

AVIATION STATE ENGAGEMENT FORUM	
NATIONAL	Submission date: 08/09/2020

TITLE	RNAV waypoint naming convention
SUBMITTED BY	[Sateesh Sathineni] – [Airservices/Aeronautical Information Services]: ais@airservicesaustralia.com
CONSULTATION SUMMARY	Seek feedback on proposed changes to the RNAV waypoint naming convention used in flight procedures within Australia.
KEY ISSUES	<ul style="list-style-type: none"> • The current RNAV waypoint naming convention is causing conflicts with the pronounceable five-letter-name-code (5LNC) waypoints in ICAO International Codes and Routes Designators (ICARD) application and must be addressed to avoid duplication. • Proposal to use alphanumeric ident instead of current alphabetic character waypoint names to mitigate duplication issue • To become compliant with ICAO Annex 11 and PANS OPS Doc 8168
FEEDBACK TO	[Sateesh Sathineni] – [Airservices/Aeronautical Information Services]: ais@airservicesaustralia.com
CLOSE DATE	30-Sep-2020
ATTACHMENTS	H5020_FINAL_12AUG2020

OVERVIEW

Refer to the attached AIC

PROPOSAL

Refer to the attached AIC

AERONAUTICAL
INFORMATION
CIRCULAR (AIC)

H50/20

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RNAV WAYPOINT NAMING CONVENTION

1. INTRODUCTION

- 1.1 This AIP AIC cancels and replaces AIC H41/20, with the email address in para 4.1 amended.
- 1.2 The purpose of this AIC is to notify the aviation industry of proposed changes to the RNAV waypoint naming convention used in flight procedures within Australia and obtain feedback on the proposed changes.

2. CONTEXT

- 2.1 *ICAO Annex 11* states 'The principles governing the use of alphanumeric name-codes in support of RNAV SID, STAR and instrument approach procedures are detailed in *PANS-OPS (Doc 8168)*'.
 - 2.2 *ICAO PANS-OPS Doc 8168 Volume 2 - Chapter 1 – section 1.6 – Waypoint naming section* states that 'Waypoints used in support of RNAV SID, STAR and instrument approach procedures shall be designated by either a unique, **five-letter, pronounceable "name-code" or a five-alphanumeric name-code.**'
 - 2.3 Currently, the waypoints used in RNAV Instrument approach procedures are **five letter unpronounceable name-code.**
 - 2.4 The first three letters of the waypoint are either of the airport ICAO code/IATA code identifier. If the first three letters of ICAO/IATA code for a given location are not available then character "Z" may be used in between these letters to differentiate.
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- 2.5 The fourth letter indicate the direction from which the procedure approaches the airport (i.e. N, S, E, or W). The fifth letter identity the procedure fix type - I for the Intermediate Fix (IF), F for the Final Approach Fix (FAF), M for the Missed Approach Point (MAPt), T for the Missed Approach Turn Fix (MATF) and H for the Missed Approach Hold Fix (MAHF).
- 2.6 However the current RNAV waypoint naming convention is causing conflicts with the pronounceable five-letter-name-code (5LNC) waypoints in ICAO International Codes and Routes Designators (ICARD) application.
- For example, ARMET is a pronounceable waypoint allocated in ICAO ICARD application for the U.S.A and is used operationally. This is also used as Missed Approach Turn Fix point in Armidale (YARM) RNAV (GNSS) RWY 23 procedure (ARM derived from ICAO code, E indicating the direction from which procedure approach the airport and T to indicate it is a turn fix type). There are many instances like this thus conflicting with the (5LNC) waypoints in ICAO International Codes and Routes Designators (ICARD) application.
- 2.7 Differentiating between unpronounceable and pronounceable waypoint names varies from person to person and introduced further issues while reserving the RNAV waypoint names.
- 2.8 While there are significant efforts being made by ICAO and various Air Navigation Service Providers (ANSP) to avoid duplication of five-letter-name-code (5LNC) waypoints used in ATS communications, the current RNAV waypoint naming convention must also be addressed to avoid duplicate waypoint 5LNC globally.

3. NEW NAMING CONVENTION

- 3.1 To mitigate the above identified issues, Aeronautical Information Services (AIS) propose to change the naming convention of RNAV waypoints published by Airservices Australia to five-alphanumeric name-code as follows.
- a) The first two letters are assigned for a given location and will be used for waypoints used in RNAV Instrument approach procedures. These first two letters would remain static for a given location. These two letters could be taken from the aerodrome location code, NAVAID or another combination, as these characters aren't used in normal pilot communications.
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- b) The third letter is replaced by a digit starting from '2', excluding 0 and 1. When the instrument approach procedure is revised and deemed necessary to change waypoint names, the number can be changed from 2 to 3, 3 to 4 etc.
- c) The fourth and fifth letter still follow the current convention of indicating the true direction from which the procedure approaches and the fix type respectively. This is to ensure that they correlate with current pilot operational procedures for radio telephony, direction and waypoint sequence.

3.2 The following is an example of how the proposed new ident will be changed to:

Proposed New IDENT	Current IDENT	Latitude	Longitude
AR2EA	ARMEA	302110.22S	1514624.48E
AR2EB	ARMEB	302326.41S	1515230.10E
AR2EC	ARMEC	302910.90S	1515207.71E
AR2EF	ARMEF	302842.83S	1514239.70E
AR2EI	ARMEI	302604.72S	1514735.03E
AR2EM	ARMEM	303120.69S	1513744.26E
AR2ET	ARMET	303331.78S	1513520.99E
AR2WD	ARMWD	304216.02S	1512733.89E
AR2WE	ARMWE	303958.27S	1512127.54E
AR2WF	ARMWF	303444.38S	1513120.68E
AR2WG	ARMWG	303414.34S	1512152.10E
AR2WH	ARMWH	302922.73S	15139 25.24E
AR2WI	ARMWI	303721.42S	1512624.24E
AR2WM	ARMWM	303207.15S	1513616.86E

3.3 For instrument approach procedures at parallel RWY (e.g. YSSY and YBBN), one of the parallel instrument approach procedures will be assigned pronounceable five-letter-name-code (5LNC) to avoid duplication within the terminal area.

4. MORE INFORMATION

4.1 Please send your questions/feedback to:

Email: ais@airservicesaustralia.com

5. CANCELLATION

5.1 This AIC self-cancels when the consultation closes on 31 August 2020.

6. DISTRIBUTION

6.1 Airservices Australia website only.
