0-CCO	Improved Flexibility and Efficiency Departure Profiles – Continuous Climb Operations (CCO)	CNS SG
Performance-based Navigation (PBN) Approach	110	1	B0-APTA	Optimization of Approach Procedures including vertical guidance	CNS SG
Standard Instrument Departures/Standard Terminal Arrivals (SID/STAR)	120	2	B0-CCO B0-CDO	Optimization of Approach Procedures including vertical guidance	CNS SG
Performance-based Navigation (PBN) Visual Departure and Arrival Procedures	130	3	Regional	-	ATM SG
Performance-based Navigation (PBN) Routes	140	2	B0-FRTO	Improved Operations through Enhanced En-Route Trajectories	CNS SG

Performance-based Navigation (PBN) Airspace	150	2	Regional	-	ATM SG
Safety Nets	160	2	B0-SNET	Increased effectiveness of ground-based safety nets	CNS SG
Airborne Safety Systems	170	2	B0-ACAS	Airborne Collision Avoidance Systems (ACAS) Improvements	CNS SG
ATS Surveillance	180	1	B0-ASUR	Initial Capability for Ground Surveillance	CNS SG
Airspace classification	190	2	Regional	-	ATM SG
Flight Level Orientation Schemes (FLOS)	200	2	Regional	-	ATM SG
Flight Level Allocation Schemes (FLAS)	210	2	Regional	-	ATM SG
ATS Inter-facility Data-link Communications (AIDC)	220	1	B0-FICE	Increased Interoperability Efficiency & Capacity through Ground-Ground Integration	CNS SG
Automated Transfer of Control	230	2	Regional	-	ATM SG
ATS Surveillance data sharing	240	2	Regional	-	CNS SG
ATM systems enabling optimal PBN/ATC operations	250	2	B0-APTA	Optimization of Approach Procedures including vertical guidance	CNS SG
ATC Horizontal separation	260	2	Regional	-	ATM SG
ATS surveillance with data integrated	270	1	B0-ASUR	Initial Capability for Ground Surveillance	CNS SG
ADS-C and CPDLC	280	1	B0-TBO	Improved Safety and Efficiency through the initial application of Data Link En-Route	CNS SG
UPR and DARP	290	3	B0-FRTO	Improved Safety and Efficiency through the initial application of Data Link En-Route	ATM SG
Aeronautical Information Management	300	1	B0-DATM	Service Improvement through Digital Aeronautical Information Management	ATM SG

Meteorological Information	310	2	B0-AMET	Meteorological information supporting enhanced operational efficiency and safety	MET SG
ATM Managers' Performance	320	2	Regional	-	ATM SG
ATC simulators performance	330	2	Regional	-	ATM SG
Safety assessment of changes	340	2	Regional	-	ATM SG
ATM Operators' performance	350	2	Regional	-	ATM SG
Civil Military use of SUA	360	1	B0-FRTO	Improved Operations through Enhanced En-Route Trajectories	ATM SG
Strategic Civil Military coordination	370	1	Regional	Improved Operations through Enhanced En-Route Trajectories	ATM SG
Tactical Civil Military coordination	380	1	Regional	Improved Operations through Enhanced En-Route Trajectories	ATM SG
Civil Military system integration	390	2	Regional	Improved Operations through Enhanced En-Route Trajectories	ATM SG
Civil Military nav aids joint provision	400	2	Regional	Improved Operations through Enhanced En-Route Trajectories	ATM SG
Civil Military common training	410	2	Regional	Improved Operations through Enhanced En-Route Trajectories	ATM SG
Civil Military common procedures	420	2	Regional	Improved Operations through Enhanced En-Route Trajectories	ATM SG
Nil	430	2	B0-ASEP	Air Traffic Situational Awareness (ATSA)	CNS SG
Nil	440	3	B0-WAKE	Improved Access to Optimum Flight Levels through Climb/Descent Procedures using ADS-B	ATM SG
Nil	450	3	B0-OPFL	Increased Runway Throughput through Optimized Wake Turbulence Separation	ATM SG

**AIR NAVIGATION REPORT FORM (ANRF)
APAC Regional Planning for ASBU Modules**

REGIONAL/NATIONAL PERFORMANCE OBJECTIVE – B0-ACDM: Improved Airport Operations through Airport-CDM					
Performance Improvement Area 1: Airport Operations					
ASBU B0-ACDM: Impact on Main Key Performance Areas (KPA)					
	Access & Equity	Capacity	Efficiency	Environment	Safety
Applicable	Y	Y	Y	Y	
ASBU B0-ACDM: Implementation Progress					
Elements			Target and Implementation Status (Ground and Air)		
Airport CDM at all high density aerodromes			November 2015 (Seamless ATM Phase I): - Airport CDM at all high density aerodromes.		
Apron Management			November 2015- (Seamless ATM Phase I) All high density international aerodromes (100,000 scheduled movements per annum or more) should provide an appropriate apron management service in order to regulate entry of aircraft into and coordinate exit of aircraft from the apron;		
ATM- Aerodrome coordination			November 2015- (Seamless ATM Phase I) All high density international aerodromes (100,000 scheduled movements per annum or more) should have appropriate ATM coordination on airport development and maintenance planning; coordination with local authorities regarding environmental, noise abatement, and obstacles; and ATM/PBN procedures for the aerodrome		
Aerodrome Capacity - assessment of passenger, airport gate, apron, taxiway and runway capacity;			November 2015- (Seamless ATM Phase I) All high density international aerodromes (100,000 scheduled movements per annum or more) should have a declared airport terminal and runway capacity November 2018- (Seamless ATM Phase II) All high density aerodromes should have a declared airport terminal and runway capacity		

ASBU B0-ACDM: Implementation Challenges				
Elements	Implementation Area			
	Ground system Implementation	Avionics Implementation	Procedures Availability	Operational Approvals
Airport CDM at all high density aerodromes	Inter connection of ground systems of all stakeholders	Nil	Lack of guidance material and Coordination procedures	Lack of Agreements (MOU) among stake holders, and procedures
Apron Management	communication facilities	Nil	Lack of Coordination procedures between a provider of ATS Services and the aerodrome operator.	Lac k of Agreements, (MOU) and procedures
ATM coordination	Nil	Nil	Lack of Coordination procedures	Lack of Agreements (MOU),and procedures
Aerodrome Capacity	Availability of space	Nil	Lack of guidance material to assess airport capacity	Nil

ASBU B0-ACDM: Performance Monitoring and Measurement (Implementation)	
Elements	Performance Indicators/Supporting Metrics
Airport CDM at all high density aerodromes.	% of applicable international aerodromes having implemented improved airport operations through airport-CDM (applicable=high density)
Apron Management	% of high density international aerodromes (100,000 scheduled movements per annum or more) providing an appropriate apron management service
ATM – Aerodrome coordination	% of high density international aerodromes having appropriate ATM coordination in accordance with the Seamless ATM Plan
Aerodrome Capacity –Phase 1	% of high density international aerodromes having declared capacity in accordance with the Seamless ATM Plan Phase 1
Aerodrome Capacity- Phase 2	% of high density aerodromes having declared capacity in accordance with the Seamless ATM Plan Phase 2

ASBU B0-ACDM: Performance Monitoring and Measurement (Benefits)	
Key Performance Areas	Performance Metrics
Access & Equity	Enhanced equity on the use of aerodrome facilities.
Capacity	Enhanced use of existing of gate and stands (unlock latent capacity). Reduced workload, better organization of the activities to manage flights. Enhanced aerodrome capacity
Efficiency	Improved operational efficiency (fleet management); and reduced delay. Reduced fuel burn due to reduced taxi time and lower aircraft engine run time. Improved aerodrome expansion in accordance with Master Plan
Environment	Reduced emissions due to reduced fuel burn
Safety	Not applicable