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UNITING AVIATION

# **RNAV to RNP Chart Depiction**

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MIDAD TF/5 & AIM SG/4 (Cairo, Egypt, 13-15 February 2018)



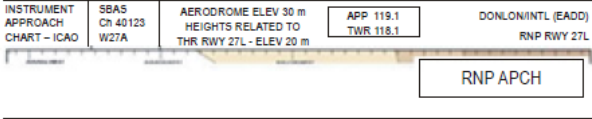
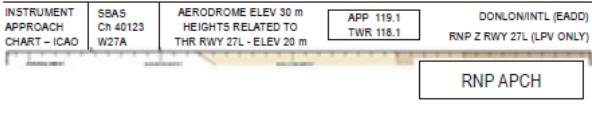
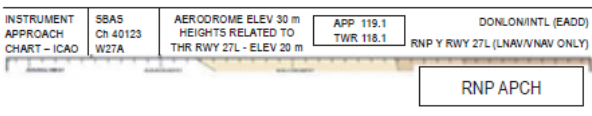
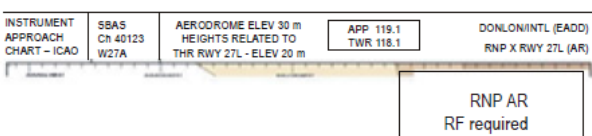
- Inconsistencies with the aeronautical charts, the PBN operational approvals and the avionics displays.
- Amendment 6 to the PANS-OPS (DOC 8168) (applicability date: 13 November 2014) introduced procedure design criteria and charting requirements to support PBN.
- Circular 336 provides guidance to assist States and other stakeholders with the transition from RNAV to RNP approach chart identification (*a new circular has been developed and will be published soon to replace Cir 336*)



- Until 30 November 2022, approach charts depicting procedures that meet the RNP APCH navigation specification criteria must include either the term RNP or RNAV (GNSS) in the identification (e.g. RNP RWY 23 or RNAV (GNSS) RWY 23). However, from 1 December 2022, only the term RNP will be permitted.
- Until 30 November 2022, approach charts depicting procedures that meet the RNP AR APCH navigation specification criteria must include either the term RNP (AR) or RNAV (RNP) in the identification (e.g. RNAV (RNP) RWY 23). However, from 1 December 2022, only the term RNP (AR) will be permitted.



## Examples

Old naming	Interim (current) naming	Final Naming	
RNAV (GPS) RWY 23	RNAV <sub>(GNSS)</sub> RWY 23	RNP RWY 23	 <p>← Chart identification</p> <p>← PBN requirements box</p>
RNAV (GNSS) RWY 23	RNAV <sub>(GNSS)</sub> RWY 23	RNP RWY 23	 <p>← (LPV only)</p>
RNAV (RNP) RWY 23	RNAV <sub>(RNP)</sub> RWY 23	RNP RWY 23 (AR)	 <p>← (LNAV/VNAV only)</p>
			 <p>← (AR)</p>


- States may decide to go directly from the old naming convention to the final convention



- The chart identification must include the runway identification for straight-in landing (RNP RWY 23)
- For circling procedure; a letter designator (a, b, c, etc.); example: RNP A
- When more than one PBN approach procedure exists for the same runway: e.g. RNP Z RWY 23, RNP Y RWY 23



- Status of PBN Charting Depiction is at **Appendix A**, for the review by the meeting.



International Civil Aviation Organization

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For information only

AIM SG/3-WP/14  
**APPENDIX A**

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EB 2017/05

6 January 2017

**TRANSITION TO RNP CHART INSTRUMENT APPROACH DEPICTION**

1. On 13 November 2014, Amendment 6 to Doc 8168, *Procedures for Air Navigation Services — Aircraft Operations, Volume II — Construction of Visual and Instrument Flight Procedures*, presented a change to the approach charts by introducing the “PBN Requirements Box” and a change in chart identifications for performance-based navigation (PBN) approaches (**Attachment**).
2. Amendment 6 allows for a transition period between 13 November 2014 and 30 November 2022 during which use of existing and new chart identifications would be acceptable. ICAO Circular 336, *Area Navigation (RNAV) to Required Navigation Performance (RNP) Instrument Approach Chart Depiction*, was produced in support of Amendment 6 to provide guidance on the change, in particular managing the risks involved during the transition period. However, since adoption of Amendment 6, concerns have been raised regarding the implementation of this change. The attention of the 39th Session of the Assembly was drawn to these concerns, and ICAO was encouraged to update the guidance available and develop a regionally coordinated transition plan to support the effective rollout of the change.
3. To address concerns related particularly to transition arrangements and potential confusion for operators being faced with variations in chart titling during the transition period, Circular 336 is to be replaced by new guidance material. This new material, which will also use feedback provided by early adopting States, will contain a redesigned risk assessment and extensive guidance for transition planning covering key considerations such as consultation, communication planning and impact assessment.
4. The new transition planning guidance material will emphasize the need for connection and synchronization between global, regional and State transition planning.
5. The guidance is expected to be available in summer 2017. Until the guidance and regional transition plans are available, the following is recommended:
  - a) States that have already started implementing the chart naming provisions of Amendment 6 to Doc 8168 should not revert back to the old names, but should not continue further implementation until this can be coordinated with the regional transition plan; and
  - b) States planning their implementation of Amendment 6 should wait for the development of the regional transition plan which will be based on the improved guidance material replacing Circular 336.

**Enclosure:**  
Extract from Amendment 6 to Doc 8168

Issued under the authority of the Secretary General

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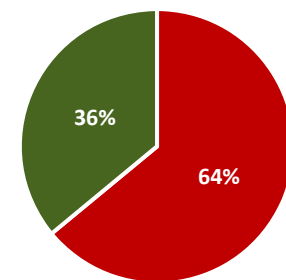
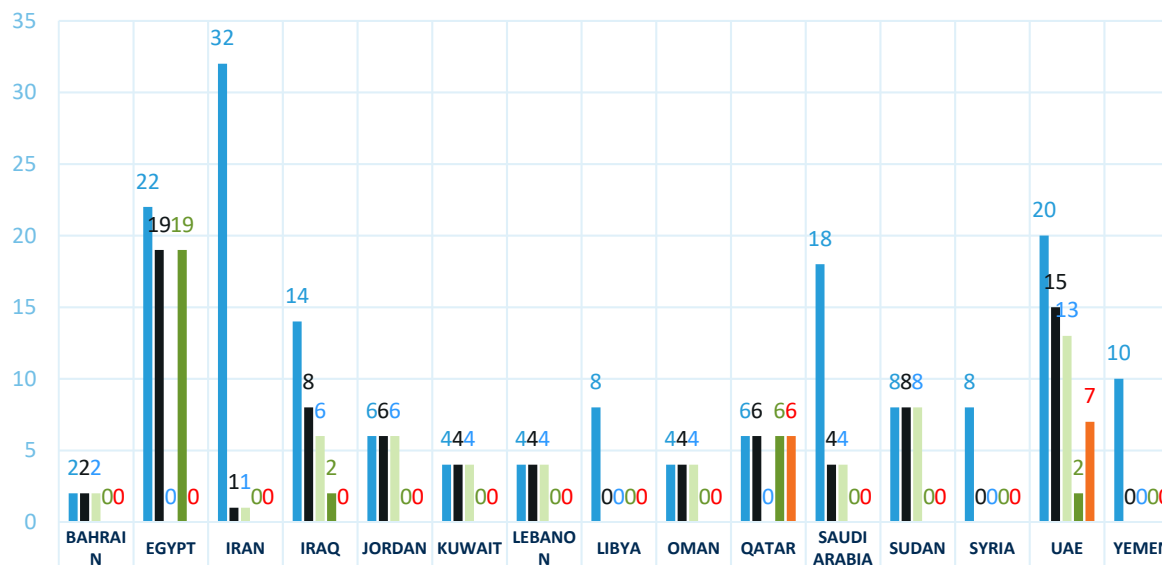
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## PBN Chart Status



■ Interim (52) ■ Final (29)

	BAHRAIN	EGYPT	IRAN	IRAQ	JORDAN	KUWAIT	LEBANON	LIBYA	OMAN	QATAR	SAUDI ARABIA	SUDAN	SYRIA	UAE	YEMEN
# of RWY ends	2	22	32	14	6	4	4	8	4	6	18	8	8	20	10
# of PBN RWYs	2	19	1	8	6	4	4	0	4	6	4	8	0	15	0
Interim (PBN Charting) implemented	2	0	1	6	6	4	4	0	4	0	4	8	0	13	0
Final (PBN Charting) implemented	0	19	0	2	0	0	0	0	0	6	0	0	0	2	0
PBN Requirement Box / Chart Notes	0	0	0	0	0	0	0	0	0	6	0	0	0	7	0



- MID Transition Plan for the implementation of RNAV to RNP Charting Depiction, developed by PBN SG/3 (Cairo, Egypt, 11-13 February 2018) to be included in the MID Region PBN Implementation Plan (MID Doc 007) is at **Appendix B**, to be reviewed by the AIM SG.
- ***PBN SG/3 DRAFT CONCLUSION 3/1: ACTION PLAN FOR THE IMPLEMENTATION OF RNAV TO RNP CHART NAMING CONVENTION***
- *That, States be urged to provide the ICAO MID Office with their action plan for the implementation of RNAV to RNP Chart naming convention, and keep the MID Office apprised of the status of implementation*





- The meeting is invited to:
  - review and update the status of RNAV to RNP Charting Depiction at **Appendix A**;
  - review the MID Transition Plan for the implementation of RNAV to RNP Charting Depiction at ; **Appendix B** and
  - urge States to provide the ICAO MID Office with their action plan for the implementation of RNAV to RNP Chart naming convention, and keep the MID Office apprised of the status of implementation.



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THANK YOU

State / Aerodrome	RWY Designator		
		Status (PBN RWY?)	PBN APCH Type(s)
<b>BAHRAIN</b>			
OBBI	12L	Y	LNAV
	30R	Y	LNAV
<b>Total</b>	<b>2</b>	<b>2</b>	
<b>%</b>		<b>100%</b>	
<b>EGYPT</b>			
HEBA	14		
	32	Y	LNAV
HESN	17	Y	LNAV
	35	Y	LNAV
HECA	05L	Y	LNAV
	05C	Y	LNAV
	05R		
	23L		
	23C	Y	LNAV
	23R	Y	LNAV
HEGN	16L	Y	LNAV, LNAV/VNAV
	16R	Y	LNAV, LNAV/VNAV
	34L	Y	LNAV, LNAV/VNAV
	34R	Y	LNAV, LNAV/VNAV
HELX	2	Y	LNAV
	20	Y	LNAV
HEMA	15	Y	LNAV
	33	Y	LNAV
HESH	04L	Y	LNAV, LNAV/VNAV
	04R	Y	LNAV, LNAV/VNAV
	22L	Y	LNAV, LNAV/VNAV
	22R	Y	LNAV, LNAV/VNAV
<b>Total</b>	<b>22</b>	<b>19</b>	
<b>%</b>		<b>86%</b>	

State / Aerodrome	RWY Designator		
		Status (PBN RWY?)	PBN APCH Type(s)
<b>IRAN</b>			
OIKB	03L		
	03R		
	21L		
	21R		
OIFM	08L		
	08R		
	26L		
	26R		
OIMM	13L		
	13R		
	31L		
	31R		
OISS	11L		
	11R		
	29L		
	29R		
OITT	12L		
	12R		
	30L		
	30R		

State / Aerodrome	RWY Designator		
		Status (PBN RWY?)	PBN APCH Type(s)
OIIE	11L		
	11R		
	29L		
	29R	Y	LNAV
OIII	11L		
	11R		
	29L		
	29R		
OIZH	17		
	35		
OIYY	13		
	31		
<b>Total</b>	<b>32</b>	<b>1</b>	
<b>Percentage</b>		<b>3%</b>	
<b>IRAQ</b>			
ORBI	15L		
	15R	Y	LNAV
	33L	Y	LNAV
	33R		
ORMM	14		
	32		
ORER	18	Y	LNAV
	36	Y	LNAV
ORSU	13	Y	LNAV
	31	Y	LNAV
ORNI	10	Y	LNAV, LNAV/VNAV
	28	Y	LNAV, LNAV/VNAV
ORBM	15		
	33		
<b>Total</b>	<b>14</b>	<b>8</b>	
<b>Percentage</b>		<b>57%</b>	

State / Aerodrome	RWY Designator		
		Status (PBN RWY?)	PBN APCH Type(s)
<b>JORDAN</b>			
OJAI	08L	Y	LNAV, LNAV/VNAV
	08R	Y	LNAV, LNAV/VNAV
	26L	Y	LNAV, LNAV/VNAV
	26R	Y	LNAV, LNAV/VNAV
OJAQ	1	Y	LNAV, LNAV/VNAV
	19	Y	LNAV
<b>Total</b>	<b>6</b>	<b>6</b>	
<b>Percentage</b>		<b>100%</b>	
<b>KUWAIT</b>			
OKBK	15L	Y	LNAV, LNAV/VNAV
	15R	Y	LNAV, LNAV/VNAV
	33L	Y	LNAV, LNAV/VNAV
	33R	Y	LNAV, LNAV/VNAV
<b>Total</b>	<b>4</b>	<b>4</b>	
<b>Percentage</b>		<b>100%</b>	
<b>LEBANON</b>			
OLBA	3	Y	LNAV
	16	Y	LNAV
	17	Y	LNAV
	21	Y	LNAV
	34		
	35		
<b>Total</b>	<b>4</b>	<b>4</b>	
<b>Percentage</b>		<b>100%</b>	

State / Aerodrome	RWY Designator		
		Status (PBN RWY?)	PBN APCH Type(s)
<b>LIBYA</b>			
HLLB	15R		
	15L		
	33R		
	33L		
HLLS	13		
	31		
HLLT	9		
	27		
<b>Total</b>	<b>8</b>	<b>0</b>	
<b>Percentage</b>		<b>0%</b>	
<b>OMAN</b>			
OOMS	08L	Y	LNAV, LNAV/VNAV
	26R	Y	LNAV, LNAV/VNAV
OOSA	7	Y	LNAV, LNAV/VNAV
	25	Y	LNAV, LNAV/VNAV
<b>Total</b>	<b>4</b>	<b>4</b>	
<b>Percentage</b>		<b>100%</b>	
<b>QATAR</b>			
OTBD	15	Y	LNAV
	33	Y	LNAV, LNAV/VNAV
OTHH	16L	Y	LNAV, LNAV/VNAV
	16R	Y	LNAV, LNAV/VNAV
	34L	Y	LNAV, LNAV/VNAV
	34R	Y	LNAV, LNAV/VNAV
<b>Total</b>	<b>6</b>	<b>6</b>	
<b>Percentage</b>		<b>100%</b>	

State / Aerodrome	RWY Designator		
		Status (PBN RWY?)	PBN APCH Type(s)
<b>SAUDI ARABIA</b>			
OEDF	16L		
	16R		
	34L		
	34R		
OEJN	16L		
	16C		
	16R		
	34L		
	34C		
	34R		
OEMA	17	Y	LNAV
	18	Y	LNAV
	35	Y	LNAV
	36	Y	LNAV
OERK	15L		
	15R		
	33L		
	33R		
<b>Total</b>	<b>18</b>	<b>4</b>	
<b>Percentage</b>		<b>22%</b>	



State / Aerodrome	RWY Designator		
		Status (PBN RWY?)	PBN APCH Type(s)
<b>SUDAN</b>			
HSNN	4	Y	LNAV, LNAV/VNAV
	22	Y	LNAV, LNAV/VNAV
H SOB	1	Y	LNAV, LNAV/VNAV
	19	Y	LNAV, LNAV/VNAV
HSSS	18	Y	LNAV, LNAV/VNAV
	36	Y	LNAV, LNAV/VNAV
HSPN	17	Y	LNAV, LNAV/VNAV
	35	Y	LNAV, LNAV/VNAV
<b>Total</b>	<b>8</b>	<b>8</b>	
<b>Percentage</b>		<b>100%</b>	
<b>SYRIA</b>			
OSAP	9		
	27		
OSLK	17		
	35		
OSDI	05L		
	05R		
	23L		
	23R		
<b>Total</b>	<b>8</b>	<b>0</b>	
<b>Percentage</b>		<b>0%</b>	

State / Aerodrome	RWY Designator		
		Status (PBN RWY?)	PBN APCH Type(s)
<b>UAE</b>			
OMAA	13L		
	13R		
	31L		
	31R		
OMAD	13	Y	LNAV, RNP AR
	31	Y	LNAV, RNP AR
OMAL	1	Y	LNAV, LNAV/VNAV
	19	Y	LNAV, LNAV/VNAV
OMDB	12L	Y	LNAV, LNAV/VNAV
	12R	Y	LNAV, LNAV/VNAV
	30L	Y	LNAV, LNAV/VNAV
	30R	Y	LNAV, LNAV/VNAV
OMDW	12	Y	LNAV, LNAV/VNAV
	30	Y	LNAV, LNAV/VNAV
OMFJ	11		
	29	Y	LNAV, LNAV/VNAV
OMRK	16	Y	LNAV, LNAV/VNAV
	34	Y	LNAV, LNAV/VNAV
OMSJ	12	Y	LNAV, LNAV/VNAV, RNP AP
	30	Y	LNAV, LNAV/VNAV, RNP AP
<b>Total</b>	<b>20</b>	<b>15</b>	
<b>Percentage</b>		<b>75%</b>	

State / Aerodrome	RWY Designator		
		Status (PBN RWY?)	PBN APCH Type(s)
<b>YEMEN</b>			
OYAA	8		
	26		
OYHD	3		
	21		
OYRN	6		
	24		
OYSN	18		
	36		
OYTZ	1		
	19		
<b>Total</b>	<b>10</b>	<b>0</b>	
<b>Percentage</b>		<b>0%</b>	
<b>Results</b>			
<b>Total</b>	<b>166</b>	<b>81</b>	
<b>Percentage (%)</b>		<b>49%</b>	

## **CHAPTER 6**

### **PBN CHARTING**

#### **1. INTRODUCTION**

6.1 Charting of PBN Instrument Approach Procedures in the MID Region should follow the criteria included in Annex 4 and the PANS OPS (DOC 8168).

#### **2. TRANSITION PLAN FOR RNAV TO RNP INSTRUMENT APPROACH CHART DEPICTION**

6.2 For a harmonized implementation of the Amendment 6 to the PANS OPS related to RNAV to RNP Approach Chart Depiction, the following transition plan should apply in the MID Region:

- MID States, that have not yet done so, should implement RNAV to RNP Chart naming convention for their current PBN Approach Procedures published in their AIPs, starting from 29 March 2019 up to 8 September 2022.
- New PBN Approach Procedures, planned to be published before 29 March 2019, should be published using the new naming convention, if practicable.
- If a PBN Approach Procedure published in the National AIP is amended and re-published before 29 March 2019 (for any reason), the new naming convention should be used, if practicable.

6.3 States are required to provide the ICAO MID Office with their action plan for the implementation of RNAV to RNP Chart naming convention, and keep the MID Office apprised of the status of implementation.