



International Civil Aviation Organization

ICAO

Eleventh Meeting of the FANS Interoperability Team – Asia
(FIT-Asia/11)

Video Teleconference, 23 – 27 August 2021

Agenda Item 3: PBCS Developments and Implementation

REGIONAL SUPPLEMENTARY PROCEDURES UPDATE

(Presented by the Secretariat)

SUMMARY

This paper presents the status of Regional Supplementary Procedures supporting performance-based separations in Asia/Pacific airspace over the high seas.

1. INTRODUCTION

1.1 ICAO Doc. 7030 – *Regional Supplementary Procedures* provides the procedural means of implementing in airspace over the high seas the provisions of Doc 4444 – *Procedures for Air Navigation Services – Air Traffic Services (PANS-ATM)* that are subject to regional air navigation agreement, and any regionally agreed procedures supplementing the provisions of Annexes to the Convention and PANS. Doc. 7030 is available through the ICAO Secure Portal at <http://portallogin.icao.int/>.

1.2 Regional Supplementary Procedures must not be in conflict with the provisions contained in the Annexes or PANS.

1.3 Implementation of the performance-based separation minima based on RNAV 10/RNP 10, RNP 4 and/or RNP 2 and the supporting Performance-Based Communications and Surveillance (PBCS) specified in PANS-ATM in airspace over the high seas requires regional air navigation agreement and, therefore, supporting Regional Supplementary Procedures.

2. DISCUSSION

History of PBCS in Doc 7030 - APANPIRG/28 Outcomes

2.1 The 28th Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/28, Bangkok, Thailand, 11 to 14 September 2017) agreed to the following Conclusion:

Conclusion APANPIRG/28/15: PBCS-Related Proposals for Amendment to Regional Supplementary Procedures

That, ICAO Asia/Pacific Regional Office is requested to circulate to States and then submit for consideration by the Council of ICAO the Proposals for Amendment to Regional Supplementary Procedures MID/ASIA and PAC to support performance-based separation.

2.2 Accordingly, PfAs to Regional Supplementary Procedures were circulated to all States and relevant International Organizations on 7 December 2017.

2.3 State Letter T 3/2.1, T 3.3/9: AP039/18 (ATM), notifying Asia/Pacific Administrations, International Organizations and all other ICAO Regions of the approval of the PfA by the Council of ICAO was circulated on 28 March 2018. The State Letter, including the approved PfAs, is provided in **Attachment A**.

2.4 The meeting is invited to note that the current Regional Supplementary Procedures for PBCS implementation support the application of performance-based separations by Asia/Pacific Administrations in their FIRs detailed as in **Table 1**.

Administration FIR/s	50 NM Lateral RNAV 10 (RNP 10)	50 Longitudi nal RNAV 10 (RNP 10) with PBCS	23 NM Lateral RNP 4 or RNP 2 with PBCS	30 NM Longitudi nal RNP 4 or RNP 2 with PBCS
Australia Brisbane and Melbourne	✓	✓	✓	✓
China Sanya	✓	✓		
Hong Kong, China Hong Kong	✓	✓		
France (Polynésie Française) Tahiti	✓	✓	✓	✓
Fiji Nadi	✓	✓	✓	✓
Japan Fukuoka	✓	✓	✓	✓
Malaysia Kuala Lumpur	✓	✓		
Nauru Nauru	✓	✓	✓	✓
New Zealand Auckland Oceanic and New Zealand	✓	✓	✓	✓
Papua New Guinea Port Moresby	✓	✓	✓	✓
Singapore Singapore	✓	✓		
Solomon Islands Honiara	✓	✓	✓	✓
USA Anchorage and Oakland Oceanic	✓	✓	✓	✓
Viet Nam Ho Chi Minh	✓	✓		

Table 1: Doc 7030-supported Performance Based Separations per APAC State/FIR

2.5 States not listed in Table 1 may have currently implemented, or intend to implement, performance-based separations in the high seas airspace within their FIRs. Such States may include (but not be limited to):

India, Indonesia, Maldives, Myanmar, Philippines, Sri Lanka.

2.6 Additionally, as reflected in the report of the FIT-Asia/10 meeting, the need for the Hong Kong FIR to be supported by Doc 7030 procedures for performance-based separations should be clarified, as it was understood that the Hong Kong FIR had 100% radar/ADS-B and VHF radio coverage.

2.7 Following on from discussion at related meetings in the Asia/Pacific Region, most recently the Ninth Meeting of the South China Sea Traffic Flow Review Group (SCSTFRG/9, 01 -03 June 2021), ICAO APAC Regional Office has prepared a draft PfA to update Doc 7030 MID/ASIA SUPPS (Attachment B) to add the FIRs listed in **Table 2**.

Administration FIR/s	50 NM Lateral RNAV 10 (RNP 10)	50 Longitudi nal RNAV 10 (RNP 10) with PBCS	23 NM Lateral RNP 4 or RNP 2 with PBCS	30 NM Longitudi nal RNP 4 or RNP 2 with PBCS
Indonesia Ujung Pandang <i>Formal letter received by ICAO</i>	✓	✓	✓	✓
Philippines Manila	✓	✓		
Singapore Singapore	<i>implemented</i>	<i>implemented</i>		
Sri Lanka Colombo	✓	✓		
Hong Kong, China Hong Kong	For removal?	For removal?		

Table 2: Proposed update to Doc 7030 MID/ASIA

2.8 The meeting is invited to note that ICAO is currently working on a two-phase project to:

- a) restructure Doc 7030 (currently structured with MID/ASIA and PAC regions, and others) to align with the ICAO Regions (APAC, etc.); and
- b) conduct a follow-up review of the document to remove redundant information and carry through consequential changes arising from amendments to ICAO Annexes and PANS.

2.9 While a moratorium on processing of PfAs had been initiated, ICAO Headquarters has advised that the PfA in Attachment B may be processed, provided it is submitted shortly after the FIT-Asia/11 meeting. Accordingly the Administrations identified in Table 2 are requested to confirm the performance-based separations they intend to implement, and to provide as soon as possible a formal letter requesting the addition of their FIRs to the relevant paragraphs of Doc 7030 (Philippines, Singapore, Sri Lanka), or removal (Hong Kong China).

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) Note that Doc 7030 support is necessary for the implementation of performance-based separations in airspace over the high seas;
- c) Commit to a course of action to submit the necessary Proposals for Amendment to Doc 7030 (India, Maldives, Myanmar, and others, where necessary);
- d) Seek confirmation of details for the Doc 7030 PfA from Indonesia, Philippines and Sri Lanka.
- e) notify the ICAO Asia and Pacific Regional Office of any requirements or proposals for amendment to Doc 7030; and
- f) discuss any relevant matters as appropriate.

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Reference : T 3/2.1, T 3.3/9: AP039/18 (ATM)

28 March 2018

Subject : **Approval of a Proposal for Amendment to the Regional Supplementary Procedures (Doc 7030/5), (Serial No. APAC-S 17/10-MID/ASIA 2,3,4,5,6,7) (Serial No. APAC-S 17/11-PAC 2,3,4,5,6,7)**

Sir/Madam,

1. I wish to inform you that the attached amendment of the Proposal for Amendment to the Regional Supplementary Procedures (Doc 7030/5), (Serial No. APAC-S 17/10-MID/ASIA 2,3,4,5,6,7) (Serial No. APAC-S 17/11-PAC 2,3,4,5,6,7) has been processed according to the procedure approved by the Council on 13 March 2018 and so is now approved.
2. The material concerned will be implemented on 29 March 2018.
3. This change will be incorporated in the new Sixth Edition of Doc 7030/6 as part of the restructuring process of Doc 7030.

Yours sincerely.

Arun Mishra
ICAO Regional Director
Asia and Pacific

Enclosure:

Proposal for Amendment to the Regional
Supplementary Procedures (Doc 7030/5),
(Serial No. APAC-S 17/10-MID/ASIA 2,3,4,5,6,7)
(Serial No. APAC-S 17/11-PAC 2,3,4,5,6,7)

ATTACHMENT A
PROPOSAL FOR AMENDMENT OF THE
REGIONAL SUPPLEMENTARY PROCEDURES
MIDDLE EAST/ASIA (MID/ASIA) REGION (Doc. 7030/5)

(Serial No.: APAC-S 17/10-MID/ASIA 2,3,4,5,6,7)

a) **Regional Supplementary Procedures:**

MID/ASIA

b) **Proposed by:**

Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG)

c) **Proposed amendment:**

Editorial Note: Amendments are arranged to show deleted text using strikethrough (~~text to be deleted~~), and added text with grey shading (text to be inserted).

Glossary

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RCP	required communication performance
RSP	required surveillance performance
PBC	performance-based communication
PBCS	performance-based communication and surveillance
PBN	performance-based navigation
PBS	performance-based surveillance

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Chapter 2. FLIGHT PLANS

2.1 CONTENT – GENERAL
(A2 – Chapter 3; P-ATM – Chapter 4 and Appendix 2)

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2.1.5 Required communication performance (RCP) specifications

2.1.5.1 From 29 March 2018, all aircraft authorized for performance-based communication (PBC) and planning to operate in the MID/ASIA Region shall insert the appropriate descriptor(s) in Item 10a of the flight plan to indicate the compliance with the relevant required communication performance (RCP) specification(s).

2.1.6 Required surveillance performance (RSP) specifications

2.1.6.1 From 29 March 2018, all aircraft authorized for performance-based surveillance (PBS) and planning to operate in the MID/ASIA Region shall insert relevant required surveillance performance (RSP) specification(s) (e.g. RSP 180) in Item 18 of the flight plan following the SUR/ indicator.

2.1.57 Reduced vertical separation minimum (RVSM) approved aircraft

2.1.57.1 The aircraft registration shall be inserted in Item 18 of the ICAO flight plan form.

2.1.57.2 Operators of formation flights of State aircraft shall not insert the letter W in Item 10 of the ICAO flight plan form, regardless of the RVSM approval status of the aircraft concerned. Operators of formation flights of State aircraft intending to operate within the RVSM airspace specified in 4.2.2 shall include STS/NONRVSM in Item 18 of the ICAO flight plan form.

2.1.68 Non-RVSM-approved aircraft

2.1.68.1 Civil operators of non-RVSM-approved aircraft shall flight plan to operate outside the RVSM airspace specified in 4.2.2.

2.1.79 Non-RVSM-approved State aircraft

Nil.

2.1.810 Indication of 8.33 kHz channel spacing capability

Nil.

2.1.911 Route

Nil.

2.1.1012 Estimated times

Nil.

2.1.1113 Mach number

2.1.1113.1 For turbo-jet aircraft intending to operate within airspace and on air routes to which longitudinal separation minima utilizing Mach number technique will be applied, the planned true Mach number shall be specified in Item 15 of the flight plan.

2.1.1214 Alternative flight level

Nil.

2.1.1315 Special handling (STS)

Nil.

2.1.1416 Controller-pilot data link communications (CPDLC)

~~Nil~~

2.1.16.1 All aircraft planning to operate in the MID/ASIA Region and intending to use controller-pilot data link communications (CPDLC) shall insert the appropriate descriptor(s); (J2, J3, J4, J5, J6 and/or J7) in Item 10a of the flight plan.

2.1.17 Automatic dependent surveillance –contract (ADS-C)

2.1.17.1 All aircraft planning to operate in the MID/ASIA Region and intending to use automatic dependent surveillance — contract (ADS-C) services shall insert the D1 descriptor in Item 10b of the flight plan.

Editorial Note. — All remaining paragraphs in Chapter 2 are renumbered accordingly.

Chapter 3. COMMUNICATIONS

3.1 AIR-GROUND COMMUNICATIONS AND IN-FLIGHT REPORTING

3.1.1 Communications equipment

~~Nil~~

3.1.1 PERFORMANCE BASED COMMUNICATIONS (PBC)

(A6, Part I – Chapter 7; A6, Part II – Chapter 2.5; A6, Part III, Sections II and III – Chapter 5; A11 –

Chapters 2, 3 and 6; A15 – Chapter 7, P-ATM – Chapters 4 and 5, and Appendix 2)

Note.— *Additional guidance can be found in the ICAO Performance-based Communication and Surveillance (PBCS) Manual (Doc 9869).*

3.1.1.1 Required communication performance (RCP) Specifications

3.1.1.1.1 RCP 240

3.1.1.1.1.1 RCP 240 is applicable to communication systems used to support the separation minima specified in 6.2.1.4, 6.2.2.2 and 6.2.2.4.

Note.— *Note. As of 29 March 2018, the separation minima specified in 6.2.1.4, 6.2.2.2 and 6.2.2.4 will be applied in portions of the MID/ASIA Region, as notified in State AIPs.*

Means of compliance

3.1.1.1.1.2 The aircraft operator shall:

- a) implement provisions for receiving reports of performance and taking corrective actions for aircraft identified as not complying with RCP specification(s); and
- b) be authorized by the State of the Operator or the State of Registry, as appropriate, in order to qualify for the separation minima specified in 6.2.1.4, 6.2.2.2 and 6.2.2.4.

3.1.1.1.1.3 The air navigation services providers (ANSPs) shall:

- a) ensure that the communication system satisfies RCP 240 when applying the separation minima specified in 6.2.1.4, 6.2.2.2 and 6.2.2.4;
- b) establish PBCS monitoring programmes; and
- c) apply the appropriate flight plan designator to determine aircraft eligibility for the application of relevant separation minima.

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~~**3.3 CONTROLLER PILOT DATA LINK COMMUNICATIONS (CPDLC)**~~

~~Nil.~~

Editorial Note.— *All remaining paragraphs in Chapter 3 are renumbered accordingly.*

Editorial Note.— *Chapter 4 is included for reference and consequential amendments resulting from PBCS Pfa.*

Chapter 4. NAVIGATION

4.1 PERFORMANCE-BASED NAVIGATION (PBN)

Note.— *As the Middle East and Asia (MID/ASIA) Regions transition to PBN as contained in the Performance-based Navigation (PBN) Manual (Doc 9613), the contents of 4.1 will be amended.*

4.1.1 Area navigation (RNAV) specifications

4.1.1.1 RNAV 10 (RNP 10)

Note.— *RNAV 10 retains the RNP 10 designation, as specified in the Performance-based Navigation (PBN) Manual (Doc 9613), 1.2.3.5.*

Area of applicability

4.1.1.1.1 The RNAV 10 (RNP 10) specification or better is applicable to navigation systems used to support the separation minima specified in 6.2.1.3 and 6.2.2.2.

4.1.1.1.1 — For flights on designated controlled oceanic routes or areas within the Auckland Oceanic, Brisbane, Fukuoka, Ho Chi Minh, Hong Kong, Honiara, Kuala Lumpur, Melbourne, Nauru, New Zealand, Port Moresby, Sanya, and Singapore FIRs, a lateral separation minimum of 93 km (50 NM) may be applied.

4.1.1.1.2 — For flights on designated controlled oceanic routes or areas within the Auckland Oceanic, Brisbane, Fukuoka, Ho Chi Minh, Hong Kong, Honiara, Kuala Lumpur, Melbourne, Nauru, New Zealand, Port Moresby, Sanya, and Singapore FIRs, a longitudinal separation minimum of 93 km (50 NM) derived by RNAV may be applied between RNAV-equipped aircraft approved to RNP 10 or better, in accordance with the provisions of the PANS-ATM, 5.4.2.6.

Means of compliance

4.1.1.1.3 For application of 4.1.1.1.1 and 4.1.1.1.2, the aircraft and the operator must have been approved by the State of Registry or the State of the Operator, as appropriate, to meet the following requirements (or equivalent):

- a) aircraft navigation performance shall be such that the standard deviation of lateral track errors shall be less than 8.7 km (4.7 NM) (or the aircraft approved to RNP 10); and
- b) operator programmes shall be established to mitigate the occurrence of large navigational errors due to equipment malfunction or operational error:
 - 1) operator in-flight operating drills shall include mandatory navigation cross-checking procedures to identify navigation errors in sufficient time to prevent aircraft from inadvertent deviation from ATC-cleared route; and
 - 2) the operator shall establish programmes to provide for the continued airworthiness of aircraft navigation systems necessary to navigate to the degree of accuracy required.

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4.1.2 Required navigation performance (RNP) specifications

4.1.2.1 RNP 4

Area of applicability

4.1.2.1.1 The RNP 4 specification shall be applicable to navigation systems used to support the separation minima specified in 6.2.1.3, 6.2.1.4, 6.2.2.2 and 6.2.2.4

4.1.2.1.1 — For flights on designated controlled oceanic routes or areas within the Auckland Oceanic, Brisbane, Fukuoka, Honiara, Melbourne, Nauru, New Zealand and Port Moresby, FIRs, a lateral separation minimum of 55.5 km (30 NM) may be applied.

4.1.2.1.2 — For flights on designated controlled oceanic routes or areas within the Auckland Oceanic, Brisbane, Fukuoka, Honiara, Melbourne, Nauru, New Zealand and Port Moresby FIRs, a longitudinal separation minimum of 55.5 km (30 NM) derived by RNAV may be applied between RNAV-equipped aircraft approved to RNP 4 or better, in accordance with the provisions of the PANS-ATM 5.4.2.6.

Means of compliance

4.1.2.1.2 Aircraft must be approved by the State of Registry or the State of the Operator to RNP 4.

4.1.2.2 RNP 2

4.1.2.2.1 The RNP 2 specification shall be applicable to navigation systems used to support the separation minima specified in 6.2.1.3, 6.2.1.4, 6.2.2.2 and 6.2.2.4.

Means of compliance

4.1.2.2.2 Aircraft must be approved by the State of Registry or the State of the Operator to RNP 2.

Editorial Note.— All remaining paragraphs in Chapter 4 are renumbered accordingly.

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Chapter 5. SURVEILLANCE
(P-OPS, Vol. 1; P-ATM – Chapter 8)

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5.4 PERFORMANCE-BASED SURVEILLANCE (PBS)

~~**5.4 AUTOMATIC DEPENDENT SURVEILLANCE CONTRACT (ADS-C)**~~

~~Nil.~~

(A6, Part I – Chapter 7; A6, Part II – Chapter 2.5; A6, Part III, Sections II and III – Chapter 5; A11 – Chapters 2, 3 and 6; A15 – Chapter 7, P-ATM – Chapters 4 and 5, and Appendix 2)

Note.— Additional guidance can be found in the ICAO Performance-based Communication and Surveillance (PBCS) Manual (Doc 9869).

5.4.1 Required surveillance performance (RSP) specifications

5.4.1.2 RSP 180

5.4.1.2.1 RSP 180 is applicable to surveillance systems used to support the separation minima specified in 6.2.1.4, 6.2.2.2 and 6.2.2.4.

Means of compliance

5.4.1.2.2 The aircraft operator shall:

- a) implement provisions for receiving the reports of observed performance and taking corrective actions for aircraft identified as not complying with RSP specification(s); and
- b) be authorized by the State of the Operator or the State of Registry, as appropriate, in order to qualify for the separation minima specified in 6.2.1.4, 6.2.2.2 and 6.2.2.4.

5.4.1.2.3 The air navigation services providers (ANSPs) shall:

- a) ensure that the communication system satisfies RSP 180 when applying the separation minima specified in 6.2.1 and 6.2.2;
- b) establish PBCS monitoring programmes; and
- c) apply the appropriate flight plan designator to determine aircraft eligibility for application of relevant separation minima.

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Editorial Note.— All remaining paragraphs in Chapter 5 are renumbered accordingly.

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Chapter 6. AIR TRAFFIC SERVICES

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6.2 SEPARATION

6.2.1 Lateral

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6.2.1.3 The minimum lateral separation shall be 98 km (50 NM) between aircraft meeting RNAV 10 (RNP 10) in accordance with 4.1.1.1 on designated controlled oceanic routes or areas within the Auckland Oceanic, Brisbane, Fukuoka, Ho Chi Minh, Hong Kong, Honiara, Kuala Lumpur, Melbourne, Nauru, New Zealand, Port Moresby, Sanya and Singapore FIRs:

~~6.2.1.3 The minimum lateral separation shall be 93 km (50 NM) between aircraft meeting the provisions in 4.1.1.1.~~

6.2.1.4 The minimum lateral separation shall be 42.6 km (23 NM) between aircraft on designated controlled oceanic routes or areas within the Auckland Oceanic, Brisbane, Fukuoka, Honiara, Melbourne, Nauru, New Zealand and Port Moresby FIRs. This minimum is applied in accordance with 5.4.1.2.1.6 b) of PANS-ATM and provided the following conditions are met:

- a) communication – CPDLC RCP 240 per para, 3.1.1.1;
- b) navigation – RNP 4, or RNP 2 per para.4.1.2.1 and 4.1.2.2;
- c) surveillance – ADS-C RSP 180 per para. 5.4.1.2.

6.2.1.4 ~~The minimum lateral separation shall be 55.5 km (30 NM) between aircraft meeting the provisions in 4.1.2.1, provided:~~

- a) ~~the aircraft are approved by the State of Registry or the State of the Operator to RNP 4;~~
- b) ~~direct controller pilot voice communications or controller pilot data link communications (CPDLC) are maintained;~~
- c) ~~surveillance is maintained using an automatic dependent surveillance (ADS) system; and~~
- d) ~~an ADS lateral deviation change event contract is established, with a lateral deviation threshold of 9.3 km (5 NM)~~

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6.2.2 Longitudinal

(P-ATM – Chapters 5 and 13)

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6.2.2.2 The minimum longitudinal separation shall be 98 km (50 NM) between aircraft on designated controlled oceanic routes or areas within the Auckland Oceanic, Brisbane, Fukuoka, Ho Chi Minh, Hong Kong, Honiara, Kuala Lumpur, Melbourne, Nauru, New Zealand, Port Moresby, Sanya and Singapore FIRs. This minimum is applied in accordance with 5.4.2.9 of PANS-ATM and provided the following conditions are met:

- a) communication – CPDLC RCP 240 per para. 3.1.1.2;

- b) navigation – RNAV 10 (RNP 10), RNP 4, or RNP 2 per para. 4.1.1.1, 4.1.2.1 and 4.1.2.2;
- c) surveillance – ADS-C RSP 180 per para. 5.4.1.2.

~~6.2.2.2 The minimum longitudinal separation shall be 93 km (50 NM) derived by RNAV between aircraft meeting the provisions in 4.1.1.1.~~

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6.2.2.4 The minimum longitudinal separation shall be 55.5 km (30 NM) between aircraft on designated controlled oceanic routes or areas within the Auckland Oceanic, Brisbane, Fukuoka, Honiara, Melbourne, Nauru, New Zealand and Port Moresby FIRs. This minimum is applied in accordance with 5.4.2.9 of PANS-ATM and provided the following conditions are met:

- a) communication – CPDLC RCP 240 per para. 3.1.1.2;
- b) navigation – RNP 4, or RNP 2 per para. 4.1.2.1 and 4.1.2.2;
- c) surveillance – ADS-C RSP 180 per para. 5.4.1.2.

~~6.2.2.4 The minimum longitudinal separation shall be 55.5 km (30NM) between aircraft meeting the provisions in 4.1.2.1~~

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Chapter 7. SAFETY MONITORING

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7.2 AIRSPACE MONITORING

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7.2.4 PBCS

7.2.4.1 Adequate monitoring shall be conducted to assess continuing compliance of the communication and surveillance systems with the prescribed RCP and/or RSP specifications.

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Editorial Note.— All remaining paragraphs in Chapter 7 are renumbered accordingly.

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-END-

d) **Date when proposal received:**

15 September 2017

e) **Proposer's reason for amendment:**

1. This proposal for amendment was developed by ICAO Asia and Pacific Regional Office responding to the request by the 28th Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/28, Bangkok, Thailand, 11 to 14 September 2017) that ICAO circulate to States and then submit for consideration by the Council of ICAO the Proposals for Amendment to ICAO Doc 7030 Regional

Supplementary Procedures MID/ASIA and PAC to support performance-based separation. *Conclusion APANPIRG/28/15* Refers. The new performance-based communication and surveillance (PBCS) provisions supporting performance-based separation became applicable in November 2016 under amendments to ICAO Annexes 6 and 11, and Doc 4444.

2. This amendment is necessary to ensure that Doc 7030 is updated to correctly support the current standards and procedures specified in Annexes 6 and 11 and Doc 4444.
3. Annex 11 sections 2.8.1 and 2.9.1 state that the RCP and RSP specifications shall be prescribed, when applicable, on the basis of regional air navigation agreements. This proposal for amendment will represent the agreement of the MID/ASIA Region on the implementation operator authorization and flight planning requirements and, in specified FIRs, separation minima based on PBC, PBN and PBS.
4. The following APANPIRG/27 (September 2016) and APANPIRG/28 Conclusions support this PFA:
 - a. *Conclusion APANPIRG/27/7: PBCS Operator Requirements*, urging States to take appropriate measures to enable aircraft operators to file RCP and RSP indicators in flight plans;
 - b. *Conclusion APANPIRG/27/8: State Implementation of ICAO Provisions for PBCS*, urging States that apply or plan to apply performance-based separation to implement ATM system capability by not later than 29 March 2018, and apply common implementation dates supported by joint submissions of PfAs to Doc 7030;
 - c. *Conclusion APANPIRG/27/9: Asia/Pacific Region PBCS Transition Strategy*, endorsing a strategy for implementation of the new PBCS provisions in Annexes 6 and 11 and Doc 4444 by not later 29 March 2018;
Note: The Asia/Pacific Region PBCS Transition Strategy was developed in coordination with the North Atlantic (NAT) Region Systems Planning Group (NAT SPG).
 - d. *Conclusion APANPIRG/28/11: PBCS Operational Authorizations*, urging States to expedite action on the development and implementation of a PBCS authorization process, to share information on the availability of PBCS regulatory material and operator readiness, and to monitor and make available communications and surveillance performance against the RCP 240 and RSP 180 specifications;
 - e. *Conclusion APANPIRG/28/15: PBCS-Related Proposals for Amendment to Regional Supplementary Procedures*, requesting the ICAO Asia/Pacific Regional Office to circulate to States and then submit to the Council of ICAO this PFA.
5. Taking similar action in support of the PBCS implementation the 52nd Meeting of the North Atlantic Systems Planning Group (NAT SPG/52, June 2016) approved Conclusions 52/19 and 52/20 urging: a) user States (States of the Operator or Registry) to take appropriate measures to develop, establish and implement necessary policies and procedures to ensure that their operators conducting flights in the NAT Region would be compliant with PBCS requirements, and b) the NAT provider States and their ANSPs that planned to apply 42.6 km (23 NM) lateral separation minimum and/or 55.5 km (30 NM), 93 km (50 NM) and/or 5-minute longitudinal separation minima implement the capability to process and apply ICAO PBCS flight plan designators to determine aircraft eligibility for performance-based horizontal separation by 29 March 2018.

f) **Proposed implementation date of the amendment:**

Upon approval by Council.

g) Action by the Secretary General:

The proposal has been circulated to the following States and international organizations:

Afghanistan	Estonia	Niger
Albania	Ethiopia	Nigeria
Algeria	Finland	Norway
Andorra	France	Oman
Angola	Gabon	Pakistan
Argentina	Gambia	Paraguay
Armenia	Georgia	Peru
Australia	Germany	Philippines
Austria	Ghana	Poland
Azerbaijan	Greece	Portugal
Bahamas	Guinea-Bissau	Qatar
Bahrain	Haiti	Republic of Korea
Bangladesh	Hungary	Republic of Moldova
Belarus	Iceland	Romania
Belgium	India	Russian Federation
Benin	Indonesia	San Marino
Bhutan	Iran (Islamic Republic of)	Saudi Arabia
Bolivia (Plurinational State of)	Iraq	Senegal
Bosnia and Herzegovina	Ireland	Serbia
Botswana	Israel	Seychelles
Brazil	Italy	Sierra Leone
Brunei Darussalam	Jamaica	Singapore
Bulgaria	Japan	Slovakia
Burkina Faso	Jordan	Slovenia
Cameroon	Kazakhstan	Somalia
Canada	Kenya	South Africa
Cape Verde	Kuwait	Spain
Central African Republic	Kyrgyzstan	Sri Lanka
Chad	Latvia	Sudan
Chile	Lebanon	Suriname
China	Libya	Swaziland
Colombia	Lithuania	Sweden
Congo	Luxembourg	Switzerland
Côte d'Ivoire	Madagascar	Syrian Arab Republic
Croatia	Malaysia	Tajikistan
Cuba	Maldives	Thailand
Cyprus	Mali	The Former Yugoslav Republic of Macedonia
Czech Republic	Malta	Togo
Democratic People's Rep. of Korea	Mauritania	Trinidad and Tobago
Democratic Republic of the Congo	Mauritius	Tunisia
Denmark	Mexico	Turkey
Djibouti	Monaco	Turkmenistan
Dominican Republic	Mongolia	Uganda
Ecuador	Montenegro	Ukraine
Egypt	Morocco	United Arab Emirates
El Salvador	Mozambique	United Kingdom
Eritrea	Namibia	United Republic of Tanzania
	Nepal	United States
	Netherlands	Uruguay
	New Zealand	

Uzbekistan		IBAC
Venezuela	EUROCONTROL	IFALPA
Viet Nam	CANSO	IFATCA
Yemen	IACA	
Zambia	IAOPA	
Zimbabwe	IATA	

h) Secretariat's comments:

This proposal for amendment was initially developed by the FANS Interoperability Team – Asia (FIT-Asia) as a template for submission by States or Groups of States and, following the request by APANPIRG/28 under Conclusion APANPIRG/28/15, further developed and modified in consultation between the ICAO Asia/Pacific Regional Office and ICAO Headquarters. This ensures conformance with the provisions of Annexes 6 and 11 and the PANS-ATM, and with the ICAO rules and practices for drafting amendments to Regional Supplementary Procedures, and provides for alignment with Regional Supplementary Procedures and NAT and PAC where necessary.

The provisions in this PfA related to implementation of PBCS by ANSPs to support the application of performance-based separation by ATC apply only to the FIRs previously specified in Doc 7030 to provide separation based on RNAV 10/RNP 10 and RNP 4.

The provisions in this PfA related to operator authorizations and flight planning of PBCS capability apply to all operators (and their States) that plan to operate flights in airspace where performance-based separation requiring PBCS may be applied to their flights.

ATTACHMENT B

PROPOSAL FOR AMENDMENT OF THE REGIONAL SUPPLEMENTARY PROCEDURES PACIFIC (PAC) REGION (Doc. 7030/5)

(Serial No.: APAC-S 17/11-PAC 2, 3, 4, 5, 6, 7)

a) **Regional Supplementary Procedures:**

PAC.

b) **Proposed by:**

Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG)

c) **Proposed amendment:**

Editorial Note: Amendments are arranged to show deleted text using strikethrough (~~text to be deleted~~), and added text with grey shading (text to be inserted).

Glossary

...

RCP	required communication performance
RSP	required surveillance performance
PBC	performance-based communication
PBCS	performance-based communication and surveillance
PBN	performance-based navigation
PBS	performance-based surveillance

...

Chapter 2. FLIGHT PLANS

2.1 CONTENT – GENERAL

(A2 – Chapter 3; P-ATM – Chapter 4 and Appendix 2)

...

2.1.5 Required communication performance (RCP) specifications

2.1.5.1 From 29 March 2018, all aircraft authorized for performance-based communication (PBC) and planning to operate in the PAC Region shall insert the appropriate descriptor(s) in Item 10a of the flight plan to indicate the compliance with the relevant required communication performance (RCP) specification(s).

2.1.6 Required surveillance performance (RSP) specifications

2.1.6.1 From 29 March 2018, all aircraft authorized for performance-based surveillance (PBS) and planning to operate in the PAC Region shall insert relevant required surveillance performance (RSP) specification(s) (e.g. RSP 180) in Item 18 of the flight plan following the SUR/ indicator.

2.1.57 Reduced vertical separation minimum (RVSM) approved aircraft

2.1.57.1 The aircraft registration shall be inserted in Item 18 of the ICAO flight plan form.

2.1.68 Non-RVSM-approved aircraft

Nil.

2.1.79 Non-RVSM-approved State aircraft

Nil.

2.1.810 Indication of 8.33 kHz channel spacing capability

Nil.

2.1.911 Route

Nil.

2.1.1012 Estimated times

Nil.

2.1.1113 Mach number

2.1.1113.1 For turbo-jet aircraft intending to operate within the Anchorage Oceanic and Oakland Oceanic FIRs, the planned true Mach number shall be specified in Item 15 of the flight plan.

2.1.1214 Alternative flight level

Nil.

2.1.1315 Special handling (STS)

Nil.

2.1.1416 Controller-pilot data link communications (CPDLC)

~~Nil~~

2.1.16.1 All aircraft planning to operate in the PAC Region and intending to use controller-pilot data link communications (CPDLC) shall insert the appropriate descriptor(s); (J2, J3, J4, J5, J6 and/or J7) in Item 10a of the flight plan.

2.1.17 Automatic dependent surveillance –contract (ADS-C)

2.1.17.1 All aircraft planning to operate in the PAC Region and intending to use automatic dependent surveillance — contract (ADS-C) services shall insert the D1 descriptor in Item 10b of the flight plan.

Editorial Note. — All remaining paragraphs in Chapter 2 are renumbered accordingly.

Chapter 3. COMMUNICATIONS

3.1 AIR-GROUND COMMUNICATIONS AND IN-FLIGHT REPORTING

3.1.1 Communications equipment

Nil

3.1.1 PERFORMANCE BASED COMMUNICATIONS (PBC)

(A6, Part I – Chapter 7; A6, Part II – Chapter 2.5; A6, Part III, Sections II and III – Chapter 5; A11 – Chapters 2, 3 and 6; A15 – Chapter 7, P-ATM – Chapters 4 and 5, and Appendix 2)

Note.— Additional guidance can be found in the ICAO Performance-based Communication and Surveillance (PBCS) Manual (Doc 9869).

3.1.1.1 Required communication performance (RCP) Specifications

3.1.1.1.1 RCP 240

3.1.1.1.1.1 RCP 240 is applicable to communication systems used to support the separation minima specified in 6.2.1.4, 6.2.2.2 and 6.2.2.4.

Note. As of 29 March 2018, the separation minima specified in 6.2.1.4, 6.2.2.2 and 6.2.2.4 will be applied in portions of the PAC Region, as notified in State AIPs.

Means of compliance

3.1.1.1.1.2 The aircraft operator shall:

- a) implement provisions for receiving reports of performance and taking corrective actions for aircraft identified as not complying with RCP specification(s); and
- b) be authorized by the State of the Operator or the State of Registry, as appropriate, in order to qualify for the separation minima specified in 6.2.1.4, 6.2.2.2 and 6.2.2.4.

3.1.1.1.1.3 The air navigation services providers (ANSPs) shall:

- a) ensure that the communication system satisfies RCP 240 when applying the separation minima specified in 6.2.1.4, 6.2.2.2 and 6.2.2.4;
- b) establish PBCS monitoring programmes; and
- c) apply the appropriate flight plan designator to determine aircraft eligibility for the application of relevant separation minima.

...

~~3.3 CONTROLLER PILOT DATA LINK COMMUNICATIONS (CPDLC)~~

Nil.

Editorial Note.— All remaining paragraphs in Chapter 3 are renumbered accordingly.

Editorial Note.— Chapter 4 is included for reference and consequential amendments resulting from PBCS Pfa.

Chapter 4. NAVIGATION

4.1 PERFORMANCE-BASED NAVIGATION (PBN)

Note.— *As the Pacific (PAC) Region transition to PBN as contained in the Performance-based Navigation (PBN) Manual (Doc 9613), the contents of 4.1 will be amended.*

4.1.1 Area navigation (RNAV) specifications

4.1.1.1 RNAV 10 (RNP 10)

Note.— *RNAV 10 retains the RNP 10 designation, as specified in the Performance-based Navigation (PBN) Manual (Doc 9613), 1.2.3.5.*

Area of applicability

4.1.1.1.1 The RNAV 10 (RNP 10) specification or better is applicable to navigation systems used to support the separation minima specified in 6.2.1.3 and 6.2.2.2.

~~4.1.1.1.1 For flights on designated controlled oceanic routes or areas within the Anchorage Oceanic, Auckland Oceanic, Nadi, Oakland Oceanic and Tahiti FIRs, a lateral separation minimum of 93 km (50 NM) may be applied.~~

~~4.1.1.1.2 For flights on designated controlled oceanic routes or areas within the Anchorage Oceanic, Auckland Oceanic, Nadi, Oakland Oceanic and Tahiti FIRs, a longitudinal separation minimum of 93 km (50 NM) derived by RNAV may be applied between RNAV-equipped aircraft approved to RNP 10 or better, in accordance with the provisions of the PANS-ATM, 5.4.2.6.~~

Means of compliance

4.1.1.1.3~~2~~ For application of 4.1.1.1.1 ~~and 4.1.1.1.2~~, the aircraft and the operator must have been approved by the State of Registry or the State of the Operator, as appropriate, to meet the following requirements (or equivalent):

- a) aircraft navigation performance shall be such that the standard deviation of lateral track errors shall be less than 8.7 km (4.7 NM) (or the aircraft approved to RNP 10); and
- b) operator programmes shall be established to mitigate the occurrence of large navigational errors due to equipment malfunction or operational error:
 - 1) operator in-flight operating drills shall include mandatory navigation cross-checking procedures to identify navigation errors in sufficient time to prevent aircraft from inadvertent deviation from ATC-cleared route; and
 - 2) the operator shall establish programmes to provide for the continued airworthiness of aircraft navigation systems necessary to navigate to the degree of accuracy required.

...

4.1.2 Required navigation performance (RNP) specifications

4.1.2.1 RNP 4

Area of applicability

4.1.2.1.1 The RNP 4 specification shall be applicable to navigation systems used to support the separation minima specified in 6.2.1.3, 6.2.1.4, 6.2.2.2 and 6.2.2.4.

~~4.1.2.1.1 For flights on designated controlled oceanic routes or areas within the Anchorage Oceanic, Auckland Oceanic, Nadi, Oakland Oceanic and Tahiti FIRs, a lateral separation minimum of~~

~~55.5 km (30 NM) may be applied.~~

~~4.1.2.1.2 For flights on designated controlled oceanic routes or areas within the Anchorage Oceanic, Auckland Oceanic, Nadi, Oakland Oceanic and Tahiti FIRs, a longitudinal separation minimum of 55.5 km (30 NM) derived by RNAV may be applied between RNAV equipped aircraft approved to RNP 4 or better, in accordance with the provisions of the PANS-ATM 5.4.2.6.~~

Means of compliance

~~4.1.2.1.2.3 Aircraft must be approved by the State of Registry or the State of the Operator to RNP 4.~~

4.1.2.2 RNP 2

~~4.1.2.2.1 The RNP 2 specification shall be applicable to navigation systems used to support the separation minima specified in in 6.2.1.3, 6.2.1.4, 6.2.2.2 and 6.2.2.4.~~

Means of compliance

~~4.1.2.2.2 Aircraft must be approved by the State of Registry or the State of the Operator to RNP 2.~~

Editorial Note.— All remaining paragraphs in Chapter 4 are renumbered accordingly.

...

Chapter 5. SURVEILLANCE (P-ATM – Chapter 8; P-OPS, Vol. I, Part III)

...

5.4 PERFORMANCE-BASED SURVEILLANCE (PBS)

~~**5.4 AUTOMATIC DEPENDENT SURVEILLANCE CONTRACT (ADS-C)**~~

~~Nil.~~

~~(A6, Part I – Chapter 7; A6, Part II – Chapter 2.5; A6, Part III, Sections II and III – Chapter 5; A11 – Chapters 2, 3 and 6; A15 – Chapter 7, P-ATM – Chapters 4 and 5, and Appendix 2)~~

~~*Note.— Additional guidance can be found in the ICAO Performance-based Communication and Surveillance (PBCS) Manual (Doc 9869).*~~

5.4.1 Required surveillance performance (RSP) specifications

5.4.1.2 RSP 180

~~5.4.1.2.1 RSP 180 is applicable to surveillance systems used to support the separation minima specified in 6.2.1.4, 6.2.2.2 and 6.2.2.4.~~

Means of compliance

~~5.4.1.2.2 The aircraft operator shall:~~

- ~~a) implement provisions for receiving the reports of observed performance and taking corrective actions for aircraft identified as not complying with RSP specification(s); and~~

- b) be authorized by the State of the Operator or the State of Registry, as appropriate, in order to qualify for the separation minima specified in 6.2.1.4, 6.2.2.2 and 6.2.2.4.

5.4.1.2.3 The air navigation services providers (ANSP) shall:

- a) ensure that the communication system satisfies RSP 180 when applying the separation minima specified in 6.2.1.4, 6.2.2.2 and 6.2.2.4;
- b) establish PBCS monitoring programmes; and
- c) apply the appropriate flight plan designator to determine aircraft eligibility for application of relevant separation minima.

...

Editorial Note.— All remaining paragraphs in Chapter 5 are renumbered accordingly.

...

Chapter 6. AIR TRAFFIC SERVICES

(A11 – Attachment B; P-ATM – Chapters 5 and 15)

...

6.2 SEPARATION

6.2.1 Lateral

...

6.2.1.2 The minimum lateral separation shall be 98 km (50 NM) between aircraft meeting RNAV 10 (RNP 10) in accordance with 4.1.1.1 on designated controlled oceanic routes or areas within the Anchorage Oceanic, Auckland Oceanic, Nadi, Oakland Oceanic and Tahiti FIRs.

~~6.2.1.2 The minimum lateral separation shall be 93 km (50 NM) between aircraft meeting the provisions in 4.1.1.1.~~

6.2.1.3 The minimum lateral separation shall be 42.6 km (23 NM) between aircraft on designated controlled oceanic routes or areas within the Anchorage Oceanic, Auckland Oceanic, Nadi, Oakland Oceanic and Tahiti FIRs. This minimum is applied in accordance with 5.4.1.2.1.6 b) of PANS-ATM and the following:

- a) communication – CPDLC RCP 240 per para. 3.1.1.1;
- b) navigation – RNP 4, or RNP 2 per para. 4.1.2.1 and 4.1.2.2;
- c) surveillance – ADS-C RSP 180 per para. 5.4.1.2.

6.2.1.3 ~~The minimum lateral separation shall be 55.5 km (30 NM) between aircraft meeting the provisions in 4.1.2.1, provided:~~

- a) ~~the aircraft are approved by the State of Registry or the State of the Operator to RNP 4;~~
- b) ~~direct controller pilot voice communications or controller pilot data link communications (CPDLC) are maintained;~~
- c) ~~surveillance is maintained using an automatic dependent surveillance (ADS) system; and~~

- d) ~~an ADS lateral deviation change event contract is established, with a lateral deviation threshold of 9.3 km (5 NM)~~

6.2.2 Longitudinal

(P-ATM – Chapters 5 and 13)

...

6.2.2.2 The minimum longitudinal separation shall be 98 km (50 NM) between aircraft on designated controlled oceanic routes or areas within the Anchorage Oceanic, Auckland Oceanic, Nadi, Oakland Oceanic and Tahiti FIRs. This minimum is applied in accordance with 5.4.2.9 of PANS-ATM and provided the following conditions are met:

- d) communication – CPDLC RCP 240 per para. 3.1.1.2;
- e) navigation – RNAV 10 (RNP 10), RNP 4, or RNP 2 per para. 4.1.2.1 and 4.1.2.2;
- f) surveillance – ADS-C RSP 180 per para. 5.4.1.2.

6.2.2.3 ~~The minimum longitudinal separation shall be 55.5 km (30 NM) between aircraft meeting the provisions in 4.1.2.1.~~

~~———— Note. ADS is required for the application of this minimum; therefore, the applicable provisions will be those of PANS-ATM, 5.4.2.6.1 to 5.4.2.6.3 and 5.4.2.6.4.~~

6.2.2.3 The minimum longitudinal separation shall be 55.5 km (30 NM) between aircraft on designated controlled oceanic routes or areas within the Anchorage Oceanic Auckland Oceanic, Nadi, Oakland Oceanic and Tahiti FIRs. This minimum is applied in accordance with 5.4.2.9 of PANS-ATM and provided the following conditions are met:

- d) communication – CPDLC RCP 240 per para. 3.1.1.2;
- e) navigation – RNP 4, or RNP 2 per para. 4.1.2.1 and 4.1.2.2;
- f) surveillance – ADS-C RSP 180 per para. 5.4.1.2.

....

Chapter 7. SAFETY MONITORING

...

7.2 AIRSPACE MONITORING

...

7.2.4 PBCS

7.2.4.1 Adequate monitoring shall be conducted to assess continuing compliance of the communication and surveillance systems with the prescribed RCP and/or RSP specifications.

...

Editorial Note.— All remaining paragraphs in Chapter 7 are renumbered accordingly.

...

-END-**d) Date when proposal received:**

15 September 2017

e) Proposer's reason for amendment:

3. This proposal for amendment was developed by ICAO Asia and Pacific Regional Office responding to the request by the 28th Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/28, Bangkok, Thailand, 11 to 14 September 2017) that ICAO circulate to States and then submit for consideration by the Council of ICAO the Proposals for Amendment to ICAO Doc 7030 Regional Supplementary Procedures MID/ASIA and PAC to support performance-based separation. *Conclusion APANPIRG/28/15 Refers.* The new performance-based communication and surveillance (PBCS) provisions supporting performance-based separation became applicable in November 2016 under amendments to ICAO Annexes 6 and 11 and Doc 4444.
4. This amendment is necessary to ensure that Doc 7030 is updated to correctly support the current standards and procedures specified in Annexes 6 and 11 and Doc 4444.
5. Annex 11 sections 2.8.1 and 2.9.1 state that the RCP and RSP specifications shall be prescribed, when applicable, on the basis of regional air navigation agreements. This proposal for amendment will represent the agreement of the PAC Region on the implementation operator authorization and flight planning requirements and, in specified FIRs, separation minima based on PBC, PBN and PBS.
6. The following APANPIRG/27 (September 2016) and APANPIRG/28 Conclusions support this PfA:
 - a. *Conclusion APANPIRG/27/7: PBCS Operator Requirements*, urging States to take appropriate measures to enable aircraft operators to file RCP and RSP indicators in flight plans;
 - b. *Conclusion APANPIRG/27/8: State Implementation of ICAO Provisions for PBCS*, urging States that apply or plan to apply performance-based separation to implement ATM system capability by not later than 29 March 2018, and apply common implementation dates supported by joint submissions of PfAs to Doc 7030;
 - c. *Conclusion APANPIRG/27/9: Asia/Pacific Region PBCS Transition Strategy*, endorsing a strategy for implementation of the new PBCS provisions in Annexes 6 and 11 and Doc 4444 by not later 29 March 2018;
Note: The Asia/Pacific Region PBCS Transition Strategy was developed in coordination with the North Atlantic (NAT) Region Systems Planning Group (NAT SPG).
 - d. *Conclusion APANPIRG/28/11: PBCS Operational Authorizations*, urging States to expedite action on the development and implementation of a PBCS authorization process, to share information on the availability of PBCS regulatory material and operator readiness, and to monitor and make available communications and surveillance performance against the RCP 240 and RSP 180 specifications;
 - e. *Conclusion APANPIRG/28/15: PBCS-Related Proposals for Amendment to Regional Supplementary Procedures*, requesting the ICAO Asia/Pacific

Regional Office to circulate to States and then submit to the Council of ICAO this PfA.

7. Taking similar action in support of the PBCS implementation the 52nd Meeting of the North Atlantic Systems Planning Group (NAT SPG/52, June 2016) approved Conclusions 52/19 and 52/20 urging: a) user States (States of the Operator or Registry) to take appropriate measures to develop, establish and implement necessary policies and procedures to ensure that their operators conducting flights in the NAT Region would be compliant with PBCS requirements, and b) the NAT provider States and their ANSPs that planned to apply 42.6 km (23 NM) lateral separation minimum and/or 55.5 km (30 NM), 93 km (50 NM) and/or 5-minute longitudinal separation minima implement the capability to process and apply ICAO PBCS flight plan designators to determine aircraft eligibility for performance-based horizontal separation by 29 March 2018.

f) **Proposed implementation date of the amendment:**

Upon approval by Council.

g) **Action by the Secretary General:**

The proposal has been circulated to the following States and international organizations:

Afghanistan	Croatia	Italy
Albania	Cuba	Jamaica
Algeria	Cyprus	Japan
Andorra	Czech Republic	Jordan
Angola	Democratic People's Rep. of	Kazakhstan
Argentina	Korea	Kenya
Armenia	Democratic Republic of the	Kuwait
Australia	Congo	Kyrgyzstan
Austria	Denmark	Latvia
Azerbaijan	Djibouti	Lebanon
Bahamas	Dominican Republic	Libya
Bahrain	Ecuador	Lithuania
Bangladesh	Egypt	Luxembourg
Belarus	El Salvador	Madagascar
Belgium	Eritrea	Malaysia
Benin	Estonia	Maldives
Bhutan	Ethiopia	Mali
Bolivia (Plurinational State of)	Finland	Malta
Bosnia and Herzegovina	France	Mauritania
Botswana	Gabon	Mauritius
Brazil	Gambia	Mexico
Brunei Darussalam	Georgia	Monaco
Bulgaria	Germany	Mongolia
Burkina Faso	Ghana	Montenegro
Cameroon	Greece	Morocco
Canada	Guinea-Bissau	Mozambique
Cape Verde	Haiti	Namibia
Central African Republic	Hungary	Nepal
Chad	Iceland	Netherlands
Chile	India	New Zealand
China	Indonesia	Niger
Colombia	Iran (Islamic Republic of)	Nigeria
Congo	Iraq	Norway
Côte d'Ivoire	Ireland	Oman
	Israel	Pakistan

Paraguay	South Africa	United Republic of Tanzania
Peru	Spain	United States
Philippines	Sri Lanka	Uruguay
Poland	Sudan	Uzbekistan
Portugal	Suriname	Venezuela
Qatar	Swaziland	Viet Nam
Republic of Korea	Sweden	Yemen
Republic of Moldova	Switzerland	Zambia
Romania	Syrian Arab Republic	Zimbabwe
Russian Federation	Tajikistan	
San Marino	Thailand	EUROCONTROL
Saudi Arabia	The Former Yugoslav	CANSO
Senegal	Republic of Macedonia	IACA
Serbia	Togo	IAOPA
Seychelles	Trinidad and Tobago	IATA
Sierra Leone	Tunisia	IBAC
Singapore	Turkey	IFALPA
Slovakia	Turkmenistan	IFATCA
Slovenia	Uganda	
Somalia	Ukraine	
	United Arab Emirates	
	United Kingdom	

h) Secretariat's comments:

This proposal for amendment was initially developed by the FANS Interoperability Team – Asia (FIT-Asia) as a template for submission by States or Groups of States and, following the request by APANPIRG/28 under Conclusion APANPIRG/28/15, further developed and modified in consultation between the ICAO Asia/Pacific Regional Office and ICAO Headquarters. This ensures conformance with the provisions of Annexes 6 and 11 and the PANS-ATM, and with the ICAO rules and practices for drafting amendments to Regional Supplementary Procedures, and provides for alignment with Regional Supplementary Procedures MID/ASIA and NAT where necessary.

The provisions in this PfA related to implementation of PBCS by ANSPs to support the application of performance-based separation by ATC apply only to the FIRs previously specified in Doc 7030 to provide separation based on RNAV 10/RNP 10 and RNP 4.

The provisions in this PfA related to operator authorizations and flight planning of PBCS capability apply to all operators (and their States) that plan to operate flights in airspace where performance-based separation requiring PBCS may be applied to their flights.

— END —

**PROPOSAL FOR AMENDMENT OF THE
REGIONAL SUPPLEMENTARY PROCEDURES
MIDDLE EAST/ASIA (MID/ASIA) REGION (Doc. 7030/5)**

(Serial No.: APAC-S 21/XX-MID/ASIA 6,7)

a) Regional Supplementary Procedures:

MID/ASIA

b) Proposed by:

Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG)

c) Proposed amendment:

Editorial Note: Amendments are arranged to show deleted text using ~~text to be deleted~~, and added text with grey shading (text to be inserted).

...

Chapter 6. AIR TRAFFIC SERVICES

...

6.2 SEPARATION

6.2.1 Lateral

...

6.2.1.3 The minimum lateral separation shall be ~~98~~ 93 km (50 NM) between aircraft meeting RNAV 10 (RNP 10) in accordance with 4.1.1.1 on designated controlled oceanic routes or areas within the Auckland Oceanic, Brisbane, Colombo, Fukuoka, Ho Chi Minh, Hong Kong, Honiara, Kuala Lumpur, Manila, Melbourne, Nauru, New Zealand, Port Moresby, Sanya, ~~and~~ Singapore and Ujung Pandang FIRs.

6.2.1.4 The minimum lateral separation shall be 42.6 km (23 NM) between aircraft on designated controlled oceanic routes or areas within the Auckland Oceanic, Brisbane, Fukuoka, Honiara, Melbourne, Nauru, New Zealand, ~~and~~ Port Moresby, Singapore and Ujung Pandang FIRs. This minimum is applied in accordance with 5.4.1.2.1.6 b) of PANS-ATM and provided the following conditions are met:

- a) communication – CPDLC RCP 240 ~~per para~~ in accordance with 3.1.1.1.1;
- b) navigation – RNP 4, or RNP 2 ~~per para~~ in accordance with 4.1.2.1 and 4.1.2.2;
- c) surveillance – ADS-C RSP 180 ~~per para~~ in accordance with 5.4.1.2

...

6.2.2 Longitudinal

(P-ATM – Chapters 5 and 13)

...

6.2.2.2 The minimum longitudinal separation shall be 98-93 km (50 NM) between aircraft on designated controlled oceanic routes or areas within the Auckland Oceanic, Brisbane, Colombo, Fukuoka, Ho Chi Minh, Hong Kong, Honiara, Kuala Lumpur, Manila, Melbourne, Nauru, New Zealand, Port Moresby, Sanya, and Singapore and Ujung Pandang FIRs. This minimum is applied in accordance with 5.4.2.9 of PANS-ATM and provided the following conditions are met:

- a) Communication – CPDLC RCP240 ~~per para.~~ in accordance with 3.1.1.21.1.;
- b) Navigation – RNAV 10 (RNP 10) RNP 4, or RNP 2 ~~per para.~~ in accordance with 4.1.1.1, 4.1.2.1 and 4.1.2.2;
- c) Surveillance – ADS-C RSP 180 ~~per para.~~ in accordance with 5.4.1.2.

....

6.2.2.4 The minimum longitudinal separation shall be 55.5 km (30 NM) between aircraft on designated controlled oceanic routes or areas within the Auckland Oceanic, Brisbane, Fukuoka, Honiara, Melbourne, Nauru, New Zealand, and Port Moresby, Singapore and Ujung Pandang FIRs. This minimum is applied in accordance with 5.4.2.9 of PANS-ATM and provided the following conditions are met:

- a) communication – CPDLC RCP 240 ~~per para.~~ in accordance with 3.1.1.21.1.;
- b) navigation – RNP 4, or RNP 2 ~~per para.~~ in accordance with 4.1.2.1 and 4.1.2.2;
- c) surveillance – ADS-C RSP 180 ~~per para.~~ in accordance with 5.4.1.2.

...

-END-

d) Date when proposal received:

DD Month YYYY

e) Proposer's reason for amendment:

In order to improve the capacity and efficiency of airspace served by Automatic Dependent Surveillance (ADS-C) and Controller-Pilot Data Link Communications (CPDLC):

1. Indonesia, Philippines, and Sri Lanka intend to implement the 50 NM longitudinal separation minimum supported by relevant RNP, RCP and RSP specifications, and 50 NM lateral separation minimum, in the Ujung Pandang, Manila and Colombo FIRs respectively;
2. Indonesia and Singapore further intend to implement the 30 NM longitudinal and 23 NM lateral separation minimums in the Singapore and Ujung Pandang FIRs respectively.

f) Proposed implementation date of the amendment:

Upon approval by Council.

g) Action by the Secretary General:

The proposal has been circulated to the following States and international organizations:

Afghanistan	Egypt	Morocco
Albania	El Salvador	Mozambique
Algeria	Eritrea	Namibia
Andorra	Estonia	Nepal
Angola	Ethiopia	Netherlands
Argentina	Finland	New Zealand
Armenia	France	Niger
Australia	Gabon	Nigeria
Austria	Gambia	Norway
Azerbaijan	Georgia	Oman
Bahamas	Germany	Pakistan
Bahrain	Ghana	Paraguay
Bangladesh	Greece	Peru
Belarus	Guinea-Bissau	Philippines
Belgium	Haiti	Poland
Benin	Hungary	Portugal
Bhutan	Iceland	Qatar
Bolivia (Plurinational State of)	India	Republic of Korea
Bosnia and Herzegovina	Indonesia	Republic of Moldova
Botswana	Iran (Islamic Republic of)	Romania
Brazil	Iraq	Russian Federation
Brunei Darussalam	Ireland	San Marino
Bulgaria	Israel	Saudi Arabia
Burkina Faso	Italy	Senegal
Cameroon	Jamaica	Serbia
Canada	Japan	Seychelles
Cape Verde	Jordan	Sierra Leone
Central African Republic	Kazakhstan	Singapore
Chad	Kenya	Slovakia
Chile	Kuwait	Slovenia
China	Kyrgyzstan	Somalia
Colombia	Latvia	South Africa
Congo	Lebanon	Spain
Côte d'Ivoire	Libya	Sri Lanka
Croatia	Lithuania	Sudan
Cuba	Luxembourg	Suriname
Cyprus	Madagascar	Swaziland
Czech Republic	Malaysia	Sweden
Democratic People's Rep. of Korea	Maldives	Switzerland
Democratic Republic of the Congo	Mali	Syrian Arab Republic
Denmark	Malta	Tajikistan
Djibouti	Mauritania	Thailand
Dominican Republic	Mauritius	The Former Yugoslav Republic of Macedonia
Ecuador	Mexico	Togo
	Monaco	Trinidad and Tobago
	Mongolia	Tunisia
	Montenegro	

Turkey
Turkmenistan
Uganda
Ukraine
United Arab Emirates
United Kingdom
United Republic of Tanzania
United States
Uruguay
Uzbekistan
Venezuela
Viet Nam
Yemen
Zambia
Zimbabwe

EUROCONTROL
CANSO
IACA
IAOPA
IATA
IBAC
IFALPA
IFATCA

DRAFT

h) Secretariat's comments:

Editorial amendments are included as follows:

1. Correction of the lateral separation distance in paragraphs 6.2.1.3 and 6.2.2.2;
2. Correction of paragraph reference in paragraph 6.2.1.4 a);
3. Re-wording of sub-paragraphs 6.2.1.4 a) to c), 6.2.2.2 a) to c) and 6.2.2.4 a) to c);

— END —

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