Guidance Material for The Implementation of RNP APCH Operations

ICAO EUR PBN TF/6
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Introduction

Why this document?
• ICAO is actively encouraging RNP APCH implementation
• The need for guidance material on implementation expressed by different stakeholders on numerous occasions

The scope?
• RNP APCH procedures
• RNP AR APCH outside of the scope

Intended readership?
• Primarily States and ANSPs as the leaders of implementation
• Other actors concerned by the RNP APCH implementation
Background

The document is based on:

- The most recent ICAO PBN implementation methodology included in Doc 9613 - the PBN Manual
- The applicable and available ICAO, EASA and EUROCONTROL documents
- Lessons learned from pioneer implementation projects
- Review and Feedback from PBN TF/4, 5 and RATF
The main features of the guidance material:

- **Background** on RNP APCH operations as a brief introduction
- The implementation described through a set of 18 activities
- The Activities are mapped to the ICAO PBN implementation Processes and Steps
- Provides reference to applicable standards and regulatory documents for each Activity
Implementation Methodology

Process 1
Deciding what to implement and where

Process 2
Validation of assumptions and the implementation Steps
**PROCESS 1**

**Identify Navigation specification for implementation**

1. **User requirements**
2. **Step 1** Agree Operational Requirement
3. **Step 2** Create PBN Implementation Team
4. **Step 3** Agree Objectives, Scope and Time Scales
5. **Step 4** Analyse Reference Scenario
6. **Step 5** Safety and Performance Criteria
7. **Step 6** CNS/ATM Assumptions, Enablers & Constraints
8. **Step 7 a** Design Routes and Holds
9. **Step 7 b** Confirm ICAO navigation specification
10. **Activity 1** The background to RNP APCH implementation
11. **Activity 2** Create the implementation project team
12. **Activity 3** Agree project objectives, scope and timescale
13. **Activity 4** Survey of candidate airports
14. **Activity 5** Assessment of airport capabilities
15. **Activity 6** Survey of traffic characteristics and aircraft operators
16. **Activity 7** ATC and AIS services
17. **Activity 8** Benefits and costs for RNP APCH implementation
18. **Activity 9** Choose which type of RNP APCH to implement
19. **Activity 10** Develop New Nav Spec through ICAO Processes

**Process 2**

**Validation and Implementation Planning**

1. **Possible iterations with Process 1 e.g. step & et seq.**
2. **Step 11** Validate Airspace concept
3. **Step 12** Local safety case
4. **Activity 12** Procedure validation
5. **Activity 13** Finalise Procedure Design
6. **Step 13a** Ground Validation
7. **Step 13b** Flight Inspection & Flight Validation
8. **Step 14** ATC System Integration Considerations
9. **Activity 14** Mixed Mode Ops
10. **Activity 15** AIS requirements
11. **Activity 16** AIS requirements
12. **Activity 17** Training requirements
13. **Activity 18** Final review before implementation
14. **Activity 19** Introduction into service
15. **Activity 20** Post-implementation activities
16. **Step 15** Awareness & Training Material
17. **Step 16** Implementation
18. **Step 17** Post Implementation Review
19. **Gate** Final decision to implement
The Main Changes

• Many details in definitions and terminology
• Do not close the door to LP operations in Europe
• Example Chart added with three minima lines
• New Activity 16 on Navigation Database
• Some text added on procedure validation from Doc 9906
What Next?

• Further Comments?

• Next Steps?