



# Revision of operational approval criteria for Performance-Based Navigation (PBN)

RELATED NPA/CRD 2013-25 — RMT.0256 & RMT.0257 (MDM.062(A) & (B)) — 31.3.2015

## EXECUTIVE SUMMARY

This Opinion addresses an economic issue related to the administrative burden caused by Specific Approval (SPA) procedures for Performance-Based Navigation (PBN), which, according to the current text of Commission Regulation (EU) No 965/2012, will be progressively applicable not only to Commercial Air Transport (CAT) operators, but also to Non-Commercial operators of Complex (NCC) or other-than-complex motor-powered (NCO) aircraft, as well as to operators conducting Specialised Operations (SPO). Area Navigation (RNAV) was developed in the 1960s in the USA to give aviators more flexibility in deciding their horizontal path (i.e. no longer obliged to overfly ground beacons). In time, new RNAV or Required Navigation Performance (RNP) applications were added. The Agency is aware that requesting and obtaining a SPA for each PBN application constitutes an additional administrative task, especially for non-commercial operators, but also for competent authorities.

This Opinion hence proposes to obviate the need for SPA for the vast majority of existing PBN applications. Pilot training for Instrument Rating (IR) needs to be revised in parallel, since the administrative simplification shall have no adverse effect on safety. This Opinion takes into account the Fourth Edition (2013) of the ICAO Manual on performance-based navigation (Doc 9613) and the outcome of ICAO Flight Operations Panel (FLTOSP)/1 (October 2014), to pursue the following specific objectives:

- (a) propose rules on pilot training, which are an essential prerequisite to remove SPA for some PBN operations;
- (b) eliminate the specific operational approval for most PBN operations for CAT, SPO, NCC and NCO operators;
- (c) take into account the latest developments (e.g. RNP 2, Advanced-RNP and RNP 0.3 in the Fourth Edition of ICAO Doc 9613 ); and
- (d) take the opportunity to introduce necessary urgent changes also for matters other than PBN (e.g. dangerous goods, upper torso restraints and privileges of holders of a flight test rating).

This Opinion proposes amendments to Commission Regulations (EU) Nos 1178/2011 (Part-FCL, Part-ARA and Part-ORA) and 965/2012 (various Parts). The proposed changes are expected to maintain safety while reducing the regulatory burden, also with regard to oversight by competent authorities.

Applicability		Process map	
Affected regulations and decisions:	Commission Regulations (EU) Nos 1178/2011 (Part-FCL, Part-ARA and Part-ORA) and 965/2012 (Annex I — Definitions, Part-ARO, ORO, CAT, SPA, NCC, NCO, SPO) and the related AMC/GM, CS-FSTD(A) and (H), AMC 20-4, -5, -12, -26, -27 and -28.	ToR (Issue 2):	8.7.2013
Affected stakeholders:	Commercial and non-commercial aircraft operators, pilots, ATO, Original Equipment Manufacturers (OEM) and Flight Synthetic Training Devices (FSTDs).	Concept Paper:	No
Driver/origin:	Level playing field	Rulemaking group:	Yes
Reference:	Annex V (Part-SPA) to Commission Regulation (EU) No 965/2012	RIA type:	Light
		Technical consultation during NPA drafting:	No
		Publication date of the NPA:	20.12.2013
		Duration of NPA consultation:	3 months
		Review group:	Yes
		Focused consultation:	No
		Publication date of the CRD	Concurrently with this Opinion
		Publication date of the Decisions:	2016/Q2



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## 1. Procedural information

### 1.1. The rule development procedure

The European Aviation Safety Agency (hereinafter referred to as the 'Agency') developed this Opinion in line with Regulation (EC) No 216/2008<sup>1</sup> (hereinafter referred to as the 'Basic Regulation') and the Rulemaking Procedure<sup>2</sup>.

This rulemaking activity is included in the [Agency's Rulemaking Programme](#) under RMT.0256 & RMT.0257 (MDM.062 (a) & (b)). The scope and timescale of the task were defined in the related Terms of Reference<sup>3</sup>.

The draft text of this Opinion has been developed by the Agency based on the input of a specific Rulemaking Group for the two above-mentioned RMTs. All interested parties were consulted through NPA 2013-25<sup>4</sup>. 200 unique comments were received from interested parties, including industry, national aviation authorities and social partners.

The Agency has addressed and individually responded to the comments received on the NPA. The comments received and the Agency's responses thereto are presented in Comment-Response Document (CRD) 2013-25.

The final text of this Opinion has been developed by the Agency, based on the input of the Review Group for RMT.0256 & RMT.0257 (MDM.062 (a) & (b)).

The process map on the title page summarises the major milestones of this rulemaking activity.

At the final stage of this rulemaking activity, the Agency identified a need for an urgent rule change in Part-FCL in order to address the need for test pilots to operate an aircraft for certain flights without complying with the requirement to hold the respective class or type rating. Furthermore, the Agency proposes changes to requirements related to dangerous goods and upper torso restraint systems. These rule changes were included although they were not part of the rulemaking process. No public consultation has taken place on these issues.

### 1.2. The structure of this Opinion and related documents

Chapter 1 of this Opinion contains the procedural information related to this task. Chapter 2 'Explanatory Note' explains the core technical content and refers to the draft rule text proposed by the Agency.

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<sup>1</sup> Regulation (EC) No 216/2008 of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC (OJ L 79, 19.3.2008, p. 1).

<sup>2</sup> The Agency is bound to follow a structured rulemaking process as required by Article 52(1) of the Basic Regulation. Such process has been adopted by the Agency's Management Board and is referred to as the 'Rulemaking Procedure'. See Management Board Decision concerning the procedure to be applied by the Agency for the issuing of opinions, certification specifications and guidance material (Rulemaking Procedure), EASA MB Decision No 01-2012 of 13 March 2013.

<sup>3</sup> <http://easa.europa.eu/system/files/dfu/ToR%20MDM.062%28a%29%26%28b%29%20%28RMT.0256-0257%29%20Issue%20.pdf>

<sup>4</sup> In accordance with Article 52 of the Basic Regulation and Articles 5(3) and 6 of the Rulemaking Procedure: <http://easa.europa.eu/system/files/dfu/NPA%202013-25.pdf>



### 1.3. The next steps in the procedure

This Opinion contains proposed changes to European Union Regulations. It is addressed to the European Commission, which shall use it as a technical basis to prepare a legislative proposal.

The Decisions containing the related Certification Specifications (CS)/Acceptable Means of Compliance (AMC)/Guidance Material (GM) will be published by the Agency when the related Implementing Rules (IRs) are adopted by the European Commission.



## 2. Explanatory Note

### 2.1. Issues to be addressed

Pilots holding an IR have the privilege to fly an aircraft under Instrument Flight Rules (IFR). This means that they may use Air Traffic Services (ATS) routes following a series of VHF Omni-Range (VOR) stations, Non-Directional Beacons (NDB), or DMEs and approach procedures supported by ground-based navigation systems down to a DA/H of 200 ft.

This general principle is part of the FCL.605 IRs in Commission Regulation (EU) No 1178/2011<sup>5</sup>.

The privilege is based on several underlying assumptions, including that the aircraft and its navigation avionics have an airworthiness approval enabling the type of envisaged IFR operations and that pilots have appropriate training and checking standards and procedures available.

In the case of emerging 'new' concepts of operations (such as PBN) or new navigation systems, one or more of the mentioned assumptions may not be substantiated. In such a case, during the last four decades, it has become customary for the operator to apply for a SPA by the competent authority before flying these operations.

Following this principle, Regulation (EU) No 965/2012<sup>6</sup> (hereinafter referred to as the 'Air OPS Regulation') requires a SPA for the commercial and non-commercial operators wishing to fly PBN operations (except for Basic-RNAV alias RNAV 5).

This provision raised concerns related to the perceived huge economic and administrative burden of Part-SPA on general aviation, compared with the maturity already reached by PBN, in particular by basic GNSS approach operations, which, except for specific cases, are not more complex than ILS CAT I operations (for which no SPA is required).

The subsequent debate showed that, since the Basic Regulation puts all the actors involved in PBN under oversight (e.g. from the EGNOS Service Provider to providers of digital data for navigation), the major remaining gap was the lack of common requirements (at EU level) for pilot training and periodic checking in relation to PBN.

NPA 2013-25 of 20 December 2013 hence proposed the drastic reduction of the number of cases in which a SPA is required before flying PBN operations, enhancing at the same time the pilot training in relation to IR, in particular when exploiting PBN and satellite navigation.

This Opinion therefore proposes a Commission Regulation to amend Commission Regulation (EU) No 1178/2011 (Part-FCL) and the Air OPS Regulation.

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<sup>5</sup> Annex I (Part-FCL) to Commission Regulation (EU) No 1178/2011 of 3 November 2011 laying down technical requirements and administrative procedures related to civil aviation aircrew pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 311, 25.11.2011, p. 1), as amended by [Commission Regulation \(EU\) No 290/2012](#) of 30 March 2012 (OJ L 100, 5.4.2012, p. 1).

<sup>6</sup> Annex V (Part-SPA) to Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 296, 25.11. 2012, p. 1), as amended by [Commission Regulation \(EU\) No 800/2013](#) of 14 August 2013 (OJ L 227, 24.8.2013, p. 1).



The opportunity is also taken to update these Regulations in relation to torso restraint systems, transport of dangerous goods and to include provisions for amending the privileges of test pilots in order to allow them to perform flights without holding the respective class or type ratings.

## 2.2. Objectives

The overall objectives of the EASA system are defined in Article 2 of the Basic Regulation. This proposal will contribute to the achievement of the overall objectives by addressing the issues outlined in paragraph 2.1.

The specific objectives of this proposal are to:

- (a) establish safe and cost-efficient pilot training and checking requirements to remove the need for SPA for the vast majority of PBN operations;
- (b) reduce the number of cases in which an operational approval for PBN operation is required for CAT, SPO, NCC and NCO operators;
- (c) take into account the introduction of RNP 2, Advanced-RNP and RNP 0.3 in the Fourth edition of the ICAO PBN Manual; and
- (d) take the opportunity to introduce other necessary changes to Part-FCL or the Air OPS Regulation, in relation to transport of dangerous goods, upper torso restraint (UTR) systems and privileges of the holders of a flight test rating.

## 2.3. Outcome of the consultation

25 commentators submitted 200 unique comments on NPA 2013-25. These comments in principle supported the proposed approach. For more details, please see CRD 2013-25.

## 2.4. Summary of the Regulatory Impact Assessment (RIA)

To remove the obligation for SPA before flying PBN operations, the instrument rated (IR) pilots must be properly trained and checked. Consequently, several interconnected issues emerged in the OPS and FCL domains.

The RIA (Chapter 4 in NPA 2013-25) considered a series of five cascading aspects:

- (1) for which PBN applications ('what?') is it possible to safely remove the administrative operational approval procedure from Part-SPA?
- (2) alleviation of the administrative burden represented by SPA for both operators and competent authorities balanced by other mitigations ('how');
- (3) amendment to the IRs on 'new' pilots not yet rated for IR;
- (4) transition for 'old' pilots already holding a valid IR; and
- (5) transition for the Approved Training Organisations (ATOs), for Flight Instructors (FIs), including for Instrument Rating Instructors (IRIs) and for Flight Examiners (FEs) having the privilege to conduct tests of the IR (i.e. Instrument Rating Examiners (IREs)).



The RIA concluded that removing the obligation for SPA was possible for several PBN applications; however, this means that, to maintain safety, PBN elements should be included into pilot training and checking for IR.

Furthermore, the RIA recommended transition for already instrument rated pilots, ATOs, instructors and examiners based on the periodic cycle of checks or seminars, already established by the current rules.

To include PBN aspects into the next check or seminar, two new articles are considered necessary in Regulation (EU) No 1178/2011 to govern the transition.

The conclusions of the RIA were supported by the public consultation of NPA 2013-25.

No specific RIA was conducted for the additional changes to Part-FCL or the Air OPS Regulation, in relation to transport of dangerous goods, UTR systems and the privileges of the holders of a flight test rating.

## 2.5. Overview of the proposed Commission Regulation

### 2.5.1. General

This Opinion proposes a draft Commission Regulation amending Regulation (EU) No 1178/2011 (Part-FCL) and the Air OPS Regulation as regards:

- PBN, based on the related comments on NPA 2013-25 and the responses thereto;
- UTR systems, as discussed with the EASA Committee on 9 October 2014;
- transport of dangerous goods by non-commercial operators; and
- the privileges of pilots holding a flight test rating.

### 2.5.2. Amendments to Regulation (EU) No 1178/2011 in relation to PBN

The proposed changes to Part-FCL rules have been described in detail in NPA 2013-25. In particular, they cover:

- the ‘grand-fathering’ of existing licences, approvals, ratings and certificates (i.e. they do not immediately lose validity, because some technical rules have been modernised);
- the transition measures in the new Article 4a, necessary for safety reasons, to check in a reasonable time all the currently rated pilots, to demonstrate Theoretical Knowledge (TK) and practical skill;
- the similar measures in the same Article, for the renewal of instructor and examiner certificates;
- a new Article 4b in Regulation (EU) No 1178/2011 to mandate ATOs to update their respective training programmes not later than 25 August 2016, which is the same date for the end of the derogation period for Part-NCC and Part-NCO;
- a few new definitions in Part-FCL;
- the extension of the privileges of IR pilots (i.e. FCL.605) to fly the vast majority of PBN operations without any additional administrative process for operational approval;



- TK, Learning Objectives (LOs) and content of the skill test, proficiency checks and cross-crediting for the IR, now encompassing PBN operations (i.e. Appendices 7, 8 and 9); and
- the consequential amendments to Part-ORA.

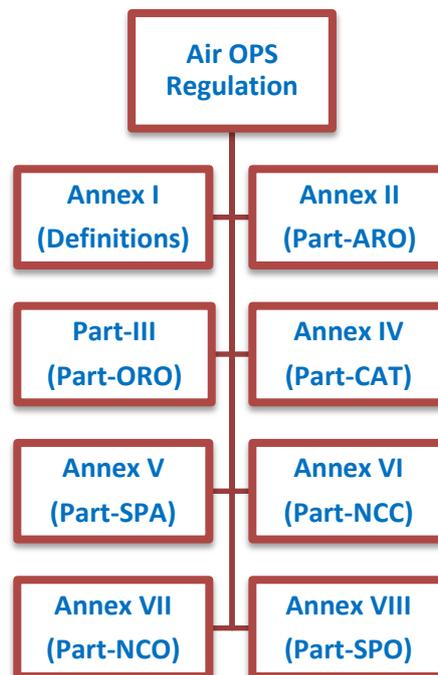
### 2.5.3. Privileges of test pilot rating holders

In addition, changes are proposed to FCL.700 and FCL.820(c)(3) to allow holders of a test pilot rating to conduct a flight without holding the respective class or type rating. This change of the existing privileges of a flight test pilot was introduced in order to correct an unintended adverse regulatory impact as in the past the existing provisions have prevented NAAs' and Agency's test pilots from completing essential certification activity tasks in support of applicants.

The impact of the rule change has been carefully assessed. The population of pilots affected by the change is extremely small and the activity is confined to the very specialised and controlled area of flight test activities. The Agency is of the opinion therefore that the proposed change would resolve the issues identified with no adverse impact on safety.

### 2.5.4. Amendments to the Air OPS Regulation in relation to PBN

In principle, PBN affects all Commercial Air Transport (Part-CAT) operators, as well as non-commercial operators (Part-NCC, Part-NCO) and operators of specialised operations (Part-SPO). The Air OPS Regulation<sup>7</sup> contains 8 annexes as shown in Figure 3:



**Figure 3: Structure of the Air OPS Regulation**

Subpart B of Part-SPA is specifically dedicated to PBN operations.

<sup>7</sup> As last amended by Commission Regulation (EU) No 379/2014 of 7 April 2014, which, inter alia, introduced Part-SPO.



The derogation in Article 6, paragraph 7, specifying that SPA.PBN.100 is not applicable for NCO until the related implementing rules are adopted and apply, is deleted.

Moreover, all Annexes, except Annex III (Part-ORO), require amendment in relation to PBN:

- A new additional definition (Required Navigation Performance) in Annex I;
- New ARO.OPS.230 in Annex II (Part-ARO), as well as amendment to Appendix II (i.e. OPS SPECS template) and Appendix V (list of SPAs) therein;
- Annex IV (Part-CAT);
- Amendment to Annex V (Part-SPA) to limit the cases where a SPA is required to:
  - RNP AR APCH; and
  - RNP 0.3 for helicopter operation; and
- Annexes VI (Part-NCC), VII (Part-NCO) and VIII (Part-SPO).

### 2.5.5. Upper Torso Restraint (UTR) systems

Following the Air Operations Standardisation meetings held in 2014, the Agency took several actions to facilitate the compliance with the requirements of CAT.IDE.A.205 on UTR systems for flight crew seats and passenger seats on aeroplanes having a Maximum Certified Take-Off Mass (MCTOM) below 5 700 kg and a Maximum Operational Passenger Seating Configuration (MOPSC) below 9 seats used in CAT operations.

The Agency launched a survey among the Member States. The results of the survey and the subsequent assessment were summarised at the EASA Committee of 9 October 2014 and further communicated in detail to Member States. Overall, it was determined that the number of non-compliant aeroplane types or models is such that it does not allow individually tailored solutions (e.g. Airworthiness Directives (ADs)) and therefore an amendment to the rule in question was necessary. In the meantime, Member States would have the possibility to issue temporary exemptions under the flexibility provision of Article 14.4 of the Basic Regulation until rulemaking is completed.

The aeroplanes unable to comply with the requirements for flight crews seats have been categorised in the following three groups:

<b>Group 1</b>	aeroplanes having a UTR system with a diagonal shoulder strap (3-point system) compliant with emergency dynamic landing conditions as defined in 23.562 (or equivalent)
<b>Group 2</b>	aeroplanes having a UTR system with a diagonal shoulder strap (3-point system) not compliant with emergency dynamic landing conditions as defined in 23.562 (or equivalent)
<b>Group 3</b>	CS-VLA (or equivalent) and CS-LSA (or equivalent) certified aeroplanes having a UTR system with a diagonal shoulder strap (3-point system)



For flight crew seats, the resulting rule change allows for:

- aeroplanes of Group 1, the use of the existing 3-point UTR systems that are compliant with emergency dynamic landing conditions;
- aeroplanes of Group 2, the use of the existing 3-point UTR system only for those aeroplanes having a Certificate of Airworthiness (CofA) issued before a cut-off date; and
- aeroplanes of Group 3, the use of the existing 3-point UTR system.

For passenger seats, the resulting rule change requires:

- a UTR system (of any kind) on the passenger seats only for those aeroplanes having a CofA issued after a cut-off date.

The impact of the rule change has been assessed taking into consideration the concerns expressed by industry and Member States.

The safety objective of the past and the present rule has not changed and it is to protect the occupant's torso in the event of rapid deceleration. On this basis, a 3-point system compliant with 23.562 (or equivalent) in use on aeroplanes of group 2 may be considered to provide an equivalent level of protection to a 4-point system.

However, for many aeroplanes of group 2 there are no technical solutions available for the retrofit of a 4-point system as the design of the seat and the airframe does not allow it. In other cases, when a modification is available, the cost of it would not be sustainable compared with the scale of the operations conducted with the existing fleet. The social impact of discontinuing CAT operations with such aircraft has also been recognised, especially in respect of small communities living on islands or other remote areas in the territory of the EU. Group 2 is therefore recognised to fit the criterion of 'not reasonably practical' originally intended by EU-OPS 1.730.

Further consideration was given to CS-VLA (or equivalent) and CS-LSA (or equivalent) certified aeroplanes, for which it was determined that a 3-point system is acceptable based on the lower maximum allowed stall speed ( $V_s$ ) requirement given in CS-VLA (or equivalent) and CS-LSA (or equivalent).

The rule changes were extended to the corresponding requirements in Part-NCC, Part-NCO and Part-SPO.

Additional AMCs and GMs will be adopted as necessary in the relevant Decisions.

The implementation dates for the various cases have been determined taking into consideration the end of the opt-out period of the respective IRs for non-commercial operations.

#### 2.5.6. Dangerous goods

Member States and stakeholders expressed growing concerns on the transport of dangerous goods by aircraft, including by non-commercial operators of other-than-complex motor-powered aircraft. Therefore, amendments to NCO.GEN.140 are proposed to consider reasonable quantities of articles and substances that would otherwise be classified as dangerous goods and that are used to facilitate flight safety as authorised under paragraph 2.2.1(a) of the Technical Instructions.



### 2.5.7. Electronic navigation data management

Currently, a number of rules (e.g. NCC.IDE.A.160) require the operator to continuously monitor both the process and the products related to electronic navigation data, either directly or by monitoring the compliance of third party providers. This obligation may:

- simply be disproportionate, taking into account the professional capabilities of small commercial or non-commercial operators;
- give no credit to the fact that providers of digital data for navigation do belong to the family of certified Air Navigation Service Providers (ANSPs), according to Article 3(q) of the Basic Regulation; and
- lead to unnecessary duplication of the safety oversight processes (i.e. not only the competent authority, but also by the end-users of the data).

Streamlining such processes and aligning them with the Basic Regulation has, however, been undertaken by the Agency through RMT.0593 & RMT.0594, which produced NPA 2014-20 of 8 August 2014<sup>8</sup> and the subsequent Opinion No 02/2015<sup>9</sup> (published on 16 March 2015) on Part-DAT. Opinion No 02/2015 proposes inter alia the amendment of the Air OPS rules on management of electronic navigation data.

### 2.5.8. Regulatory harmonisation

The ICAO Air Navigation Commission (ANC) has recently reorganised its Panels. Part of this initiative disbanded the previous OPS Panel, now replaced by the FLTOPSP, whose first meeting (FLTOPSP/1) took place in Montreal from 27 to 31 October 2014.

The subgroup on PBN (PBNSG) drew the attention of FLTOPSP/1 on the Agency's NPA 2013-25, which aims at modernising the regulatory approach to PBN operations. Furthermore, PBNSG informed the FLTOPSP of the progress of such rulemaking initiative (i.e. 200 received comments and this Opinion being developed) and recommended not only the strong support from ICAO, but also the attention of other ICAO Contracting States and International Organisations, to consider the application of the same approach on a global scale.

After thorough discussion, FLTOPSP/1 agreed on far reaching amendments to all Parts of Annex 6 which will remove the requirement for SPA for the majority of PBN specifications. These amendments are now being considered by the ICAO ANC, and ICAO Contracting States will be consulted on the matter. In other words, these amendments are neither yet adopted by the ICAO Council, nor applicable.

However, only for transparency and information purposes, the amendments recommended by FLTOPSP/1 to Part I of Annex 6 to the Chicago Convention, are reproduced in the Appendix to this Opinion.

These amendments, after a first review by the ANC, are expected to be proposed by an ICAO State Letter (type I) in 2015, with possible applicability in November 2016.

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<sup>8</sup> <http://www.easa.europa.eu/document-library/notices-of-proposed-amendment/npa-2014-20>

<sup>9</sup> <http://www.easa.europa.eu/document-library/opinions/opinion-022015>



The amendment to ICAO Annex 6 is a precondition for the implementation of the new common European rules proposed by this Opinion, which are in particular important for the general aviation sector.

In particular, such amendments envisage that the operator of aircraft engaged in international air navigation shall ensure that when PBN is required for the route or procedure to be flown:

- (a) the relevant PBN specification is stated in the Aircraft Flight Manual (AFM) or other document that has been approved by the certifying authority as part of an airworthiness assessment or is based on such approval;
- (b) the aircraft is operated in conformance with the relevant navigation specification and limitations in the AFM or other document referred to above;
- (c) normal and abnormal procedures, including contingency procedures are established; and
- (d) the flight crew is qualified and proficient in accordance with the appropriate navigation specifications.

The above-mentioned content is reflected in the proposed rules in Part-CAT, Part-NCC, Part-NCO and Part-SPO.

In conclusion, the content of this Opinion is harmonised with the parallel ICAO initiative and both should become applicable in 2016. This will significantly reduce resources spent for non-safety related tasks by the industry and authorities. At the same time, safety will be increased through enhanced training requirements.

According to information acquired by the Agency in ICAO fora, the EU approach could be soon adopted by other significant ICAO Contracting States in other continents (e.g. by CASA in Australia).

## 2.6. CS-FSTD(A) and CS-FSTD(H)

NPA 2013-25 proposed amendments to CS-FSTD(A) and CS-FSTD(H) to add the capability for RNP APCH at least to Flight and Navigation Procedures Trainer (FNPT) II. The proposed amendments have been confirmed by the consultation and will be published in the upcoming Decision.

## 2.7. AMC and GM to Part-FCL, Part ARA and various Parts of the Air OPS Regulation

NPA 2013-25 proposed as well amendments to a number of AMC and GM, mainly to Part-FCL, Part-ARA and various Parts of the Air OPS Regulation. These AMC and GM are related to amendments of related Implementing Rules. Noteworthy are in particular the new syllabus items and Learning Objectives for PBN related ground training. The AMC and GM to the Air OPS Regulation contain the transposed provisions from related AMC 20 material. These proposals have been substantially supported during the consultation. The related Decisions will be issued once the Regulation proposed through this Opinion has been adopted by the European Commission.

## 2.8. AMC 20

In addition to the rules on Flight Crew Licensing (Part-FCL), the various Parts of the Air OPS Regulation and FSTDs, it is necessary to review AMC 20 material relevant for PBN.



In fact, the Agency has initiated a progressive migration of all OPS-related material from AMC 20-xx into AMC/GM to the Air OPS Regulation, while leaving in AMC 20, for the time being, only provisions related to airworthiness. In other words, AMC 20 would become a 'horizontal' certification specification (CS) applicable to different aircraft categories (e.g. navigation systems on board large and CS-23 aeroplanes).

The NPA hence proposed the transposition of material from the following AMC 20s to the AMC/GM to the Air OPS Regulation:

- AMC 20-4: Airworthiness Approval and Operational Criteria for the use of navigation systems in European airspace designated for Basic RNAV operations;
- AMC 20-12: Recognition of FAA Order 8400.12a for RNP 10 Operations;
- AMC 20-26: Airworthiness Approval for RNP Authorisation Required (RNP AR) operations;
- AMC 20-27: Airworthiness Approval and Operational Criteria for RNP Approach (RNP APCH) Operations, including APV Baro VNAV Operations; and
- AMC 20-28: Airworthiness Approval and Operational Criteria for Localiser Performance and Vertical Guidance (LPV) Approach Operations.

In addition, NPA 2013-25 proposed the deletion of AMC 20-5 (Airworthiness Approval and Operational Criteria for the use of the NavStar Global Positioning System (GPS)).

Said proposals were supported by the consultation.

Done at Cologne, on 31 March 2015.

Patrick KY  
Executive Director



### 3. References

#### 3.1. Affected regulations

- (a) Commission Regulation (EU) No 1178/2011 of 3 November 2011 laying down technical requirements and administrative procedures related to civil aviation aircrew pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 311, 25.11.2011), as last amended by Commission Regulation (EU) No 245/2014 of 13 March 2014 (OJ L 74, 14.3.2014, p. 33).
- (b) Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 296, 25.10.2012).
- (c) Commission Regulation (EU) No 800/2013 of 14 August 2013 amending Regulation (EU) No 965/2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 227, 24.08.2013).

#### 3.2. Affected CS, AMC and GM

- (a) [ED Decision 2012/010/R](#) of the Executive Director of the Agency of 4<sup>th</sup> July 2012 on the certification specifications for aeroplane flight simulation training devices (CS-FSTD(A))
- (b) [ED Decision 2012/011/R](#) of the Executive Director of the Agency of 26<sup>th</sup> June 2012 on the certification specifications for helicopter flight simulation training devices (CS-FSTD(H))
- (c) [ED Decision 2013/022/R](#) of the Executive Director of the Agency of 23 August 2013 on adopting Acceptable Means of Compliance and Guidance Material for Non-commercial operations with other-than-complex motor-powered aircraft (Part-NCO)
- (d) [ED Decision 2013/021/R](#) of the Executive Director of the Agency of 23 August 2013 on adopting Acceptable Means of Compliance and Guidance Material for Non-commercial operations with complex motor-powered aircraft (Part-NCC)
- (e) [ED Decision 2013/020/R](#) of the Executive Director of the Agency of 23 August 2013 on amending Decision No 2012/019/R of the Executive Director of the European Aviation Safety Agency of 24 October 2012 on Acceptable Means of Compliance and Guidance Material to Part-SPA (Amendment 1)
- (f) [ED Decision 2012/018/R](#) of the Executive Director of the Agency of 24<sup>th</sup> October 2012 on acceptable means of compliance and guidance material to Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to Air Operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council — Acceptable means of compliance and guidance material to Part-CAT
- (g) [ED Decision 2013/018/R](#) of the Executive Director of the Agency of 23 August 2013 on amending Decision No 2012/016/R of the Executive Director of the European Aviation Safety



Agency of 24 October 2012 on Acceptable Means of Compliance and Guidance Material to Part-ARO (Amendment 2)

- (h) [ED Decision 2013/017/R](#) of the Executive Director of the Agency of 23 August 2013 on amending Decision No 2012/015/R of the Executive Director of the European Aviation Safety Agency of 24 October 2012 on Acceptable Means of Compliance and Guidance Material to Annex I - Definitions (Amendment 1)
- (i) [ED Decision 2011/016/R](#) of the Executive Director of the European Aviation Safety Agency of 15 December 2011 on Acceptable Means of Compliance and Guidance Material to Commission Regulation (EU) No 1178/2011 of 3 November 2011 laying down technical requirements and administrative procedures related to civil aviation aircrew pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council — ‘Acceptable Means of Compliance and Guidance Material to Part-FCL’
- (j) [ED Decision 2013/006/R](#) of the Executive Director of the Agency of 16<sup>th</sup> April 2013 on amending Decision No 2012/006/R of the Executive Director of the European Aviation Safety Agency of 19 April 2012 on acceptable means of compliance and guidance material to Commission Regulation (EU) No 1178/2011 of 3 November 2011 laying down technical requirements and administrative procedures related to civil aviation aircrew pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council — ‘Acceptable Means of Compliance and Guidance Material to Part-ARA’

### 3.3. Reference documents

- (a) ICAO Doc 4444, Air Traffic Management, 15<sup>th</sup> edition, 2007 (including amendment 3)
- (b) ICAO Doc 9613, Performance-Based Navigation (PBN) Manual, 4<sup>th</sup> edition, 2013
- (c) ICAO Doc 9997, Performance-Based Navigation (PBN) Operational Approval Manual, 1<sup>st</sup> edition, 2013



## 4. Appendix

Amendment to ICAO Annex 6 Part I, recommended by FLTOPSP/1 (under consideration by ICAO Air Navigation Commission)

**TEXT OF PROPOSED AMENDMENT TO  
ANNEX 6 — PART I  
INTERNATIONAL COMMERCIAL AIR TRANSPORT — AEROPLANES**

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**CHAPTER 7. AEROPLANE COMMUNICATION AND  
NAVIGATION EQUIPMENT**

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### 7.2 Navigation equipment

7.2.1 An aeroplane shall be provided with navigation equipment which will enable it to proceed:

- a) in accordance with its operational flight plan; and
- b) in accordance with the requirements of air traffic services;

except when, if not so precluded by the appropriate authority, navigation for flights under the visual flight rules is accomplished by visual reference to landmarks.

7.2.2 For operations where a navigation specification for performance-based navigation (PBN) has been prescribed, an aeroplane shall, in addition to the requirements specified in 7.2.1:

- a) be provided with navigation equipment which will enable it to operate in accordance with the prescribed navigation specification(s);
- ~~b) be authorized by the State of the Operator for such operations.~~
- b) have information relevant to the aeroplane navigation specification capabilities listed in the flight manual or other aeroplane documentation, approved by the State of the Design or State of Registry; and
- c) have information relevant to the aeroplane navigation specification capabilities included in the MEL.

*Note – Guidance on aeroplane documentation is contained in the Performance-based Navigation (PBN) Manual (Doc 9613).*

7.2.3 The State of the Operator shall, for operations where a navigation specification for PBN has been prescribed, ensure that the operator has established and documented:

- a) normal and abnormal procedures including contingency procedures;
- b) flight crew qualification and proficiency requirements in accordance with the appropriate navigation specifications;
- c) a training program for relevant personnel consistent with the intended operations; and
- d) appropriate maintenance procedures to ensure continued airworthiness.



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*Note 1. – Safety risk assessment and mitigation is an integral part of developing normal, abnormal and contingency procedures. Guidance on safety risks and mitigations for PBN operations, in accordance with Annex 19, are contained in Performance-Based Navigation (PBN) Operational Approval Manual (Doc 9997).*

*Note 2. – Electronic navigation data management is an integral part of normal and abnormal procedures.*

7.2.4 The State of the Operator may require a specific approval for complex navigation specifications.

*Note – Guidance on specific approvals for complex navigation specifications (e.g. RNP AR) is contained in the Performance-Based Navigation (PBN) Operational Approval Manual (Doc 9997)*

