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RECONNECTING THE WORLD



5LNC / 5AANC

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5LNC : ICAO PROVISIONS IN ANNEX 11 (15th edition, 2018)

All requirements for composition of coded designators for significant points marked by the site of a radio navigation aid are clearly defined in ICAO Annex 11 and Appendix 2.

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.

Note.— There are three categories of significant points: ground-based navigation aid, intersection and waypoint. In the context of this definition, intersection is a significant point expressed as radials, bearings and/or distances from ground-based navigation aids.

2.15 Establishment and identification of significant points

2.15.1 Significant points shall be established for the purpose of defining an ATS route or instrument approach procedure and/or in relation to the requirements of air traffic services for information regarding the progress of aircraft in flight.

2.15.2 Significant points shall be identified by designators.

2.15.3 Significant points shall be established and identified in accordance with the principles set forth in Appendix 2.

5LNC : ICAO PROVISIONS IN ANNEX 11 (15th edition, 2018)

Some extracts of principles from Annex 11, Appendix 2

1. Establishment of significant points

1.1 Significant points should, whenever possible, be established with reference to ground-based or space-based radio navigation aids, preferably VHF or higher frequency aids.

1.2 Where such ground-based or space-based radio navigation aids do not exist, significant points shall be established at locations which can be determined by self-contained airborne navigation aids, or, where navigation by visual reference to the ground is to be effected, by visual observation. Specific points may be designated as “transfer of control” points by agreement between adjacent air traffic control units or control positions concerned.

3. Designators for significant points not marked by the site of a radio navigation aid

3.1 Where a significant point is required at a position not marked by the site of a radio navigation aid, and is used for ATC purposes, it shall be designated by a unique five-letter pronounceable “name-code”. This name-code designator then serves as the name as well as the coded designator of the significant point. *Note. — The principles governing the use of alphanumeric name-codes in support of RNAV SIDs, STARs and instrument approach procedures are detailed in the PANS-OPS (Doc 8168).*

3.2 The 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.

3.3 The name-code designator shall be easily recognizable in voice communications and shall be free of ambiguity with those used for other significant points in the same general area. **(Remark: In the EUR/NAT Region a 300 Nm radius is considered for the proximity check)**

3.4 The unique five-letter pronounceable name-code designator assigned to a significant point shall not be assigned to any other significant point

5LNC : ICAO PROVISIONS IN PANS-AIM (1st edition, 2018)

Publication of significant points, which are not part of the ATS Route system, either in AIP ENR-Section or via AIP data set

ENR 4.4 Name-code designators for significant points

#AIP-DS# A list of alphabetically arranged name-code designators (five-letter pronounceable “name-code”) established for significant points at positions not marked by the site of radio navigation aids, including:

- 1) name-code designator;
- 2) geographical coordinates in degrees, minutes and seconds of the position;
- 3) reference to ATS or other routes where the point is located; and
- 4) remarks, including supplementary definition of positions where required.



5ANNC : ICAO PROVISIONS IN DOC 8168 PANS OPS (7th edition, 2020)

PANS OPS Vol II details provisions for waypoint naming which include five-alphanumeric name-codes

1.6 WAYPOINT NAMING

1.6.1 Waypoints used in support of RNAV SIDs, STARs and instrument approach procedures shall be designated by either a unique, five-letter, pronounceable “name-code” or a five-alphanumeric name-code. The following principles apply:

- a) waypoints shall be designated by a five-alphanumeric name-code only if they are used for waypoints unique to one aerodrome that has a properly assigned four-letter location indicator (in accordance with Doc 7910);
- b) in the following cases a unique, five-letter, pronounceable “name-code”, in accordance with Annex 11, shall be applied:
 1. final waypoint of a SID;
 2. initial waypoint of a STAR;
 3. waypoints common to more than one terminal control area or used in a procedure common to more than one airport which are not used for en-route; and
 4. waypoints for ATC purposes.



5ANNC : ICAO PROVISIONS IN DOC 8168 PANS OPS (7th edition, 2020)

PANS OPS Vol II details provisions for waypoint naming which include five-alphanumeric name-codes

1.6 WAYPOINT NAMING (continued)

1.6.2 The following criteria apply when five-alphanumeric name-codes are used:

- a) the five-alphanumeric name-code convention that is adopted shall be applicable to all aerodromes within the State;
- b) five-alphanumeric name-codes should contain characters taken from the airport designator, and/or characters indicating the use of the significant point, with all combinations containing no more than three digits;
- c) the convention and the rules of application shall be published in the State AIP;
- d) the five-alphanumeric name-code shall be unique within the terminal area in which it is used;
- e) as global uniqueness cannot be assured, all waypoints that have a five-alphanumeric name-code identifier should be clearly listed as terminal waypoints in the AIP; and
- f) as global uniqueness cannot be assured for waypoints containing five-alphanumeric name-codes, to avoid any potential mis-selection by the pilot, ATC should not use waypoints designated by five-alphanumeric name-codes in any re-routing from the en-route structure into a terminal procedure.

ICARD: ICAO International Codes and Route Designators

- The management of 5LNC is done through the ICARD database located on the ICAO Secure Portal
- Each ICAO Regional Office has a nominated ICARD Data Manager
- Each State shall have nominated ICARD Authorized User(s) to perform requests of 5LNC.
- ICARD User Guidelines is available on the ICAO EUR/NAT website:
[https://www.icao.int/EURNAT/Documents/ICARD/ICARD User Guidelines - REVISED 13.05.2021.pdf](https://www.icao.int/EURNAT/Documents/ICARD/ICARD%20User%20Guidelines%20-%20REVISED%2013.05.2021.pdf)
- ICAO State Letter 2017/101 was issued to address the resolution of 5LNC duplicates – work in progress



ICAO EANPG COG ICARD 5LNC Task Force

- In June 2017, An ICARD Five-Letter Name Code (5LNC) Task Force was established in by the EANPG COG (Coordination Group of the European Aviation System Planning Group):
 - to evaluate on the **availability and pronounceability of 5LNC available in the ICARD EUR/NAT**
 - to **identify related issues** which may have applicability at the global level.
- Major Needs for 5LNC were identified, such as the **global implementation of Performance Based Navigation (PBN), VFR reporting points to be in compliance with EASA audits** and the **necessity to find available 5LNC to replace duplicates** worldwide in order to comply with Annex 11 provisions.



ICAO EANPG COG ICARD 5LNC Task Force

The Task Force **developped several Recommendations** which were endorsed by the COG71/RCOG08 Meeting in May 2018 such as:

- ICAO to address the lack of awareness & training on the use of ICARD worldwide
- ICAO to complete the population of ICARD with all 5LNC used worldwide
- Resolution of 5LNC duplicates
- Request for additional codes to be added to the ICARD EUR/NAT basket
- ICAO to set up rules specifically defining how pronounceable 5LNC shall be composed
- Request for upgraded functions in ICARD

November 2018 : 50.000 new 5LNC inserted into ICARD EUR/NAT

Longer term issues on the use of significant points were presented by Ireland and Germany at the ANConf/13 in 2018.



IFPP JOB CARD 21713: Enhancement and Accuracy of the ICARD system and resolution of duplicated 5LNCs

Following AN-Conf/13 recommendation 3.5/1 a new jobcard was issued for the ICAO IFPP (Instrument Flight Procedures Panel) to conduct a study to assess the current response level of Member States submitting their worldwide used five-letter name-codes (5LNCs) to the ICARD system and the quality of the provided data to ensure the accuracy of the database. The study should address the limitations of 5LNC availability and results should increase global air navigation safety through the resolution of the conflicts related to duplicate, similar-sounding and homophonous 5LNCs.

The EUR/NAT office submitted comments to the IFPP JobCard especially highlighting aspects such as the population of correct data in ICARD, release of 5LNCs, resolution of duplicates, sound-like issues/homophonous codes, need for new functionalities in ICARD.



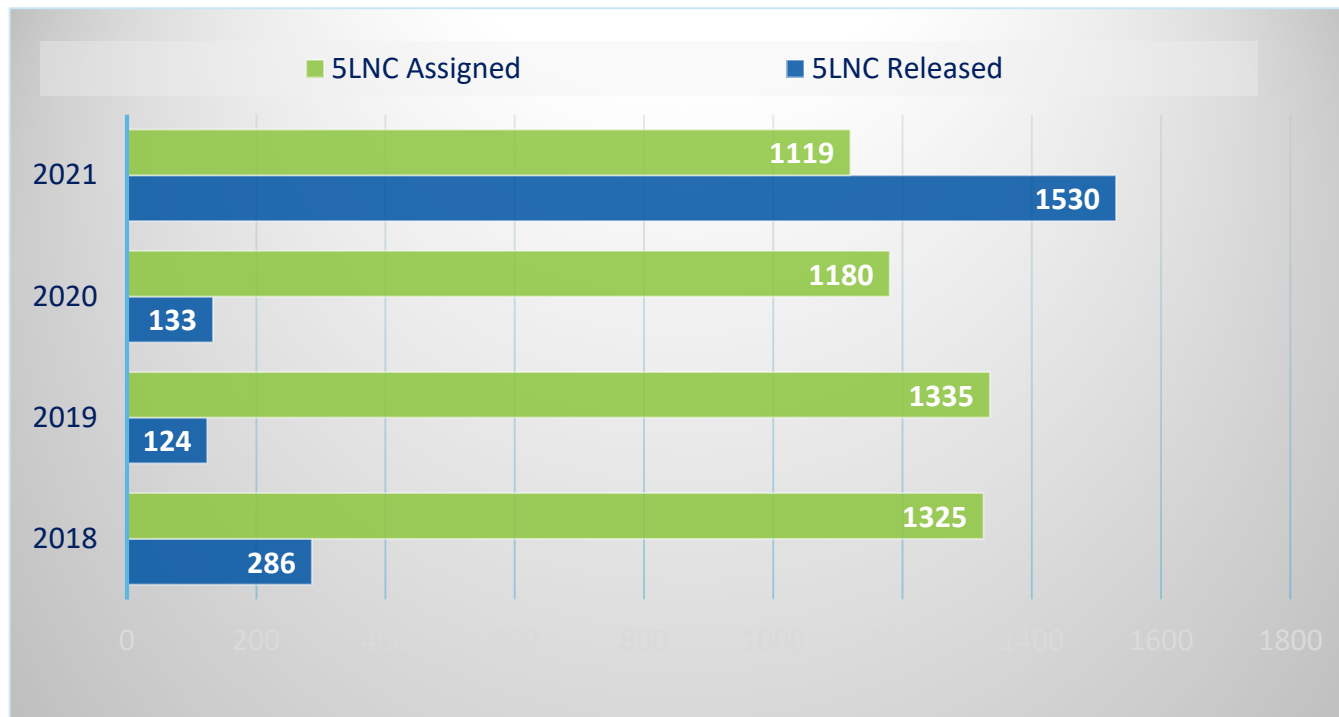
ICARD EUR/NAT 5LNC DATA (as of April 1st 2022)

- 5LNC available for EUR/NAT : **54319**
- 5LNC assigned to EUR/NAT States : **27500**

In total, for all ICAO Regions, the ICARD database contains **290,000** 5LNC



YEARLY NEED OF 5LNC IN EUR/NAT





CHALLENGES

- IFPP job card study might be on risk due to A41 budget discussions
- No Mid-Term Shortage of available pronounceable codes in EUR/NAT **but**, due to high density of codes implemented in the area there are **difficulties of finding codes free of sound-likes within 300NM**
- Resolution of duplicates was slightly progressed worldwide, but still **3785 duplicates** exist globally and it is not even clear if the number is correct



CHALLENGES

- **Accuracy of the ICARD database :**
 - In EUR/NAT, 5LNC are not systematically released in ICARD when decommissioned and/or removed from AIP within the EUR/NAT Region.
 - Worldwide, A significant number of 5LNC published in AIPs are still not reported in ICARD
- **Lack of code demand plans/outlook** to support the implementation projects (current demand is around 1000 5LNCs per year)



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THANK YOU