



International Civil Aviation Organization
CAR/SAM Regional Planning Implementation Group (GREPECAS)
**First Meeting of the Communications, Navigation and Surveillance / Air
Traffic Management Subgroup (CNS/ATM/SG/1)**
(Lima, Peru, 15 to 19 March 2010)

Agenda Item 4: Review to pending matters of the ATM/CNS/SG, ATM/COMM, CNS/COMM and respective Task Forces, for consideration in the CNS/ATM Subgroup work programme

**ICAO REGIONAL DATABASE (ICARD):
FIVE-LETTER NAME-CODE (5LNC) AND ROUTE DESIGNATORS APPLICATIONS**

(Presented by the Secretariat)

SUMMARY	
This Working Paper presents a summary of the advances in the deployment of the ICARD Database applications as part of the activities in the deployment of the tools proposed under the ICAO framework for an electronic Air Navigation Plan (eANP), and proposes several activities to be made for the continuation of this implementation.	
Reference:	
• ICAO Annex 11, Appendix 2.	
ICAO Strategic Objectives:	<i>A - Safety</i> <i>D - Efficiency</i>

1. **Introduction**

1.1 ICAO Annex 11, Appendix 2, paragraph 3.1. states that “Where a significant point is required at a position not marked by the site of a radio navigation aid, the significant point shall be designated by a **UNIQUE** five-letter pronounceable “name-code”. In order to comply with this requirement, a global dynamic coordination is foreseen.

ICARD background information

1.2 In the 1960’s, ICAO and the FAA set up a list of 140,000 five letter combinations of five-letter name-codes (5LNC). This list was then split and distributed to the various ICAO Regional offices throughout the world. These reserve lists have served as the database for 5LNC allocation by the ICAO Offices with the objective of world-wide unique allocation to enable unambiguous designation of significant points not linked to the site of a Radio Navigation Aid.

1.3 In route planning and design, two activities are essential:

- a) the allocation of Route Designators, uniquely identifying individual routes.
- b) the allocation of 5LNC codes, uniquely identifying designated point, forming part of a route.

1.4 In a cooperative effort, a system has been developed by Eurocontrol named the ICAO Regional Database (ICARD) system (http://www.eurocontrol.int/icard/public/subsite_homepage/homepage.html), which includes, the Five-Letter Name-Codes and Route Designators applications. The ICARD 5LNC application is intended to facilitate the management of Five Letter Name Codes (5LNC)

1.5 Before ICARD, route planners had little chance of knowing whether their request of a proposed code would be accepted or not. In addition, relying on surface mail, proved to be a very time-consuming method of information exchange between ICAO and its users.

1.6 With the ICARD 5LNC Database, authorized airspace planners have access to an ICAO database tool that provides the ability to make on-line requests for five letter name codes. The ability to query this database and have immediate information on 5LNC availability, greatly enhances the safety and efficiency of airspace planning. It prevents the duplication of 5LNC's and therefore enhances safety by ensuring a unique 5LNC for airspace planning purposes.

1.7 ICAO and EUROCONTROL, in collaboration, agreed to the ICARD design and the commitment by EUROCONTROL to provide support for the global operation of ICARD. Based on this agreement the ICARD 5LNC database has been implemented by the EURNAT (1998), MID region (2005), ASIA/PAC and SAM (2007) regions and by the NAM/CAR regions (2008).

1.8 Another application of the ICARD System is the route designators application. The current facilities provided in the ICARD database do not allow an immediate global use, but the ICAO State Aviation Safety Tools unit (SAST) will be tasked to establish a global Route Designators database in the second half of 2010. This activity will be coordinated with the Regional offices accordingly. Furthermore, the ICAO Air Navigation Bureau will prepare a proposal for amendment to Annex 11, Appendix 1, to add additional letters as new ATS route designators, for an applicability date in November 2012.

2. **ICARD 5LNC Implementation in the CAR/NAM/SAM Regions**

2.1 In accordance to the global deployment of the ICARD 5LNC database, the CAR/NAM and SAM regions through their corresponding Regional Offices have conducted several activities which are detailed in the **Appendices A and B** respective for the NACC and SAM ICAO Regional Offices.

2.2 Currently all 5LNCs lists from all the ICAO Regions have now been uploaded into the ICARD 5LNC Database.

2.3 Considering the advances in the implementation of this database, ICAO initially determined that the system would be operational at a global level by the end 2009. Taking into consideration that the WACAF Region be added within the next few months, it is expected that the ICARD will operate at a global level by mid 2010.

3. **Discussion**

3.1 Relative to the implementation of the 5LNC Database System, several steps need to be observed:

- a) The SAM and NACC Offices will coordinate with their states of accreditation to ensure that the 5LNCs provided in their national publications concur with 5LNCs listed in ICARD.

- b) State authorized users shall register on the EUROCONTROL portal: http://www.eurocontrol.int/icard/public/standard_page/register.html to gain access to the ICARD 5LNC database system.

3.2 The current list of authorized state users for the NACC and SAM office is listed in **Appendix C**.

3.3 For an effective use of the system, States should enforce the training and knowledge for using the system as well as promote an interactive dynamic environment for using and improving the ICARD system. Likewise, an ICARD 5LNC presentation is scheduled during the upcoming CNS/ATM/SG/1 for the provision of instruction on how to use the 5LNC system. Experiences gained since the inception of the 5LNC database system will be shared as well as feedback requested from the participants to enhance usability of the system.

3.4 Once the system is appropriately managed and used, a list of duplicate codes will be generated through the ICARD system inviting further coordination between ICAO Offices and states to clear the duplication of codes.

4. **Suggested actions**

4.1 The Meeting is invited to:

- a) note the information presented;
- b) designate State authorized user for the ICARD 5LNC database if your State hasn't done so;
- c) provide ongoing feedback on methods to improve ICARD 5LNC database function;
- d) Promote the use of the training for the use of the ICARD 5LNC database;
- e) coordinate any problems within database to the appropriate ICAO regional database manager; and
- f) propose any other action that the Meeting considers appropriate.

APPENDIX A

CAR/NAM ACTIVITIES IN IMPLEMENTATION OF THE ICARD 5LNC DATA BASE

As part of the activities in the deployment of tools proposed under the ICAO framework for an electronic Air Navigation Plan (eANP) is the implementation of a global database for the assignment of five-letter named codes (5LNCs). As a result of the global deployment of the five-letter named code (5LNC) Database, which is implemented through the ICAO Regional Database (ICARD) application, several activities were coordinated regionally. These activities were grouped as Phase I and Phase II activities:

Phase I:

This phase consisted mainly in the review of the existing NAM/CAR list of assigned five-letter name codes (5 LNC) for introduction to the ICARD

- 1) Based on the existing hard-copy of the NAM/CAR list of assigned codes, the NACC Regional Office prepared a preliminary electronic NAM/CAR list of assigned five-letter name codes, which incorporated information from the State's AIPs, State's communication and route chart data. This information was posted on the Regional office Website.
- 2) The ICAO NACC Regional Office conducted a review and update of the preliminary electronic NAM/CAR list of assigned five-letter name codes (5 LNC), registered in the ICAO NACC Regional Office. This process required States to confirm and update the information regarding 5LNC codes allocated for their use and the respective coordinates as well as other internal ICAO code confirmations and formalization of assignments. Replies and comments were received until April 24, 2009.
- 3) Based on the replies received, an initial NAM/CAR list of assigned five-letter name codes was formulated and, prior to its inclusion into ICARD, other data verification through other sources was made to ensure its validity.
- 4) Updated information to the ICARD System was coordinated with EUROCONTROL and ICAO for its inclusion into the ICARD global system as it applies to the CAR and NAM States, Territories and International Organizations. Other useful information associated to this review and update process was discovered as for example the classification of ICAO and non-ICAO codes.
- 5) The initial NAM/CAR list of assigned five-letter name codes (5LNC) was introduced to the ICARD.
- 6) An ICAO NACC Regional Office ICARD Data Manager was designated along with two alternates to support the operation of this database.
- 7) ICAO has now completed this phase and the database can be accessed at the following website:
http://www.eurocontrol.int/icard/public/subsite_homepage/homepage.html

Phase II:

This phase consists of the registration of users to the ICARD database and a further revision and use of this application, which includes the initial identification of duplicated codes and proposal to resolve these cases.

- 1) It has been required that each State/Territory/International Organization, within the NAM/CAR Regions, complete the following two steps:
 - a) Nominate one Primary Route Planner as an authorized user of the ICARD system, and one alternate.
 - b) Those individuals that were nominated by their respective State/Territory/International Organization should be registered in the ICARD System following the instructions for new users. New authorized users were advised to coordinate their registration with the ICAO NACC Regional Office ICARD Data Manager in order to complete the process of becoming an authorized user.

The State authorized user will use the ICARD System for further allocation of 5LNC's in coordination with the NACC Regional Office ICARD Data Manager. Only authorized users can make use of the application for reserving new codes. The overall objective of the system is to allow Contracting States/Territories/International Organizations, the ability to allocate unique 5LNC's as needed to meet airspace planning needs.

Appendix C to this working paper contains the list of authorized CAR/NAM ICARD users.

- 2) An instructional training presentation is planned for the upcoming GREPECAS CNS/ATM Subgroup Meeting to operate the ICARD system. Also a video illustrating the basic registration and operations of the 5LNC Application was made and will be available to all States.
- 3) A Webpage has been developed under the ICAO NACC Regional Office webpage to facilitate the access and use of the ICARD 5LNC under the section Regional Databases (<http://www.mexico.icao.int/RegionalDBs.html>). This page defines the procedure for assignment and coordination of 5LNC codes and provides training guidelines and explanatory material on the ICARD.
- 4) Further activities are considered, from the identification of duplicated codes, agreements to resolve duplications, evaluation to reclassify non ICAO codes to ICAO codes, evaluation of admitting codes with numbers, etc.

The NACC Regional Office ICARD Data Manager is: Mr. Adolfo Zavala (email: azavala@mexico.icao.int), alternates: Mr. Victor Hernandez (email: yhernandez@mexico.icao.int) and Mr. Julio Siu (email: jsiu@mexico.icao.int). Please contact these Officers for additional comments or information regarding ICARD registration procedures.

APPENDIX B

SAM ACTIVITIES IN IMPLEMENTATION OF THE ICARD 5LNC DATA BASE

1. July 2007: the SAM 5LNC codes in a test environment was sent to Eurocontrol in order to be analyzed and loaded into the ICARD 5LNC.
 2. March 2008 Mr. Jorge Fernández, RO/ATM, and as alternate Mr. Alberto Orero, RO/ATM/AIS were designed as focal points for the SAM Region.
 3. April 2008 a pilot phase was initiated with some of the SAM ATM contacts for the assignation of 5LNC via ICCARD Data base.
 4. A procedure to assist ICARD Planners on the use of the 5LNC ICARD Data Base was developed and sent to SAM States.
 5. A Presentation prepared by Eurocontrol regarding the use of the ICARD 5LNC Data Base was provided by the Secretariat during the Third SAM Implementation Group Meeting (SAM/IG/3, Lima, April 2008).
 6. June 2009 LT 11/16-SA363 5 was sent to SAM States asking for the designation of two officers in order to access to the ICARD data base, and initiate the required paperwork, so that the same may have the authorization and personal password to access the website of the SAM ICARD 5LNC Data Base.
 7. A series of presentations were provided during different Multilaterals meeting carried out in the SAM Region, as well as during the RNAV/RNP and RNP AR APCH procedure design Courses.
 8. The List of the SAM 5LNC ICARD Planners available is presented in the Appendix C of the WP04.
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APPENDIX C / APENDICE C

**5LNC CAR/NAM/SAM AUTHORIZED STATE USERS /
5LNC USUARIOS AUTORIZADOS DE ESTADOS CAR/NAM/SAM**

CAR/NAM

NAME/ NOMBRE	TITLE/ TITULO	DEPARTMENT/ DEPARTAMENTO	STREET/ CALLE	CITY/ CIUDAD	COUNTRY/ PAIS	TELEPHONE/ TELEFONO	FAX	E-MAIL
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SAM

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