



| ICAO

INTERNATIONAL CIVIL AVIATION ORGANIZATION

A UN SPECIALIZED AGENCY



CHALLENGES RELATED TO 5LNCs

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What are 5LNCs

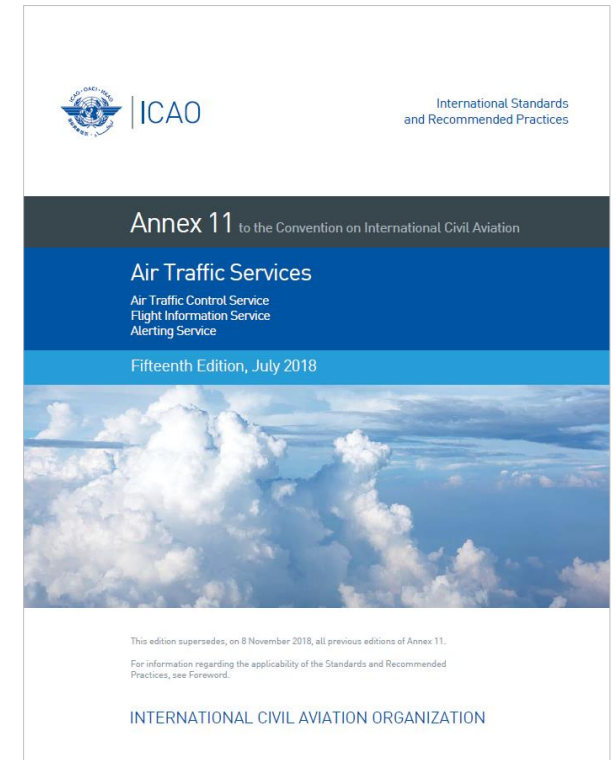
Annex 11 – Air Traffic Services

Definition – Significant point

- A specified geographical location used in defining an ATS route or the flight path of an aircraft and for other navigation and ATS purposes.

Appendix 2 – Designators for significant points not marked by the site of a radio navigation aid

- significant point shall be designated by a **unique** five-letter **pronounceable** name-code
- name-code designator shall be selected so as to avoid any **difficulties in pronunciation** by pilots or ATS personnel when speaking in the language used in ATS communications
- name-code designator shall be **easily recognizable** in voice communications and shall be **free of ambiguity**
- unique five-letter pronounceable name-code designator assigned to a significant point shall not be assigned to any other significant point
- States' requirements for unique five-letter pronounceable name-code designators shall be notified to the Regional Offices of ICAO for coordination



ICAO International Codes and Route Designators (ICARD)

Background

ICARD is a database of **290,000** five-letter name-codes (5LNCs) and **16,000** route designators (RDs) used for global air navigation.



1995



EUROCONTROL and the ICAO EUR/NAT RO started working together to develop and maintain a common database

1998



First internet application on the EUROCONTROL website was developed

2009



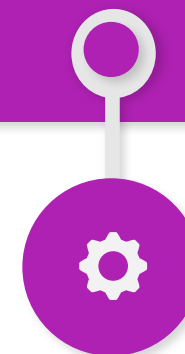
Application gradually extended to other ICAO regions

2010



ICARD database was transferred from EUROCONTROL to ICAO Headquarters

2017



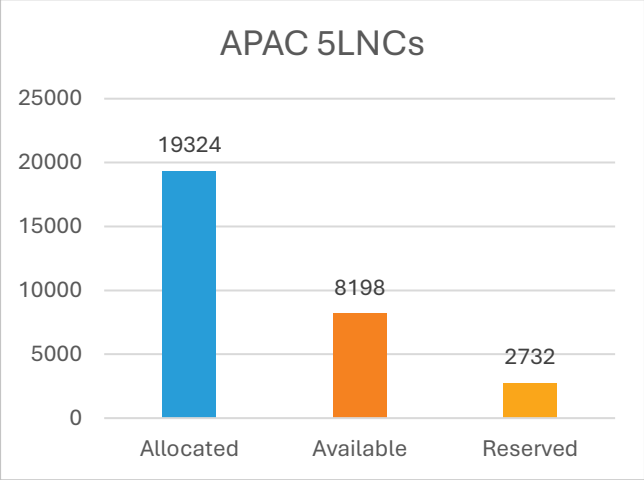
New enhanced ICARD platform was launched to provide more stability, increased processing speed, more user-friendly design

APAC 5LNCs

Overview of APAC 5LNCs

Top 3 Administrations:

- **Allocated:** Australia – 3504, Indonesia – 2671, New Zealand – 1848
- **Reserved:** India – 294, Sri Lanka – 219, Australia – 218
- **Purpose (other):** Australia – 218, Thailand – 150, India – 78
- **Purpose (none):** China – 253, Australia – 189, Japan – 118

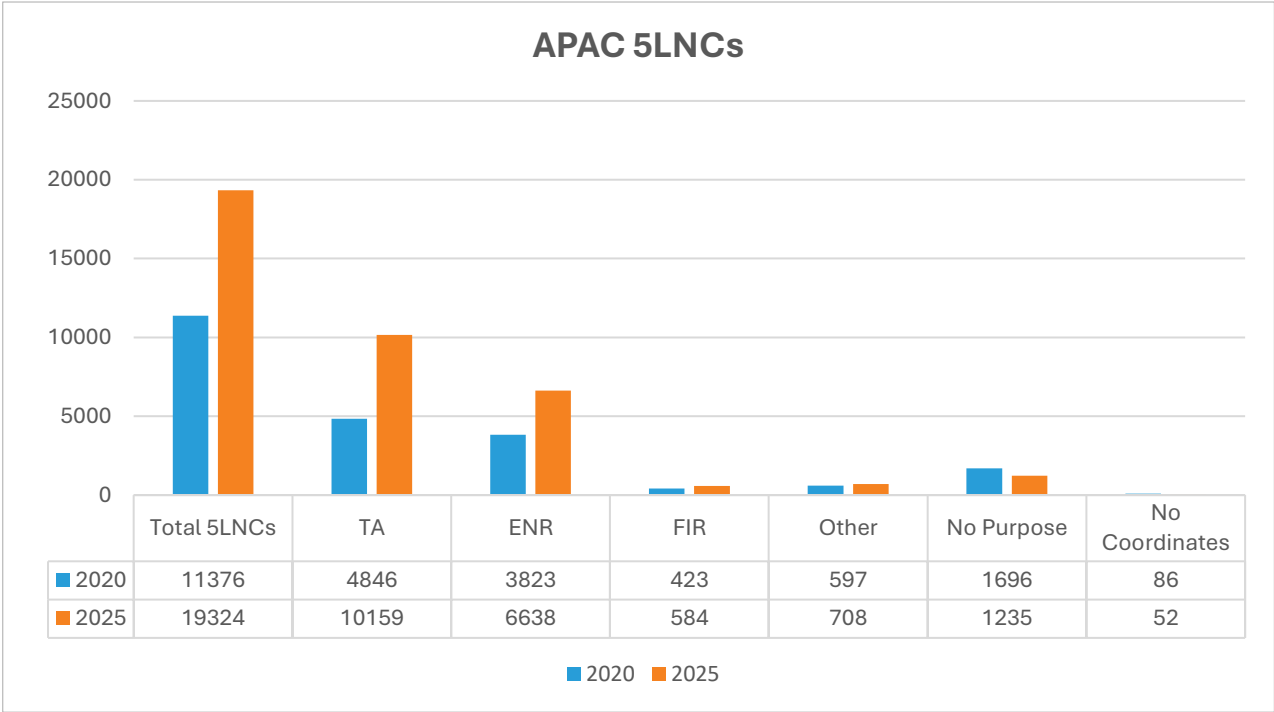


Search Results

Available codes Green-----Available Blue-----Unavailable Orange-----Reserved Red-----Allocated Purple-----History

ABVAT (APAC)	ADBEV (APAC)	ADGEV (APAC)	ADLID (APAC)	ADNOM (APAC)	ADPOL (APAC)	AGETI (APAC)	AGOKA (APAC)	AGPUN (APAC)	AGSAK (APAC)
ABVAV (APAC)	ADBUG (APAC)	ADGIN (APAC)	ADLOP (APAC)	ADNUB (APAC)	ADPUK (APAC)	AGEXI (APAC)	AGOKI (APAC)	AGRAG (APAC)	AGSED (APAC)
ABVEP (APAC)	ADBUL (APAC)	ADGUM (APAC)	ADMAM (APAC)	ADNUV (APAC)	ADRAB (APAC)	AGIGO (APAC)	AGONU (APAC)	AGREG (APAC)	AGSEG (APAC)
ABVOK (APAC)	ADBUX (APAC)	ADKAB (APAC)	ADMEM (APAC)	ADNUX (APAC)	AGAVU (APAC)	AGIMA (APAC)	AGORO (APAC)	AGRIB (APAC)	AGSEX (APAC)
ABVUG (APAC)	ADGAG (APAC)	ADKAV (APAC)	ADMEP (APAC)	ADPAD (APAC)	AGAXO (APAC)	AGIPU (APAC)	AGOSI (APAC)	AGROP (APAC)	AGSID (APAC)
ABVUK (APAC)	ADGAK (APAC)	ADKED (APAC)	ADMOV (APAC)	ADPAS (APAC)	AGEDU (APAC)	AGITI (APAC)	AGOSO (APAC)	AGRUN (APAC)	AGSIG (APAC)
ADBAB (APAC)	ADGAV (APAC)	ADKEG (APAC)	ADMUD (APAC)	ADPAX (APAC)	AGELI (APAC)	AGITO (APAC)	AGOVU (APAC)	AGRUP (APAC)	AGSIT (APAC)
ADBAY (APAC)	ADGAX (APAC)	ADKEV (APAC)	ADMUV (APAC)	ADPEV (APAC)	AGENU (APAC)	AGIVI (APAC)	AGPOL (APAC)	AGRUR (APAC)	AGSIX (APAC)
ADBAX (APAC)	ADGEB (APAC)	ADKOR (APAC)	ADNAS (APAC)	ADPIR (APAC)	AGEPO (APAC)	AGOBO (APAC)	AGPUG (APAC)	AGSAD (APAC)	AGSOB (APAC)
ADBEB (APAC)	ADGED (APAC)	ADLEG (APAC)	ADNIK (APAC)	ADPIS (APAC)	AGEPU (APAC)	AGOBV (APAC)	AGPUL (APAC)	AGSAG (APAC)	AGSOR (APAC)

Page 1 of 110



Challenges related to 5LNCs

Duplication

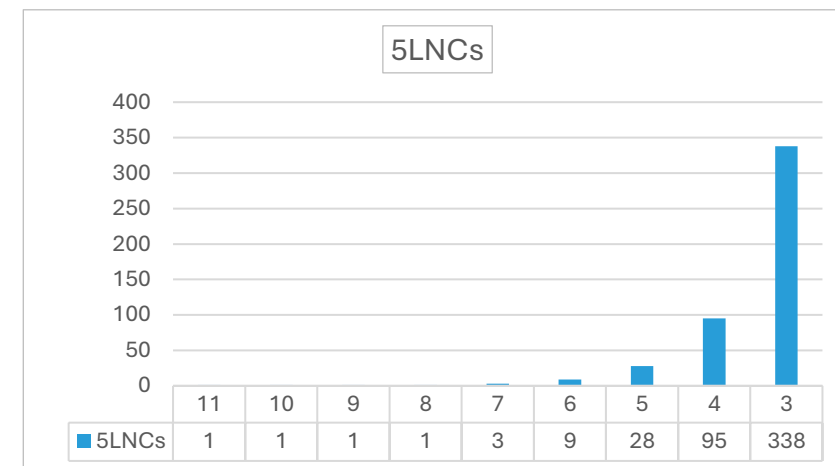
5LNC Duplications

- Duplicated 5LNCs (worldwide): **3905** (ICAO HQ, 2018)
- Duplicated 5LNCs (APAC): **2733** (2018)
- Duplicated 5LNCs (ICARD): **89**

Duplication Resolution Notification

- 2024: **17** Administrations (poor)
- 2025: **20** Administrations

ALPHA – 11
DELTA – 10
CORAL – 9
ORION – 8



ICARD
INTERNATIONAL CODES AND ROUTE DESIGNATORS

Find Allocated and Available 5LNC

SEARCH CRITERIA

Code: Search

Region:

SHOW MAP CENTERED ON

Latitude: Longitude: Map

DDMMSS[ss]H where H is 'N' or 'S' DDMMSS[ss]H where H is 'E' or 'W'

Search Results

Available codes Green-----Available Blue-----Unavailable Orange-----Reserved Red-----Allocated Purple-----History

No Result.

Page 1 of 1

Allocated codes

Code	Latitude	Longitude	Coord. States	Purpose	Creation Date	Last Modified Date	Available Date	Action	Comment
OLIVE 522412N	0015612W	GBR	ENR	24/11/1998 00:00:00	28/02/2019 10:06:42			<input type="button" value="x"/> <input type="button" value="i"/> <input type="button" value="d"/>	Purpose amended.
OLIVE 142458.43S	1705125.24W	ASM,USA		18/05/1999 00:00:00	11/12/2019 12:31:06			<input type="button" value="x"/> <input type="button" value="i"/> <input type="button" value="d"/>	

Page 1 of 1

Challenges related to 5LNCs

Duplication

Root causes

- Poor 5LNCs registration in ICARD
 - TOMEN** is available in the ICARD, it has already been published in the AIP*
- Limited resource to check duplications
 - BASIR** is available in the ICARD, it has been listed in the duplicated 5LNCs.*
 - Without a list compiled by ICAO HQ, how can duplication be reliably detected?*



Find Allocated and Available 5LNC

SEARCH CRITERIA

Code:

Region:

SHOW MAP CENTERED ON

Latitude:

Longitude:

DDMMSS[.ss]H where H is 'N' or 'S'

DDMMSS[.ss]H where H is 'E' or 'W'

Search Results

Available codes Green-----Available Blue-----Unavailable Orange-----Reserved Red-----Allocated Purple-----History

TOMEN
(APAC)

Page 1 of 1

Allocated codes

No Result!

TODAG	055057.56N	1024834.23E	
TOMEL	055027.58N	1161126.87E	
TOMEN	060408.60N	1174126.80E	
TOMUD	055413N	1170308E	A341
TOPOR	014412.12N	1025330.12E	A464, W534, Y511

AMDT 04/2022

Search Results

Available codes Green-----Available Blue-----Unavailable Orange-----Reserved Red-----Allocated Purple-----History

BASIR
(APAC)

	A	B	C
1	5LNC	Count	Countries
170	BASIL	2	Brazil, Japan, Australia
180	BASIR	3	China, Pakistan, Malaysia
181	BATAN	3	Honduras (COCESNA), Peru, Philippines

Challenges related to 5LNCs

Pronounceability & similar sounding

Annex 11

- significant point shall be designated by a **unique** five-letter **pronounceable** name-code
- name-code designator shall be **easily recognizable** in voice communications and shall be **free of ambiguity**

Example of 5LNCs difficult to pronounce

- 5LNCs starting with 'X' as the first letter

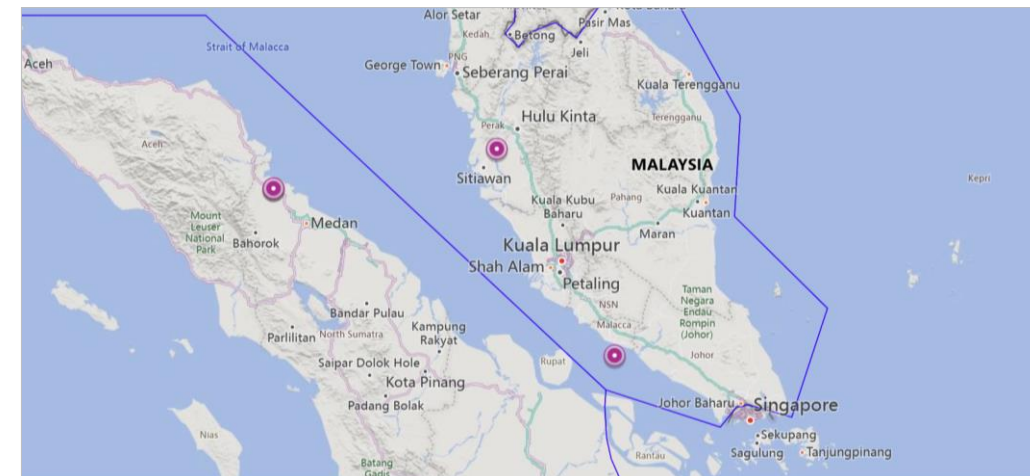
Sound-like proximity check

- Different values are used depending on the intended purpose
- Sound-like proximity check function only shows “allocated” codes (red), it leaves out all the “requested” codes (orange).
- Sound-like proximity checks do not work for 5LNCs that lack coordinate data

Search Results

Available codes Green-----Available Blue-----Unavailable Orange-----Reserved Red-----Allocated Purple-----History

XUPGA (APAC)	XUPRO (APAC)	XURGA (APAC)	XURPO (APAC)	XUSGA (APAC)	XUSPO (APAC)	XUTMA (APAC)	XUTVO (APAC)	XUVMI (APAC)	XUVTU (APAC)
XUPKU (APAC)	XUPTI (APAC)	XURKU (APAC)	XURTI (APAC)	XUSKU (APAC)	XUSTI (APAC)	XUTMI (APAC)	XUTVU (APAC)	XUVMO (APAC)	XUVUP (APAC)
XUPLA (APAC)	XUPTO (APAC)	XURLA (APAC)	XURTO (APAC)	XUSLA (APAC)	XUSTO (APAC)	XUTMO (APAC)	XUVBA (APAC)	XUVMU (APAC)	XUVUR (APAC)
XUPLI (APAC)	XUTU (APAC)	XURLI (APAC)	XURTU (APAC)	XUSLI (APAC)	XUSTU (APAC)	XUTMU (APAC)	XUVBI (APAC)	XUVPO (APAC)	XUVUS (APAC)
XUPLQ (APAC)	XUPVA (APAC)	XURLO (APAC)	XURVA (APAC)	XUSLO (APAC)	XUSVA (APAC)	XUTPO (APAC)	XUVGA (APAC)	XUVPU (APAC)	XUVUT (APAC)



Challenges related to 5LNCs

Availability

5LNCs available and reserved in ICARD

- Available: **8198**
- Reserved: **2732**
- Starting with 'X' as the first letter: **1109**

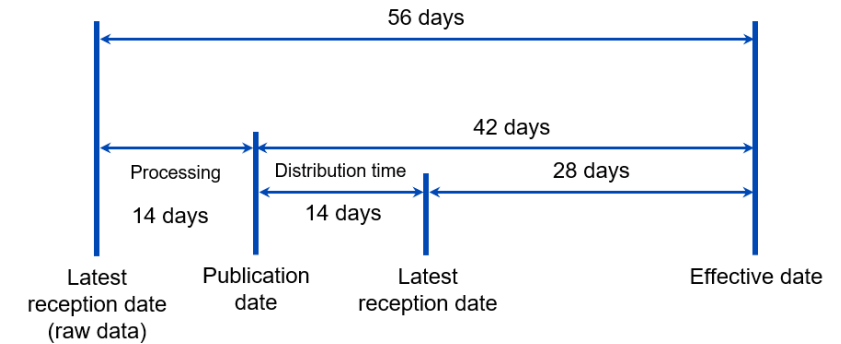
Annex 11 states . . .

- The unique five-letter pronounceable name-code designator assigned to a significant point shall not be assigned to any other significant point. When there is a need to relocate a significant point, a new name-code designator shall be chosen. In cases when a State wishes to keep the allocation of specific name-codes for reuse at a different location, such name-codes shall not be used until after a period of **at least six months**.

ICARD User Guidelines

- Released 5LNC will remain frozen for a period of **6 months**.

AIRAC significant dates



ICARD processing

At least **2 months**

Freeze time can be decreased
to 4 months

Challenges related to 5LNCs

Availability

State Reports of 5LNC Status (example)

- 5LNCs published in the AIP: **133**
- 5LNCs registered in ICARD: **250**

Issues

- Multiple 5LNCs with similar coordinates (*5LNCs replaced by new 5LNCs, but not released accordingly*)
- 5LNCs registered in ICARD, but not used for a long time
- 5LNCs published in AIP, but not registered in ICARD
- 5LNCs published in AIP, but not available in ICARD



Conclusion ATM/SG/10-10: State Reports of 5LNC Status			
That, States are urged to provide an annual update on the status of duplicated 5LNCs in ATM/SG/10 WP/44 Attachment 3 to the ICAO APAC Regional Office by not later than 28 February each year.		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 enable AAITF and ATM/SG to track progress on resolution of duplicated 5LNCs, to assist the region in reaching compliance with the Annex 11 provisions in this regard		Follow-up: <input checked="" type="checkbox"/> Required from States	
When:	21-Oct-22	Status:	Adopted by Subgroup
Who: <input type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:			

5LNC Data Collection Spreadsheet

Instructions:				
1	Provide the name of your Administration/State AND update (if any) the contact details of your ICARD Focal Point.			
2	Record all 5-letter name codes (5LNC) published in your State AIP, or deleted from AIP since last status report, in this Spreadsheet (Column A)			
3	For 5LNC on the FIR boundary, list the name of the neighbouring State concerned (Column B) - Not required for internal FIR boundary points wholly within the airspace of one State			
4	Indicate whether the 5LNC is in the Duplicated 5LNC List provided by ICAO at most recent AAITF meeting using the drop-down menu (Column C)			
5	Record the current AIP-publication status of the 5LNC using the drop-down menu (Column D).			
6	Record any relevant remarks			
7	Return the spreadsheet by email to the ICAO Asia/Pacific Regional Office by 28 February each year . apac@icao.int			
8	Enquiries: Ms. Prakayphet Chalayonnawin pchalayonnawin@icao.int .			
5LNC	Neighbouring State Name (if FIR boundary waypoint)	In Duplicated List? [Y/N]	AIP Publication Status (Active, Deleted, Replaced, Resolving or Action Pending)	Remarks
EXAMPLES				
ALPHA		N	Active	<i>If no action required, leave blank</i>
BRAVO		Y	Active	Priority given to [your State/Administration Name]
DELTA		Y	Deleted	No longer used, ICARD deletion request submitted
HOTEL		Y	Replaced	Replaced with NOVEM, ICARD deletion request submitted
INDIA		Y	Resolving	To be replaced by OSCAR in Feb 2024.
TANGO		Y	Action Pending	To be replaced in Q2 2024
ADMINISTRATION/STATE NAME:				
ICARD FOCAL POINT:				

Challenges related to 5LNCs

Key takeaways



Duplicated 5LNCs

- Poor notification of duplication resolution
- Poor 5LNC registration in ICARD
- Limited resource to check duplications

Limited availability of 5LNCs

- Release blocks of reserved codes
- Release replaced or unused 5LNCs
- Reduce freeze time considering AIRAC system

State Reports of 5LNC Status

- Provide 5LNC Data collection spreadsheet to ICAO APAC Regional Office annually



Thank You!