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**Agenda Item 4: NOTAM Contingency Plan, AIM deficiencies and ICARD system**

**Update of Module 5LNC of ICARD Database**

(Presented by the Secretariat)

<b>SUMMARY</b>	
This working paper addresses the recent update of the ICARD Database that supports the implementation of the unique five letter name code (5LNC) used for significant points (waypoints) designators by ICAO Annex 11.	
<b>REFERENCES</b>	
<ul style="list-style-type: none"><li>• Annex 11 to the Convention of International Civil Aviation</li><li>• Annex 15 to the Convention of International Civil Aviation</li><li>• State Letter AN 11/45.5-17/101</li><li>• SAM/AIM Multilateral Meetings</li><li>• Report of the Fourth Meeting of the Programmes and Projects Review Committee (PPRC/4)</li></ul>	
<b>ICAO Strategic Objectives</b>	<i>A – Safety</i> <i>B – Capacity and Air Navigation Efficiency</i> <i>E – Environmental protection</i>

**1. Background**

1.1 The ICARD database was established in 2010, and is available to the States through ICAO Portal. The objective of the database is, among others, to facilitate in an efficient and secure manner the implementation of the five letter name code (5LNC) for a correct routes and flight procedures planning, and at the same time to support ATS voice communications and aeronautical data management.

1.2 At the beginning of 2015 note was taken that States have updated in the ICARD the information of their significant points; however some situations that could possible impact in safety were originated, as follows:

- existence of a significant number of duplicated names;
- waypoints with similar-sounding established to close or in the same route;
- shortage of waypoints with easy pronunciation; and
- differences of the 5LNC data registered in ICARD with regard to the data published in the AIP

1.3 In addition, work has been done regarding deficiencies affecting the AIM Area and the update of the Action Plans to correct these deficiencies.

## 2. Analysis

2.1 ICAO, in March 2017, completed the initial implementation of the new ICARD platform. The updated ICARD database system, which can be accessed through the ICAO secure portal, replaces the previous platform and will satisfy States' needs to support the efficient and secure implementation of the unique 5LNC.

2.2 The update of the ICARD system is of the utmost importance as the current worldwide non-compliance with Annex 11 — *Air Traffic Services*, (Appendix 2, paragraphs 3.1, 3.4) regarding 5LNCs uniqueness, continues to create difficulties causing potential safety-related issues. The following issues related to 5LNCs have been identified:

- a) a significant number of duplicated codes (including codes in triplicate and in quadruplicate);
- b) similar sounding codes in close proximity or on the same flight plan route; and
- c) differences between 5LNC data registered in ICARD and published in the national Aeronautical Information Publications (AIPs).

2.3 The new platform of 5LNC module is faster and more reliable; it also presents graphic and search facilities and provides lists that can be downloaded in XLS and PDF formats, that is, lists of all the 5LNC names of a State or ICAO Region, indicating duplicated codes. Duplicated codes are presented between two States of the same ICAO Region or, most commonly, among States of different Regions.

2.4 The updated platform is able to generate alerts of the nearness of waypoints with similar letters of phonetics, and provides ownership verification, avoiding that the code being assigned is in use or reserved for another State.

2.5 It is important that States review all the names of the waypoints currently published in their AIPs, en-routes and procedures, and verify with the series of codes reserved for the State. Additionally, users could cross information with other sources available, as aeronautical charts and aeronautical websites (Example: GIS ICAO, Skyvector, etc.). If a State identifies in its airspace 5LNC not recorded in ICARD or that is not part of the series reserved for this State, a progressive replacement process of these waypoints with ICARD should be initiated, ensuring to apply the selection appropriately and communicating the Regional Office in order to validate and release the ICARD names.

2.6 States should advise the Regional Office on the waypoints that were correctly reserved and allocated through ICARD, but are no longer in use due to elimination or changes in the route / flight procedure, to proceed to its release from ICARD.

2.7 States should keep updated the list of responsible planners in order that the Regional Office could coordinate and control the allocation of subscriptions to ICARD.

2.8 Through State Letter AN 11/45.5-17/101, presented as **Appendix A** to this working paper, the Secretary General requested States to apply rules that could assist in the reduction of duplicated or similar-sounding waypoints near or in the same route. Attachment A to this letter describes the actions to resolve the problems related with duplication of waypoints.

3. **Suggested action**

3.1 Based on the above, the Meeting is invited to:

- a) take note of the information of the new 5LNC platform;
- b) apply, when possible, the recommendations of the Secretary General regarding the update of the ICARD database and the resolution of 5LNC duplication;
- c) urge States, that have not yet done so, to update their lists of responsible planners;
- d) review their 5LNC lists, verify them and amend them if necessary; and
- e) communicate the Regional Office every comment and information that allows the improvement of the functions and management of the ICARD updated platform.

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**Subject:** ICAO International Codes and Route Designators  
(ICARD) database system

**Action required:** Implement the five-letter name-code  
(5LNC) Duplicate Resolution Rules and submit updated  
information on 5LNCs

Sir/Madam,

1. I have the honour to inform you that ICAO completed the initial rollout of the new ICARD platform in March 2017. This updated ICARD database system, accessible on the ICAO Secure Portal, replaces the previous platform and will meet the needs of States to support efficient and safe implementation of unique 5LNCs.

2. The update of the ICARD system is of the utmost importance as the current worldwide non-compliance with Annex 11 — *Air Traffic Services*, (Appendix 2, paragraphs 3.1, 3.4) regarding 5LNCs uniqueness, continues to create difficulties causing potential safety-related issues. The following issues related to 5LNCs have been identified:

- a) a significant number of duplicated codes (including codes in triplicate and in quadruplicate);
- b) similar sounding codes in close proximity or on the same flight plan route; and
- c) differences between 5LNC data registered in ICARD and published in national Aeronautical Information Publications (AIPs)

3. In light of the increasing demand for 5LNCs to support implementation of performance-based navigation (PBN) without compromising safety, I invite you to carry out the actions described in the attachment through your State's ICARD focal point. Please contact the ICAO Regional Office accredited to your State should you require further support and guidance.

Accept, Sir/Madam, the assurances of my highest consideration.

Fang Liu  
Secretary General

**Enclosure:**

Update of the ICARD database and resolution  
of duplicated 5LNCs

## UPDATE OF THE ICARD DATABASE AND RESOLUTION OF DUPLICATED 5LNCs

The update of the ICARD system and the resolution of 5LNC duplicates are of the utmost importance and all States are invited to take action as described below.

### 1. CLEAN-UP OF THE ICARD PLATFORM

1.1 A comparison of your State's list of 5LNCs recorded in ICARD and 5LNCs published in your State's national Aeronautical Information Publication (AIP) shall be undertaken to identify any discrepancies and to update the information in ICARD, to align with the information contained in your State's AIP. To get a list of your State's 5LNCs allocated in ICARD go to <https://www4.icao.int/ICARD> and:

- a) enter authorized username and password;
- b) in the main menu click on "Downloads"; and
- c) in the "List All per Country" option, select Region and Country, and click on the tabs to launch a report in pdf or excel formats.

1.2 ICARD shall be used as the central system for reservation and allocation of 5LNCs. The ICAO Regional Office accredited to your State shall be advised of any 5LNCs that are used but not recorded in ICARD, as well as any 5LNCs that are allocated to your State but no longer used and which shall be released from ICARD. Your State's contribution to this exercise will significantly reduce the creation of duplicates as well as enable ICAO to identify and resolve existing duplicates or similar-sounding 5LNCs that have a potential safety impact.

1.3 States are reminded of ICAO Annex 11 and Annex 15 provisions regarding 5LNCs, and the need to coordinate with other States and all ICAO Regional Offices to resolve existing duplicated 5LNCs.

### 2. 5LNC DUPLICATE RESOLUTION RULES

2.1 Whenever possible Member States with 5LNCs of the same name but allocated to more than one physical location (duplicates, triplicates, quadruplicates, etc.) shall discuss the voluntary release of duplicated 5LNCs to allow one State to retain that 5LNC. If no resolution is agreed, the following 5LNC duplicate resolution rules will apply:

**Rule 1.** Priority is given to (a) 5LNC(s) which is (are) already allocated in ICARD. Duplicated 5LNCs that are not allocated in ICARD shall be replaced by new 5LNCs. If two or more 5LNCs of the same name are in ICARD, Rule 2 applies.

*Example:* 5LNC KOBAS allocated in ICARD to two Member States.

*Note:* the Regional Office(s) shall advise the State(s) concerned to change those duplicated 5LNCs not in ICARD. Publication in AIP(s) shall not be considered as sub-criteria in these Resolution Rules.

**Rule 2.** If two or more 5LNCs of the same name are allocated in ICARD:

- a) creation date (date when the 5LNC was allocated in ICARD for that State)

If there are two or more 5LNCs with a creation date, the earliest date will have priority. After verification that the State with the priority date is still using that 5LNC, (a) new 5LNC(s) shall be proposed by the Regional Office(s) to the other State(s) with the same duplicated 5LNC;

- b) creation date versus no creation date

(A) new 5LNC(s) shall be proposed to the State(s) with no ICARD creation date;

- c) No creation date

If there are two or more 5LNCs of the same name without creation dates, Rule 3 applies.

**Rule 3.** If Rules 1 and 2 do not resolve the 5LNC duplication, the following characteristics will have priority:

- a) 5LNCs used in both terminal airspace (SIDs/STARs) and en-route airspace;  
*Note: The amount of changes foreseen and publication required in AIP sections AD and ENR could be very large*
- b) 5LNCs used in high-density/high-complexity terminal airspace (e.g. SIDs/STARs, holdings, instrument approach procedures);
- c) 5LNCs used in en-route airspace (e.g. crossovers between two or more ATS routes, transfer of control points, upper/lower airspace routes, etc). Priority shall be given to highest number of ATS routes crossings through the 5LNCs concerned;
- d) 5LNCs used in low-density/low-complexity terminal airspace;
- e) 5LNCs used in other routes (domestic, temporary, helicopter, etc.)

**Rule 4.** Resolving conflicts:

- a) if any of the previous rules do not resolve 5LNC duplicates and if the 5LNC duplicates are within the area of accreditation of one Regional Office, that Regional Office will make the decision;
- b) if the 5LNC duplicates are in different regions, the Regional Offices involved shall agree on a resolution;
- c) if any of the previous rules do not resolve the 5LNC duplicates, ICAO Headquarters, in coordination with the relevant Regional Office(s), will make the final decision.