



Terms of Reference

for a rulemaking task

Revision of surveillance performance and interoperability

RMT.0679 — ISSUE 1 — 18.3.2016

Applicability		Process map	
Affected regulations and decisions:	Regulations (EC) No 1207/2011, (EC) No 1206/2011, (EC) No 262/2009, (EU) No .../... laying down common airspace usage requirements and operating procedures repealing Commission Regulation (EU) No 1332/2011 Decision 2012/002/R	Concept Paper:	No
		Rulemaking group:	Yes
		RIA type:	Full
		Technical consultation during NPA drafting:	as required
		Publication date of the NPA:	2017/Q2
Affected stakeholders:	ANSP, Aircraft operators (including GA), Aerodrome operators and equipment manufactures	Duration of NPA consultation:	3 months
		Review group:	TBD
Driver/origin:	Safety, Proportionality and cost-effectiveness	Focused consultation:	TBD
		Publication date of the Opinion:	2018/Q2
Reference:	N/A	Publication date of the Decision:	2019/Q2



1. Issue and reasoning for regulatory change

Commission Implementing Regulation (EU) No 1207/2011 of 22 November 2011¹ (hereinafter referred to as ‘SPI Regulation’) details the requirements on the systems, their constituents and associated procedures within the European air traffic management network (EATMN), contributing to the provision of surveillance data. While it addresses both air and ground environments, most of the specific obligations are addressed to operators of aircraft (both civil and State) for the carriage and operation of airborne surveillance equipment and the dates by which qualifying aircraft must be equipped.

Several significant implementation issues were identified by stakeholders via consultation with the Commission. In particular through a European Commission workshop on 7 March 2014, it was agreed to initiate a two-step approach to address the significant implementation issues which surfaced following the entry into force of the aforementioned Regulation.

- a) **Step 1:** Minimal changes to the implementing rule (IR), principally delaying effective dates for airborne equipage to provide sufficient time for a detailed review.

This was achieved on 26 September 2014, with publication of Regulation (EU) No 1028/2014², with deadlines for forward fit and retro fit ABS-B Out and Enhanced Mode S (EHS) extended to 8 June 2016 and 7 June 2020 respectively.

- b) **Step 2:** Significant changes to the IR following a detailed review and impact assessment of:

- a. the purpose and goal of the regulation;
- b. the underlying assumptions in terms of expected costs and benefits;
- c. the scope and applicability of the regulation; and
- d. exemptions and monitoring conditions.

Furthermore, a stakeholder workshop facilitated by the European Commission on the necessary evolution of the SPI Regulation, was held on 21 April 2015. The objective of the workshop was to discuss the possible options for amendments to the regulation and to clarify the way forward, using a single European sky ATM research joint undertaking (SJU) study as the preliminary input. In this workshop a number of important items were identified that need to be addressed (see paragraph 4). Concerning the options, the workshop attendees generally favoured ‘the need for a ground and aircraft mandate’ based on a performance approach including infrastructure rationalisation and safeguarding spectrum use.

As a result, the Agency has been requested to undertake a rulemaking task for the revision of the implementing regulation.

2. Objectives

To ensure the safe, efficient, cost effective, proportionate and harmonised implementation of a rationalised surveillance infrastructure and functionality in the European airspace.

¹ Commission Implementing Regulation (EU) No 1207/2011 of 22 November 2011 laying down requirements for the performance and the interoperability of surveillance for the single European sky (OJ L 305, 23.11.2011, p. 35).

² Commission Implementing Regulation (EU) No 1028/2014 of 26 September 2014 amending Implementing Regulation (EU) No 1207/2011 laying down requirements for the performance and the interoperability of surveillance for the single European sky (OJ L 284, 30.9.2014, p. 7).



3. Activities

During the development of the regulatory provisions and the appropriate means of compliance, fully justified by the appropriate regulatory impact assessment, the rulemaking group should take due regard of the existing provisions as defined in the SPI Regulation.

The regulatory provisions to be proposed should recognise the single European sky ATM research (SESAR) concept of operations (CONOPS), ATM Master Plan, SESAR Evolution of the Surveillance Infrastructure, ICAO Global Air Navigation Plan and be cognisant of US Next Generation Air Transport System (NextGen) concepts of surveillance. It will acknowledge the commonality of concepts stated in these documents as regards the future of surveillance. The surveillance infrastructure should be envisaged to remain a mix of SSR Mode S, Wide Area Multi-Lateration (WAM), ADS-B Out and PSR (including MSPSR) where required. It should acknowledge that a surveillance infrastructure designed and implemented at European level rather than at national level, should achieve the surveillance performance objectives. Primary radar coverage would also be available, as required, to provide safe air traffic services (ATS). The SESAR vision also indicates that the current surveillance performance, supporting 3NM and 5NM separation capability within controlled airspace³ is not required to evolve and should continue as the performance objective to support performance improvements within the SESAR 2020 deployment timeframe. The task will also take due regard of the interaction and needs rated to remotely piloted aircraft systems (RPAS) and also visual flight rules (VFR) operations.

4. Regulatory issues

Based on SESAR CONOPS and during the debates at the workshop held by the Commission, it was evident that building an efficient surveillance network is of paramount importance for the safety and efficiency of the single European sky. As a result several key areas have been identified which form the basis of what this rulemaking task should address.

These key areas that need to be addressed are:

- Performance: surveillance systems and infrastructure need to ensure that surveillance capability can continue to fulfil its role as the operational environment evolves in line with the 'European ATM Master Plan 2015'. The system performance needs to reflect the services being provided.
- Spectrum protection/rationalisation: air traffic management (ATM) is required to improve the manner in which the radio frequency (RF) spectrum currently assigned to it is managed and used.
- Cost rationalisation: keeping the costs to a minimum and maximising the benefits is a key consideration, the use of systems with lower procurement and maintenance costs could result in significant savings if deployed in a coherent manner.
- Interoperability: the interoperability between ground-ground, airborne-ground and airborne-airborne systems needs to be ensured.
- Safety; the required performance whilst maintaining or enhancing safety needs to be ensured.

Therefore, the following items should be addressed as part of the rulemaking task (none exhaustive):

- clarification to the scope and applicability of the regulation
- clarification of the safety and interoperability objectives;
- clarification of the performance objectives;
- verification of the validity of the current airborne requirements;
- application of the provisions to state aircraft and military;

³ Controlled Airspace refers operations in airspace class A to E



- the availability, and certification requirements of equipment suitable for general aviation (GA) and possible RPAS;
- application of a performance approach with respect to type of operation and airspace classification;
- required surveillance infrastructure and ground systems;
- spectrum protection;
- surveillance data sharing and its use thereof;
- required minimum aircraft derived data (ADD) to be transmitted and used;
- harmonisation of technical requirements with the US Federal Aviation Administration FAA;
- exemption/derogation criteria; and
- monitoring and handling of anomalies.

5. Deliverables

- (a) An EASA Opinion for possible amendments to:
- COMMISSION IMPLEMENTING REGULATION (EU) No 1207/2011 of 22 November 2011 laying down requirements for the performance and the interoperability of surveillance for the single European sky.
 - COMMISSION IMPLEMENTING REGULATION (EU) No 1206/2011 of 22 November 2011 laying down requirements on aircraft identification for surveillance for the single European sky.
 - COMMISSION REGULATION (EC) No 262/2009 of 30 March 2009 laying down requirements for the coordinated allocation and use of Mode S interrogator codes for the single European sky.
 - COMMISSION IMPLEMENTING REGULATION (EU) .../of [...] laying down common airspace usage requirements and operating procedures repealing Commission Regulation (EU) No 1332/2011.
- (b) A Decision amending Decision 2012/002/R of the Executive Director of the Agency of 8 March 2012 on the Acceptable Means of Compliance and Guidance Material for Common Airspace Usage Requirements and Operating Procedures 'AMC/GM to AUR'.
- (c) Additional regulations and decisions to those mentioned above may be impacted by this task and require amendment. These additional regulations and decisions should be identified during the rulemaking task and proposal for amendment may be included as part of this rulemaking task or additional rulemaking tasks will be initiated as appropriate.

6. Interface issues

- (a) The draft regulatory provisions will take into due consideration the provisions contained in:
- COMMISSION IMPLEMENTING REGULATION (EU) No 923/2012, as it contains requirements on the carriage and operation of surveillance equipment.
 - COMMISSION REGULATION (EU) No 965/2012, as it contains requirements on the carriage and operation of surveillance equipment.



- COMMISSION IMPLEMENTING REGULATION (EU) No 390/2013 of 3 May 2013 laying down a performance scheme for air navigation services and network functions.
 - COMMISSION REGULATION (EU) No 677/2011 as it pertains to the provision surveillance services.
 - COMMISSION REGULATION (EU) .../... laying down technical requirements and administrative procedures related to service providers and the oversight thereof pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council and repealing Commission Regulation (EC) No 482/2008, Commission Implementing Regulations (EU) Nos 1034/2011 and 1035/2011 and amending Commission Regulation (EU) No 677/2011.
- (b) The draft regulatory provisions will also take due consideration of the recommendation provided by the Agency in the report 'Detection losses in Central Europe on the 5th and 10th of June 2014' (ED0.1-2014-ed04.00)
- (c) The draft regulatory provisions developed by this rulemaking task will be used in the development of the EASA draft provisions stemming from the following rulemaking tasks (RMT's) that contribute significantly to a successful and safe implementation.
- RMT.0519 Maintaining CS-ACNS
 - RMT.0376 Carriage of ACAS II equipment on aircraft other than aeroplanes in excess of 5 700 kg or 19 pax

7. Focused consultation

Focused consultation may be organised as required prior to the publication of the NPA and during the review of the comments to the NPA. This will be determined during the drafting phase and may include:

- (a) meetings with stakeholders;
- (b) workshop; and
- (c) RAG/TAGs and SSCC consultation (written or face-to-face meetings).

8. Profile and contribution of the rulemaking group

A rulemaking group will be established to support the Agency with this rulemaking task. Subgroups may be established, as appropriate, to cater for specific aspects related to the task. The profile of the rulemaking group and its potential members is as follows:

- (a) The group should:
 - be composed of sufficient experts representing competent authorities, air navigation service providers (ANSPs), airport operators, commercial and non-commercial aircraft operators, military organisations, ground and aircraft system manufactures; and
 - hold six to eight meetings between 2016/Q1 and 2017/Q2.
- (b) The members of the rulemaking group should have knowledge of and experience in designing and validating ground and airborne surveillance systems and the operations thereof. Experience in regulatory and policy making or standards development work at national and/or international level would be advantageous.



9. Annex I: Reference documents

9.1. Affected regulations

- COMMISSION IMPLEMENTING REGULATION (EU) No 1207/2011 of 22 November 2011 laying down requirements for the performance and the interoperability of surveillance for the single European sky (OJ L 305, 23.11.2011, p. 35)
- COMMISSION IMPLEMENTING REGULATION (EU) No 1206/2011 of 22 November 2011 laying down requirements on aircraft identification for surveillance for the single European sky (OJ L 305, 23.11.2011, p. 23)
- COMMISSION REGULATION (EC) No 262/2009 of 30 March 2009 laying down requirements for the coordinated allocation and use of Mode S interrogator codes for the single European sky (OJ L 84, 31.3.2009, p. 20).
- COMMISSION IMPLEMENTING REGULATION (EU) .../of [...] laying down common airspace usage requirements and operating procedures repealing Commission Regulation (EU) No 1332/2011.

9.2. Affected decisions

Decision 2012/002/R of the Executive Director of the Agency of 8 March 2012 on the Acceptable Means of Compliance and Guidance Material for Common Airspace Usage Requirements and Operating Procedures 'AMC/GM to AUR'.

9.3. Reference documents (none exhaustive)

- 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, 19.03.2008, p. 1)
- Regulation (EC) No 551/2004 of the European Parliament and of the Council of 10 March 2004 on the organisation and use of the airspace in the single European sky (the airspace Regulation) (OJ L 96, 31.3.2004, p. 20)
- COMMISSION IMPLEMENTING REGULATION (EU) No 390/2013 of 3 May 2013 laying down a performance scheme for air navigation services and network functions (OJ L 128, 9.5.2013, p. 1)
- Commission Regulation (EC) No 677/2011 of 7 July 2011 laying down detailed rules for the implementation of air traffic management (ATM) network functions and amending Regulation (EC) No 691/2010 (OJ L 185, 15.7.2011, p. 1)
- Commission Implementing Regulation (EU) No 923/2012 of 26 September 2012 laying down the common rules of the air and operational provisions regarding services and procedures in air navigation and amending Implementing Regulation (EU) No 1035/2011 and Regulations (EC) No 1265/2007, (EC) No 1794/2006, (EC) No 730/2006, (EC) No 1033/2006 and (EU) No 255/2010 (OJ L 281, 13.10.2012, p.1)
- 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, p. 1)



- COMMISSION REGULATION (EU) .../... of XXX laying down technical requirements and administrative procedures related to service providers and the oversight thereof pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council and repealing Commission Regulation (EC) No 482/2008, Commission Implementing Regulations (EU) Nos 1034/2011 and 1035/2011 and amending Commission Regulation (EU) No 677/2011 (Opinion 03/2014, <http://easa.europa.eu/document-library/opinions/opinion-032014>)
- ICAO Annex 10 Volume IV
- ICAO DOC 9871 Second Edition – Technical Provisions Mode S Services Extended Squitter
- ICAO DOC 9924 — Aeronautical Surveillance Manual
- ICAO DOC 9994 — Manual on Airborne Surveillance Applications
- ICAO Doc 9750 — Global Air Navigation Plan
- ATM Master Plan 2015 edition
- Report ‘Detection losses in Central Europe on the 5th and 10th of June 2014’ (ED0.1-2014-ed04.00)
- Summary Report – Workshop on the Evolution of Regulation (EU) N°1207/2011 (Surveillance Performance and Interoperability) – Step 2 – 21 April 2015 – version 2.0 (DG MOVE.E.2/GO, 21 May 2015)
- SESAR Concept of Operations Step 1, D65-011 (dated 9.05.2012)
- SESAR Evolution of the Surveillance Infrastructure, D10-02 (dated 29.10.2012)
- Regulatory approach for the Surveillance Performance and Interoperability requirements SES/IOP/SPI/REGAP/1.0 11 September 2007
- ICB Position Paper EASA RMT on revision of the SPI IR (adopted on 10 September 2015)
- EBAA, ECOGS, ERAC, GAMA, IAOPA Position paper Surveillance Performance and Interoperability Review of Implementing Rule 1207/2011 Towards a proper implementation of ADS-B of 09.07.2015
- EAS ADS-B POSITION PAPER ON THE EVOLUTION OF THE SPI MANDATE of 12 July 2015
- FAA regulation 14 CFR 91.225 and § 91.227
- REPORT FROM THE ADS-B AVIATION RULEMAKING COMMITTEE TO THE FEDERAL AVIATION ADMINISTRATION — Recommendations on Federal Aviation Administration Notice No. 7–15, Automatic Dependent Surveillance—Broadcast (ADS-B) Out Performance Requirements to Support Air Traffic Control (ATC) Service; Notice of Proposed Rulemaking September 26, 2008

