Policy on the identification of standard departure and arrival routes

1   INTRODUCTION

Each route shall be assigned a designator that is unique for that aerodrome. The designator shall be defined in accordance with Annex 11, Appendix 3. In addition, the first 4 letters of any 5LNC used in a route designator shall be unique for the aerodrome.

This guidance is to assist the proponent in the identification of standard departure and arrival routes to the Safety Regulation Division of the Irish Aviation Authority.

Any requests for further information or observations on this ASAM should be forwarded to ansdinfo@iaa.ie

2   REFERENCES

ICAO Annex 4 – Aeronautical Charts

ICAO Annex 11 – Air Traffic Services

ICAO Doc 8168 Vol II - Procedures for Air Navigation Services, Construction of Visual and

Instrument Flight Procedures

3   DEFINITIONS

ATS route - A specified route designed for channelling the flow of traffic as necessary for the provision of air traffic services.

Note 1 - The term ATS route is used to mean variously, airway, advisory route, controlled or uncontrolled route, arrival or departure route, etc.

Note 2 - An ATS route is defined by route specifications that include an ATS route designator, the track to or from significant points (waypoints), distance between significant points, reporting requirements and, as determined by the appropriate ATS authority, the lowest safe altitude.

ICARD ICAO International Codes and Routes Designators

5LNC – See Policy on Naming of Significant Points ASAM #7

The Proponent - An entity or an individual proposing a change to the airspace architecture

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.

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Standard instrument arrival (STAR) - A designated instrument flight rule (IFR) arrival route linking a significant point, normally on an ATS route, with a point from which a published instrument approach procedure can be commenced

Standard instrument departure (SID) - A designated instrument flight rule (IFR) departure route linking the aerodrome or a specified runway of the aerodrome with a specified significant point, normally on a designated ATS route, at which the en-route phase of a flight commences.

Strategic Waypoints - Where the waypoint is used strategically (i.e. part of the route structure itself) and is likely to be used routinely in RTF exchanges, a standard ICAO 5LNC is allocated.

Tactical waypoints - A waypoint that is intended for use on a tactical basis, but still needing to be contained in the navigation database for procedure definition purposes other than as an ATS significant point, is allocated an alphanumeric designator.

Waypoint (WPT) - A specified geographical location used to define an area navigation route or the flight path of an aircraft employing area navigation. Waypoints are identified as either:

Fly-by waypoint: A waypoint which requires turn anticipation to allow tangential interception of the next segment of a route or procedure,

or

Flyover waypoint: A waypoint at which a turn is initiated in order to join the next segment of a route or procedure.

4   Composition of designators

4.1   The plain language designator of a standard departure or arrival route shall consist of:

✓   A basic indicator (the basic indicator shall be the name or name-code of the significant point where a standard departure route terminates or a standard arrival route begins) followed by

✓   A validity indicator (The validity indicator shall be a number from 1 to 9) followed by

✓   A route indicator (The route indicator shall be one letter of the alphabet. The letters "I" and "O" shall not be used), where required; followed by

✓   The Category of the aircraft types (CAT A/B or CAT C/D)

✓   The word "departure or SID" or "arrival or STAR"; followed by

Runway number or the word "visual", if the route has been established for use by aircraft operating in accordance with the visual flight rules (VFR).

4.2   The coded designator of a standard departure or arrival route, instrument or visual, shall consist of:

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✓ The coded designator (the coded indicator shall be the name or name-code of the significant point where a standard departure route terminates or a standard arrival route begins) followed by

✓ The validity indicator (The validity indicator shall be a number from 1 to 9) followed by

✓ The route indicator (The route indicator shall be one letter of the alphabet. The letters "I" and "O" shall not be used) where required.

> Note 1: Airborne navigation databases use a maximum of 6 characters to identify a route. If the coded designator is longer than 6 characters, the fifth character of the 5LNC is not coded in navigation database route designation.

> Note 2: The coded designator and the navigation specification name may be charted alongside the route in the plan view.

5 Assignment of designators

Each route shall be assigned a separate designator.

To distinguish between two or more routes which relate to the same significant point (and therefore are assigned the same coded designator), a separate route indicator shall be assigned to each route.

6 Assignment of validity indicators

A validity indicator shall be assigned to each route to identify the route which is currently in effect.

The first validity indicator to be assigned shall be the number "1".

Whenever a route is amended, a new validity indicator, consisting of the next higher number, shall be assigned. The number "9" shall be followed by the number "1".

7 SID Designators

SIDs are promulgated in the respective aerodrome entries in the Irish AIP Aerodrome AD 2 section.

SIDs end at a significant point on a designated ATS Route at which the en-route ATS system is joined. The name of the ATS significant point at the end of the SID procedure (navigation aid identifier or ICAO ICARD 5LNC) will normally determine the designation of the SID procedure.

In assigning designators, care will be taken to ensure that no confusion will arise in their practical use in voice communications through close similarities with other designators.

8 STAR Designators

STARs are promulgated in the respective aerodrome entries in the Irish AIP Aerodrome AD 2 section.

The basic indicator for STARs is either:

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The name or the name code for the holding facility or significant point where the arrival route terminates

Or

The name or the name code for the holding facility or significant point where the arrival route begins

9   Charting requirements

Additional procedure requirements shall be provided as chart notes. PBN items shall be separated out and published in a PBN requirements box on the plan view of the chart immediately below the chart identifier. The PBN requirements box shall include the identification of the navigation specification used in the procedure design, any navigation sensor limitations and any required functionalities that are described as options in the navigation specification, that is, not included in the core navigation specification as follows:

- ✓ a) Navigation specification:
  - ➢ — RNAV 5
  - ➢ — RNAV 1
  - ➢ — RNP 1
  - ➢ — Advanced RNP. (RNP navigation accuracies shall be specified, e.g. RNP 2, RNP 1)
  - ➢ — RNP 0.3
- ✓ b) Navigation sensor limitations, e.g:
  - ➢ — GNSS required
- ✓ c) Functional requirements:
  - ➢ — RF required
- ✓ Lengthy text may be shown on the verso of the chart.

10   Designator Changes

Changes to SIDs and STARs will invariably require a change in the composition of designators. The following designator changes will be required in the following circumstances in the absence of detailed guidance by ICAO:

10.1 SID designator changes will be required in the following circumstances

- ✓ A new name of the ATS significant point at the end of the SID procedure

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> ➤ A new coded designator, validity indicator (1) and route indicator shall be established

- ✓ Changes to vertical profile, i.e., procedure design gradient and altitude/FL constraints.

  > ➤ The validity indicator shall increase by 1 to the next number

- ✓ Changes to lateral profile, i.e., ground track.

  > ➤ The validity indicator shall increase by 1 to the next number

- ✓ The insertion on the route of new significant points.

  > ➤ The validity indicator shall increase by 1 to the next number

- ✓ The renaming of a significant point on the route.

  > ➤ The validity indicator shall increase by 1 to the next number

- ✓ Speed limitation changes.

  > ➤ The validity indicator shall increase by 1 to the next number

- ✓ The withdrawal or replacement of navaids defining a SID.

  > ➤ The validity indicator shall increase by 1 to the next number

10.2 STAR designator changes will be required in the following circumstances

- ✓ A new name of the ATS significant point at the start of the STAR procedure

  > ➤ A new coded designator, validity indicator (1) and route indicator shall be established

- ✓ Changes to vertical profile, i.e. altitude/FL constraints.

  > ➤ The validity indicator shall increase by 1 to the next number

- ✓ Changes to lateral profile, i.e., ground track.

  > ➤ The validity indicator shall increase by 1 to the next number

- ✓ The withdrawal or replacement of navaids defining a STAR.

  > ➤ The validity indicator shall increase by 1 to the next number

- ✓ The insertion on the route of new significant points.

  > ➤ The validity indicator shall increase by 1 to the next number

- ✓ The renaming of a significant point on the route.

  > ➤ The validity indicator shall increase by 1 to the next number

- ✓ Speed limitation changes, including changes to Speed Limitation Points.

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> ➢ The validity indicator shall increase by 1 to the next number

10.3 Designator changes are not required in the following circumstances

- ✓ Changes to magnetic variation

- ✓ Changes to departure aerodrome runway designators arising from changes to magnetic variation

- ✓ Changes to ATS information, e.g. frequencies

- ✓ Changes to Area Minimum Altitudes or their presentation on charts

- ✓ Transition Altitude changes

- ✓ Navaid frequency changes

- ✓ Waypoint or navaid co-ordinate refinements and/or corrections

- ✓ Track mileage refinements and/or corrections

- ✓ Changes to background airspace or topographical information on procedure charts.

- ✓ Changes to 'General Information' or 'Warnings' or 'Notes' will generally not generate designator changes, however the significance of any such changes may warrant a validity indicator change at the discretion of the Pans-Ops & Airspace Inspector