



International Civil Aviation Organization

ICAO

Thirteenth Meeting of the FANS Interoperability Team – Asia
(FIT-Asia/13)

Bangkok, Thailand, 06 – 09 June 2023

Agenda Item 3: PBCS Developments and Implementation

REVIEW OF ANNUAL PBCS SURVEY OF THE IMPLEMENTATION OF PERFORMANCE-BASED HORIZONTAL SEPARATION MINIMA

(Presented by ICAO)

SUMMARY

This paper presents the review of the annual PBCS survey of the implementation Status of Performance-based Horizontal Separation minima.

1. INTRODUCTION

1.1 The annual PBCS survey was introduced in 2016 following the fifth meeting of the FANS Interoperability Team – Asia (FIT-Asia/5), when ICAO disseminated a state letter (Ref T3/ 10.1.16 - AP064/ 16 (ATM)). The State letter highlighted the most significant issues requiring priority attention by States that provided performance-based separations using CPDLC and ADS-C, a draft APAC regional PBCS transition strategy and a survey of the current and planned implementation of performance-based horizontal separation minima.

1.2 The survey was amended accordingly to reflect the current separation standards in the PANS ATM (Doc 4444) at the FIT-Asia/12 in 2022. The PBCS implementation chart, which accompanies the ICAO's Regional PBCS Implementation Update paper, was updated as well.

1.3 Completion and submission of the completed PBCS survey report form is supported by a number of formal Conclusions¹ agreed by the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG), and its technical sub-group to which FIT-Asia reports – the Regional Airspace Safety Monitoring Advisory Group (RASMAG).

2. DISCUSSION

2.1 Some items in section 4 of the survey form (shown in **Figure 1**) may require clarification because the current and planned status are mixed in the survey. In addition, there are some editorial errors included in the survey form.

¹ Conclusions APANPIRG/27-7, RASMAG/22-3, APANPIRG/28-11, RASMAG/23-1, RASMAG/27-2.

4. Has your State implemented or planned to implement the following performance-based horizontal separation minima?				
Navigation Specifications & Applicable ATM Operations	RNAV/RNP	RNAV/RNP 10, RNP 4, RNP 2	50 NM Lateral Separation <i>Communication other than direct controller-pilot voice</i>	
		RNAV/RNP 10, RNP 4	50 NM Longitudinal Separation <i>RCP/240 and RSP/180</i>	
		RNP 4 or RNP 2	30 NM Longitudinal Separation	
			30 NM Lateral Separation <i>In cases where the ANSP has considered there is insufficient operational benefit to justify the investment in the change from 30 NM to 23 NM.</i>	
		23 NM Lateral Separation <i>Other planned or implemented separations dependent on RCP240/RSP180. Please also provide the DOC 4444 PANS-ATM reference.</i>		

Figure 1 – Current section 4 of the annual PBCS survey form

2.2 The meeting is invited to consider the following Draft Conclusion, for presentation to RASMAG/28.

Draft Conclusion FIT-Asia/13-X: Revised Survey of the Status of Current and Planned Implementation of Performance-Based Separation Minima

That, The revised *Survey of the Status of Current and Planned Implementation of Performance-Based Separation Minima* at **Attachment A** be uploaded to the Asia/Pacific Regional Office to replace the existing form

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information in this paper;
- b) discuss and agree to the revised regional status report form, for reporting implementation status to FIT-Asia, RASMAG and APANPIRG; and
- c) discuss any relevant matters as appropriate.

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Draft Conclusion FIT-Asia/13-x: Revised Survey of the Status of Current and Planned Implementation of Performance-Based Separation Minima	
What: That: The revised <i>Survey of the Status of Current and Planned Implementation of Performance-Based Separation Minima</i> at Attachment A be uploaded to the ICAO Asia/Pacific Regional Office website to replace the existing.	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: to rationalize and simplify the survey questions.	Follow-up: <input checked="" type="checkbox"/> Required from States
When: 9-Jun-23	Status: Draft to be adopted by Subgroup
Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other: XXXX	

SURVEY OF THE STATUS OF CURRENT AND PLANNED IMPLEMENTATION OF PERFORMANCE-BASED HORIZONTAL SEPARATION MINIMA
(proposed change marked up)

Instructions:

1. Complete the Survey at least once annually and return by email to the ICAO APAC Regional Office (apac@icao.int) by **NOT LATER THAN 28 FEBRUARY EACH YEAR.**

 2. **Administrations that provide ATC Separation Services in Category R airspace¹:**
 - Complete all sections of the form.

 3. **Administrations that do not provide separation services in Category R airspace:**
 - Complete Section 1 Group A (question A3), Group D and E
Refer ICAO Doc 9869 – PBCS Manual Appendix A refers.
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¹ The Asia/Pacific Seamless Air Navigation Services Plan defines Category R Airspace: ¹ Category R: remote en-route airspace with Air Traffic Services (ATS) HF or CPDLC communications and outside the coverage of ground-based surveillance ~~note~~ coverage.

1. Has your State/Administration completed any of the following preparations for PBCS implementation?					
PBCS Implementation Task List	Task Group	Task ID	TASK descriptor	Y/N	If NO, Planned Date
	Group A	A-1	AIP (Prescription of an RCP/RSP specification. Also see B-3 below)		
		A-2	PBCS policies, objectives supporting safety oversight of ANSP PBCS operations		
		A-3	PBCS policies, objectives supporting safety oversight of Aircraft Operator and Aircraft System PBCS operations		
		A-4	Proposal for Amendment to ICAO Doc 7030 - <i>Regional Supplementary Procedures</i> for PBCS operations , if applicable		
	Group B	B-1	PBCS Implementation Plan		
		B-2	Target dates for PBCS and relevant ATM operations		
		B-3	RCP/RSP specifications		
		B-4	PBCS awareness		
	Group C	C-1	Operational concepts and procedures for PBCS operations		
		C-2	ATM automation system changes to use flight plan RCP/RSP indicators		
		C-3	ATM automation changes for PBCS monitoring		
		C-4	Confirm initial ANSP compliance with RCP/RSP specifications		
	Group D	D-1	Aircraft operator readiness		
		D-2	Confirm initial operator and/or aircraft type/system compliance with RCP/RSP		
Group E	E-1	PBCS monitoring, analysis and reporting - post implementation			

2. Does your State/Administration submit data link problem reports (PRs) to a recognized Central Reporting Agency (CRA)?	Y/N	If NO, Planned Date

3. Does your State/Administration monitor and analyse data link performance in accordance with the following specifications and report the analysis to a recognized FANS Interoperability Team (FIT)?				Y/N	If NO, Planned Date
Communication Specifications & Interoperability Standards	Normal	RCP240	FANS1/A CPDLC		
	Alternate	RCP400	SATVOICE		
		RCP400	HF		
Surveillance Specifications & Interoperability Standards	Normal	RSP180	FANS1/A ADS-C		
	Alternate	RSP400	SATVOICE		
		RSP400	HF		

4. Has your State/Administration implemented, or does it plan to implement, the following performance-based horizontal separation minima?				Yes, already implemented	Yes, future (Planned Date)	NO
Navigation Specifications & Applicable ATM Operations	RNAV/RNP	RNAV/RNP 10, RNP 4, RNP 2	50 NM Lateral Separation <i>Communication other than direct controller-pilot VHF voice</i>			
		RNAV/RNP 10, RNP 4	50 NM Longitudinal Separation <i>RCP/240 and RSP/180</i>			
		RNP 4 or RNP 2	30 NM Longitudinal Separation <i>RCP/240 and RSP/180</i>			
			30 NM Lateral Separation <i>RCP/240 and RSP/180</i> <i>In cases where the ANSP has considered there is insufficient operational benefit to justify the investment in the change from 30 NM to 23 NM.</i>			
			23 NM Lateral Separation <i>RCP/240 and RSP/180</i>			
		20 NM Longitudinal Separation <i>RCP/240 and RSP/180</i>				
			Other planned or implemented separations dependent on RCP240/RSP180 <i>Please also provide the DOC 4444 PANS- ATM reference.</i>			

SURVEY OF THE STATUS OF CURRENT AND PLANNED IMPLEMENTATION OF PERFORMANCE-BASED HORIZONTAL SEPARATION MINIMA

(clean version incorporating proposed changes)

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		A-3	PBCS policies, objectives supporting safety oversight of Aircraft Operator and Aircraft System PBCS operations		
		A-4	Proposal for Amendment to ICAO Doc 7030 - <i>Regional Supplementary Procedures</i> for PBCS operations , if applicable		
	Group B	B-1	PBCS Implementation Plan		
		B-2	Target dates for PBCS and relevant ATM operations		
		B-3	RCP/RSP specifications		
		B-4	PBCS awareness		
	Group C	C-1	Operational concepts and procedures for PBCS operations		
C-2		ATM automation system changes to use flight plan RCP/RSP indicators			
C-3		ATM automation changes for PBCS monitoring			
C-4		Confirm initial ANSP compliance with RCP/RSP specifications			
Group D	D-1	Aircraft operator readiness			
	D-2	Confirm initial operator and/or aircraft type/system compliance with RCP/RSP			
Group E	E-1	PBCS monitoring, analysis and reporting - post implementation			

2. Does your Administration submit data link problem reports (PRs) to a recognized Central Reporting Agency (CRA)?	Y/N	If NO, Planned Date

3. Does your Administration monitor and analyse data link performance in accordance with the following specifications and report the analysis to a recognized FANS Interoperability Team (FIT)?				Y/N	If NO, Planned Date
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	Alternate	RCP400	SATVOICE		
		RCP400	HF		
Surveillance Specifications & Interoperability Standards	Normal	RSP180	FANS1/A ADS-C		
	Alternate	RSP400	SATVOICE		
		RSP400	HF		

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