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Implementation Status of Regional Transition Plan - RNP APCH Chart Identification from RNAV to RNP

21 Oct 2020

The Seventh Meeting of PBN Implementation Coordination Group
(PBNICG/7)



RNP APCH Chart Identification Change

❖ Background

- **Doc 8168, PANS OPS amendment (effective on 13 Nov 2014)**
 - **Include RNP APCH chart identification change**
 - **Introduce RNP APCH requirement box**
 - **needs to be changed by 30 Nov 2022**



What is changes

❖ Chart identification changes

Navigation specification	Existing chart identification	New chart identification
RNP APCH	RNAV (GNSS) RWY 23	RNP RWY 23
RNP AR APCH	RNAV (RNP) RWY 23	RNP RWY 23 (AR)

❖ PBN Approaches – parenthetical suffices

Condition	Suffix	Examples
Procedure has only an LPV line of minima	LPV only	RNP RWY 23 (LPV only)
Procedure has only an LNAV/VNAV line of minima	LNAV/VNAV only	RNP RWY 23 (LNAV/VNAV only)
Procedure has both LPV and LNAV/VNAV lines of minima but no LNAV minima	LPV, LNAV/VNAV only	RNP RWY 23 (LPV, LNAV/VNAV only)
Procedure has only an LP line of minima	LP only	RNP RWY 23 (LP only)



What is changes

❖ Examples of PBN requirement box

Navigation specification	Examples of additional requirements in PBN requirements box
RNP APCH	RF required
RNP AR APCH	RNP <0.3 Missed approach RNP <1
Advanced RNP	RNP <1 in initial and intermediate segment
RNP 0.3	RF required



What is changes

❖ Chart examples with PBN requirement box

INSTRUMENT APPROACH CHART – ICAO	SBAS Ch 40123 W27A	AERODROME ELEV 30 m HEIGHTS RELATED TO THR RWY 27L - ELEV 20 m	APP 119.1 TWR 118.1	DONLON/INTL (EADD) RNP RWY 27L
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RNP APCH

← Chart identification
← PBN requirements box

INSTRUMENT APPROACH CHART – ICAO	SBAS Ch 40123 W27A	AERODROME ELEV 30 m HEIGHTS RELATED TO THR RWY 27L - ELEV 20 m	APP 119.1 TWR 118.1	DONLON/INTL (EADD) RNP Z RWY 27L (LPV ONLY)
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RNP APCH

← (LPV only)

INSTRUMENT APPROACH CHART – ICAO	SBAS Ch 40123 W27A	AERODROME ELEV 30 m HEIGHTS RELATED TO THR RWY 27L - ELEV 20 m	APP 119.1 TWR 118.1	DONLON/INTL (EADD) RNP Y RWY 27L (LNAV/VNAV ONLY)
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RNP APCH

← (LNAV/VNAV only)

INSTRUMENT APPROACH CHART – ICAO	SBAS Ch 40123 W27A	AERODROME ELEV 30 m HEIGHTS RELATED TO THR RWY 27L - ELEV 20 m	APP 119.1 TWR 118.1	DONLON/INTL (EADD) RNP X RWY 27L (AR)
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RNP AR
RF required

← (AR)



❖ **Conclusion 6/1 - ASIA/PACIFIC REGIONAL TRANSITION PLAN FOR RNP APCH CHART IDENTIFICATION FROM RNAV TO RNP** What: Considering ICAO provided a guidance and template on transition planning for RNP approach chart identification, That,

- a) The Asia/Pacific Regional Transition Plan for RNP APCH Chart Identification from RNAV to RNP in Appendix X to the report be adopted as a draft regional plan for RNP APCH chart identification transition;
- b) ICAO Regional Office coordinate with ICAO PBN Programme Office for the inclusion of the plan in the Global Dashboard for the progress monitoring;
- c) ICAO PBN Program Office to confirm that a global contingency plan has been developed and coordinated with Regional Office;
- d) ICAO PBN Programme Office to provide an updated version of the Asia/Pacific Regional Transition Plan for RNP APCH Chart Identification from RNAV to RNP to ICAO Regional Office;
- e) ICAO Regional Office to publish the plan on the ICAO Regional Office website
- f) States develop their transition plan and implement the chart identification transition according to their designated slots.



Asia/Pacific Regional Transition Plan for RNP APCH Chart Identification from RNAV to RNP was adopted by APANPIRG/30 vide Conclusion APANPIRG/30/14 (CNS SG/23/8-PBNICG/6/1).

The plan is available at the following link on ICAO APAC webpage:

<https://www.icao.int/APAC/Documents/edocs/APX.%20B%20-%20Regional%20Transition%20Plan%20for%20RNP%20Chart%20Identification.pdf>



The regional transition plans of Asia and Pacific (APAC), Europe (EUR) and Middle East (MID) regions were approved by the ICAO PBN Programme Office and would share their transition period from the second quarters of 2019 to the fourth quarters of 2020. Considering the number of charts of three regions, i.e. APAC - 1,730 charts, EUR - 1481 charts, MID - more than 50 charts, and the expected demand of the regions, which was equally distributed based on the AIRAC cycles required within the State's slot, it would be vulnerable for aeronautical navigation data providers to exceed its capacity of each AIRAC cycle estimated as 180 charts based on one major data house, which might cause detrimental effects to aircraft operations (see Table 1).



AIRAC Cycle	Number of Charts			AIRAC Cycle	Number of Charts		
	APAC	EUR	Total		APAC	EUR	Total
Jul 18	99	104	203	Mar 26	116	33	149
Aug 15	121	67	188	Apr 23	116	13	129
Sep 12	79	131	210	May 21	104	102	206
Oct 10	80	89	169	Jun 18	114	42	156
Nov 07	66	130	196	Jul 16	92	38	130
Dec 05	65	19	84	Aug 13	92	6	98
Jan 02	101	112	213	Sep 10	91	35	126
Jan 30	95	72	167	Oct 08	82	29	111
Feb27	116	77	193	Nov 05	82	28	110

Table 3.4-1 – the number of charts planned to change in APAC and EUR



As a mitigation, APANPIRG/30 accepted the following contingency measures proposed by the Secretariat:

3.4.81.1 Airlines should ensure that the recent AIP information is reflected to their navigation data base and inform pilots of the changes including ATC phraseology. In addition, airlines should ensure their pilots would make reference to the updated AIP during the chart transition period.

3.4.81.2 State and data houses should put the charts containing safety related information on the higher priority to the chart identification changes.

3.4.81.3 To support planning of chart publication, it is proposed the following publication practices:

- i. States should publish a plan for the chart changes in the Aeronautical Information Circular (AIC) well in advance, proposed by at least 84 days (3 AIRAC Cycles) before the effective date;
- ii. Data houses confirm their capacity and inform States of their acceptance by at least 70 days before the effective date; and
- iii. States will publish charts in accordance with the Annex 15 AIRAC Cycles, preferably by 56 days (2 AIRAC cycles) before the effective date

3.4.81.4 Each State should develop a national RNP APCH chart transition plan in accordance with the regional transition plan in the Appendix B. The State transition plan should consider contingency measures mentioned above as well as recommendation in the ICAO Circular 353.

3.4.81.5 PBN Programme Office is invited to monitor the global demand of the chart changes and coordinate with data houses if there is an indication that the demand exceeds the capacity of data houses.

3.4.81.6 General aviation users should be aware of the changes of the RNP APCH chart identification as they have to update their navigation data by themselves. They have to aware that the affected changes are only the procedures compliant with the criteria in the ICAO Doc. 8168.



Asia/Pacific Regional Transition Plan for RNP APCH Chart Identification from RNAV to RNP - Proposed

RNAV to RNP Chart Identification Change								
Regional Transition Plan Template								
Region: APAC								
Circ. 353 Reference	5.2.2	5.4.4.1				5.4.4.3		
State	Project Team Manager or designated focal point	Current number of RNAV Charts	Planned	total	Proposed number of AIRAC cycles	Time required for planning and communication	Target date for publication of new charts	Remarks/State's comment
Afghanistan		6		0				
Australia	Jacqueline Vials International Standards Aviation Environment Jacqueline.Vials@infrastructure.gov.au	639		653	3 yrs (periodic review cycle) 18 months (resources available)	3 to 6 months advance notice	At any time	At any time subject to a period of 3 to 6 months' advanced notice for planning purposes and submission lead times Airservices would propose to leverage the triennial procedure revalidation cycle and make changes to most procedures at the time they are subject to periodic review An accelerated deployment would be possible, subject to additional resources being made available, which could possibly achieve the transition in 18 months Australian DAP is published quarterly, Airservices preference would be to promulgate updated procedures only on these dates only and not a 'regular' AIRAC date
Bangladesh	Sabera Rahman mitasr@gmail.com	1		1				5 RNP, 1 RNAV(GNSS)
Bhutan		3	0	0	1	1 year		RNP AR cloud break procedure will be published with new chart title by Jul 2018 (tentatively)
Brunei Darussalam		2		0				
Cambodia		5		0				
China	Mr. Wang Bihe, Flight Operations Management Division, Flight Standards Department of CAAC, bh_wang@caac.gov.cn	10		317	30		Oct 2018	Transition period: 11 Oct 2018 - 31 Dec 2020 Published PBN approach procedures are in domestic AIP and will not affect regional transition.



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Questions?

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