

Modern Aerodrome Rules for Europe

In December 2011, EASA published Notice of Proposed Amendment (NPA) 2011-20 containing draft rules for the certification, management, operation and design of aerodromes. Only airports open for commercial air transport with at least one paved runway of 800 metres or more are addressed in these proposals. In preparing the regulatory material contained in the NPA, EASA sought to achieve the greatest congruence with ICAO's Annex 14 and its related documents in order to allow for continuity and avoid disruptions.

The rule structure

All the Implementing Rules (IR) on aerodrome safety addressing the authorities and aerodrome operator organisations will be placed in three Annexes to a future Commission Regulation on the subject. *Continued on Page 2*



EDITORIAL

Promoting global cooperation in aviation safety

A Memorandum of Understanding (MoU) on aviation safety between EASA and the Civil Aviation Authority of Singapore (CAAS) was signed in February 2012. Both



Agencies have an established working relationship and CAAS has been a strong proponent of the EASA supported South East Asia Regional Initiative Forum (SEARIF) which aims to promote regulatory harmonisation in the region.

The framework established by this MoU now enables cooperation between the two Agencies in new areas including safety information sharing, training initiatives, and further technical cooperation. With initiatives including SESAR and NextGen moving towards deployment, global cooperation to develop common solutions and reduce duplication in safety oversight methods is essential.

Looking ahead, EASA will organise its 2012 Annual Safety Conference from 10-11 October on the topic of managing safety in a performance based regulatory environment. For more information, visit:

http://easa.europa.eu/conferences/pbo/

Patrick Goudou, EASA Executive Director

Organisational Changes for Certification

Find out why EASA is re-organising its Certification Directorate.

ATM/ANS Systems Department EASA has established a new ATM/ANS Systems Department. **EASA Rulemaking Update** Learn the latest about EASA's Rulemaking activities. **Quick News** A summary of other EASA developments.

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Modern Aerodrome Rules for Europe

"EASA sought to achieve the greatest congruence with ICAO's Annex 14"



Related to these annexes, although independent, are two books with the Community Specifications (CS) and the guidance material (GM) for aerodrome design. They contain the greatest part of the transposed ICAO Annex 14.

The rules in these annexes are binding, while the CS can be deviated from under certain conditions. For this, EASA is proposing a set of proportionate and flexible provisions and it is best understood by explaining the concept of the aerodrome certification basis.

Customised compliance without safety compromise

One of the cornerstones of the new regulatory concept is the possibility for customised compliance. This will be achieved through the use of an individual aerodrome Certification Basis (CB). The CB is the means to establish an aerodrome's compliance using the CS that are considered applicable to it, depending on the aerodrome's type and operations. It is a description of an aerodrome facility's design and infrastructure in terms of the CS that it complies with. The key innovation provided by this concept is that it gives the applicant the flexibility to also use its own specifications if so required, provided that they have been found to comply with the Essential Requirements (ER) of the EASA Basic Regulation and provide an equivalent level of safety (ELOS) to the one attained by relevant CS. Additionally the concept of the Special Condition (SC) refers to any restrictions or obligations that the National Aviation Authority (NAA) may prescribe due to the airport not meeting the applicable CSs when these are inappropriate or inadequate.

As the other cornerstone of regulatory oversight and after the CB is established, the Aerodrome Manual and aerodrome inspections are used to assess the aerodrome operator's ability to meet the requirements of the BR, meaning the ERs and the IRs. For the latter, the Agency is providing Acceptable Means of Compliance (AMC), which, if followed are one way to demonstrate compliance. The operator may suggest alternative means of compliance which the NAA might accept.

The NAA will issue the certificate when it is satisfied with these two aspects (CB and Aerodrome Manual) above and it has found that the aerodrome has no features or characteristics making it unsafe for operation.

Under this risk-based approach, limitations which otherwise seem to be embedded in the traditional aerodrome certification 'pass-fail' approach may be overcome using mitigation measures, without compromising the desired safety level.

The above process can be found in the interrelated rules for the competent authority (Annex 1) and the operator organisation (Annex 2) in the NPA. It will be suggested by EASA to give the European NAAs 48 months to convert the existing certificates into European ones and to certify aerodromes which previously did not have a certificate. Furthermore, the Agency proposes to give the NAAs the possibility to accept pre-existing deviations in the airport infrastructure on a limited and controlled basis. A mechanism for easing the conversion of existing certificates is also foreseen.

"EASA is proposing a set of proportionate and flexible provisions"

Modern aerodrome rules

EASA's aerodrome rulemaking team took great care to collaborate with its stakeholders to install a modern, risk-based, SMS driven and proportionate certification framework in its rules and which reflects the ICAO Annex 14 technical content in the certification specifications.

For more information on EASA activities in the field of airports and Air Traffic Management: http://easa.europa.eu/atm

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Interview with Frédéric Copigneaux, Certification Deputy Director & Head of the newly created ATM/ANS Department

Why was the new Air Traffic Management & Air Navigation Systems Department created?

The Basic Regulation gives responsibilities to EASA in the field of Air Traffic Management (ATM) and Air Navigation Systems (ANS). We now also have rules (Commission Implementing Regulation 1034/2011 and 1035/2011) that describe the role of the Agency for the oversight, among others, of pan-European ATM service providers. The ATM Department in Certification, C.5, was created in September 2010 to address the aspects related to the technical systems used in ATM.

These providers of pan-European ATM and ANS services, EGNOS today and Galileo and IRIS in the future, will now be under the oversight of EASA. It is essentially an organisational approval so the oversight will be performed by the Agency's Approvals and Standardisation Directorate. However, aspects related to certification of the systems used in the provision of these pan-European services will be dealt with by C.5.

The Agency is also currently assisting the European Commission in the oversight of the Network Manager. Our Department is also involved in this activity in aspects related to the certification of the systems. In addition to the mandatory roles defined by the Regulations, the Department will also have other functions including providing relevant safety advice to the European Commission and SESAR Joint Undertaking.

Who does the team consist of?

We are a small team of three. Emilio Mora Castro is a software certification expert who joined the team from another role in EASA in May 2011. He will continue to support his old team as well. Hans Trautenberg joined us in November 2011 from the industry and has a strong background in satellite systems. As for myself, I am providing a part-time coordination function on top of my other activities as Deputy Director of Certification.

In the future, we could grow to about five people

but we have no plans to become a large Department. It is a bit difficult to plan in advance because the volume of activity is unknown. It could also change if EASA's remit expands.

What are the Department's main objectives and what challenges do you see in the future?

The main objective is to provide technical advice on systems. The fundamental difference between ATM and airworthiness is that there are very few prescriptive rules in ATM. The system or changes to the system must be demonstrated to be as safe as the system they replace or enhance by a "safety case". Having to demonstrate the safety of ATM systems to an Authority is relatively new concept, at least in some member States. This requirement originates from the Single European Sky Regulations, which are relatively new and not yet completely applied.

However, the experience with ATM systems from the point of view of safety is good. We are confident that this approach can work but efforts are required to define the methods to review safety cases. At the same time, applicants face the new challenge of preparing a safety case. We have to work closely with the Air Navigation Service Providers (ANSPs), National Supervisory Authorities (NSAs), Eurocontrol, and the European Commission.

What relationship does the Department have with Eurocontrol and SESAR?

Eurocontrol is probably the most experienced body in field of European ATM. With the setting up of EASA and the extension of the Agency's remit, there will be some changes to Eurocontrol's current regulatory role. Both organisations have a lot to gain by working together and fortunately Working Arrangements under the auspices of the European Commission have been in place since August 2010. We are very pleased with this collaboration.

SESAR is of course also a main player. At the present time, they are more in the research rather than in their deployment phase. By its nature, EASA's work is more orientated towards the latter. Nevertheless we have already been asked by SESAR Joint Undertaking to review some of their deliverables from the point of view of safety to see if their projects would comply with the existing rules. Although we cannot anticipate if the rules will be the same when SESAR concepts are deployed, this proactive approach is a positive development. The Agency is cooperating closely with Eurocontrol to complete this work.



Galileo satellite system

EASA Reorganises the Certification Directorate

With the start of the year 2012, most of the Flight Standards Department of the Certification Directorate (C.3) has been integrated into the Certification Directorate's Experts Department (C.2). This re-organisation is a reaction to a set of recent considerations and developments:

- The re-organisation is in line with the upcoming implementation of the Operational Suitability Data (OSD) concept.
- An internal analysis demonstrated that the integration of the Flight Standards Department (C.3) into the Experts Department (C.2) would increase the efficiency and effectiveness of the Agency's Certification processes.
- The Certification Directorate uses a project-based management approach, meaning that all activities associated to one single project are centrally coordinated by one responsible person. For the 'traditional' initial type-certification activities, this concept is already implemented by means of a matrix organisation between the Project Certification Manager (C.1) and a Certification team composed of Certification Experts (C.2), and shall now be extended to the Flight Standards activities (C.3).

It must also be mentioned that the Maintenance Review Board Section has not been integrated into the Experts Department, but into the Products Department (C.1).

"The Certification Directorate uses a project based management approach"

What is OSD and why is it needed?

EASA is responsible for the approval of relevant information necessary for the safe operation of a specific aircraft type. Such information relates to type-specific elements for training of pilots, cabin crew and maintenance personnel, and it includes the Master Minimum Equipment List (MMEL) and elements related to simulators. This type-specific information is to be included under the OSD which is subject to approval by EASA as a complementary element of the Type Certificate for the related aircraft type.

The applicant for the aircraft type-certificate will require the approval of the OSD before the aircraft is operated by an EU operator. Once the OSD is issued, the approved elements will be used by the operators of the particular aircraft type and training organisations to establish the appropriate training programmes or MEL.



The Certification Directorate

EASA took over responsibility for the airworthiness and environmental certification of all aeronautical products, parts, and appliances designed, manufactured, maintained or used by persons under the regulatory oversight of EU Member States on 28 September 2003. The Agency's certification work also includes all post-certification activities, such as the approval of changes to, and repairs of, aeronautical products and their components.



EASA Certification Director, Dr. Norbert Lohl

"The certification process must go beyond the mere approval of the aircraft type design"

The new structure of the Certification Directorate Experts Department

With the OSD becoming an integral part of the aircraft type-certificate, the EASA has had to reflect this in its organisational structure within the Certification Directorate by integrating the Flight Standards staff into the T'traditional' Certification teams, working within a consistent set of Certification Policies, Procedures and Work Instructions. Since January 2012, the Experts Department of the Certification Directorate (C.2) comprises the following sections:

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Departments in EASA's Certification Directorate

- **C.2.1** > Structure Section
- C.2.2 > Flight Test & Human Factors Section
- C.2.3 → Electrical Systems Section
- **C.2.4** > Avionics Systems Section
- **C.2.5** > Safety, Software and Airborne Electronic Hardware Section
- **C.2.6** > Powerplant Section
- C.2.7 > Cabin Safety and Cabin Crew Section

C.2.8 > Environmental Control Systems & Ice Protection Section

- C.2.9 → Operational Suitability Fixed Wing Section
- C.2.10 → Hydro-Mechanical Systems Section
- **C.2.11** → Transmission Section
- C.2.12 → Operational Suitability Rotorcraft/ Balloons/Airships Section
- C.2.13 → Instructions for Continued Airworthiness & Maintenance Training Section
- **C.2.14** > Special OPS Evaluations Section
- C.2.15 → Master Minimum Equipment List Section
- C.2.16 → Flight Simulation Training Devices Section

EASA Facts and Figures



Operational Suitability Data (OSD)

In December 2011, EASA published the Opinion 7/2011 resulting from the rulemaking task related to operational suitability data (OSD). The corresponding Notice of Proposed Amendment (NPA) No 2009-01 was published in January 2009. The comment response document was published on 13th May 2011. The Opinion 7/2011 proposes the necessary changes to Regulation 1702/2003 (Part-21) and the implementing rules for OPS, FCL and Part-66 to implement the OSD.

The OSD concept was introduced in the Basic Regulation as part of the first extension package. The purpose was to transpose the existing Operational Evaluation Board (OEB) process into the EU regulatory framework. At the same time the new rules are expected to contribute to safety enhancement.

Objectives of OSD

The objective of OSD is to ensure that certain data, necessary for safe operation, is available to and used by the operators. This data is considered specific to an aircraft type and should therefore be

produced by the designer of that type. It consists of:

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- minimum syllabus of pilot type rating training,aircraft reference data to support
- the qualification of simulators;minimum syllabus of maintenance certifying staff type rating training;
- type specific data for cabin crew training; and

• Master Minimum Equipment List (MMEL).

The operational suitability data proposed by the designer will be approved by EASA as part of the airworthiness certification. Once approved, the core of the operational suitability data must be used by operators and training organisations when establishing their customised training courses and MEL.

"OSD will enable setting one standard in the EU for type training and MEL"



The OSD is expected to contribute to closing the gap between airworthiness and operations and therefore improving safety. Furthermore it will enable setting one standard in the EU for type training and MEL.

Next steps

Currently the European Commission has started the adoption process for the Opinion which is expected to be concluded at the end of 2012 or beginning of 2013. In parallel, EASA continues to work on the Acceptable Means of Compliance (AMC) and Guidance Material (GM) for the new rules.

In addition for each of the elements of the OSD, EASA is developing Certification Specifications (CSs) that will define the conditions for approving these OSD elements. All these CSs are produced following the EASA rulemaking procedures. NPAs for CS-MMEL and CS-Cabin Crew were already issued last year. The CSs for the other elements will follow.

The new rules will enter into force with an appropriate transition plan, allowing stakeholders time to adapt.

Update on the Regulation on Air Operations – Opinion 01/2012 on non-commercial operations

On 2 February 2011, the Agency published the Opinion 01/2012 for a Commission Regulation establishing Implementing Rules for non-commercial operations. The rules distinguish between general or business aviation with complex aircraft (aeroplanes and helicopters) and general aviation with non-complex aircraft (smaller aeroplanes and helicopters and also sailplanes and balloons).

It is the first time that Europe will have harmonised operational requirements for this aviation sector. The Opinion is now sent to the European Commission which will take over the decision-making process leading to the adoption of these rules.

The published documents

The Opinion contains the following documents:

- Explanatory notes
- Addendum to the Cover Regulation OPS
- Part-NCC (non-commercial operations with complex motor-powered aircraft);
- Part-NCO (non-commercial operations with oth er-than-complex motor-powered aircraft).
 The chart summarises what has been published until now for Air Operations with this Opinion and previous Opinions.





Current status and next steps

The Opinion for the final Annex of this Regulation, Annex VIII – Part-SPO (specialised operations, e.g. aerial work) will be published in April 2012.

The Agency will adopt the corresponding Accept-

able Means of Compliance and Guidance Material (once the Implementing Rules have been adopted).

The Opinion can be downloaded at the Agency's website: http://easa.europa.eu/opinions



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IORS

EASA's Internal Occurrence Reporting System (IORS) became fully operational on 29 February. This means that safety related occurrence reports transmitted to the Agency should be made in accordance with the form and manner established by the Agency. This marks the culmination of a project that began in February 2010 and was possible thanks to the hard work and close cooperation between EASA and the Reporting Organisations. More information on IORS can be found at http://www.easa.europa.eu/iors/.

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EASA Automation Policy



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The EASA Automation Policy was presented at the 24th European Aviation Safety Seminar (EASS) which was organised by the Flight Safety Foundation in Dublin from 29 February to 1 March. The Policy is an Agency document addressing subjects including flight deck automation management and flight path management, simplicity of operations, situation awareness, failure detection and management, the need to retain basic manual flying skills, and flight crew cooperation and communication aspects. The development and promotion of EASA's Automation Policy is an action of the European Aviation Safety Plan (EASP). A survey to consult stakeholders on paths for improvement identified in the Automation Policy will be launched shortly.

European Regional Runway Safety Seminar

The European Regional Runway Safety Seminar took place on 8 March in Amsterdam. Organised by ICAO in collaboration with Eurocontrol and EASA, the seminar is one of the follow up actions of the ICAO Global Runway Safety Symposium held in Montreal last year.

Sukhoi Superjet 100



On 3 February, EASA issued to the Sukhoi Civil Aircraft Company a Type Certificate for the RRJ-95B known as Sukhoi Superjet 100. The EASA certificate is a validation of the certificate issued in January 2011 by the Russian Interstate Aviation Committee Aviation Register.

