



Explanatory Note to Decision 2020/014/R

Acceptable Means of Compliance and Guidance Material to Commission Implementing Regulation (EU) No 1207/2011 (the surveillance performance and interoperability (SPI) Regulation)

RMT.0679

EXECUTIVE SUMMARY

The objective of Decision 2020/014/R is to ensure the harmonised implementation of Commission Implementing Regulation (EU) No 1207/2011 (the surveillance performance and interoperability (SPI) Regulation) for airborne and ground-based surveillance systems in a safe, efficient, cost-effective and proportionate manner. The correct implementation of the SPI Regulation will enable a harmonised surveillance function and the rationalisation of the surveillance infrastructure within the Single European Sky (SES) airspace.

This Decision issues the first issue (Issue 1) of the Acceptable Means of Compliance (AMC) and Guidance Material (GM) to the SPI Regulation.

The AMC and GM provide for a common understanding of the SPI Regulation, thus enabling its harmonised implementation.

Action area:	New technologies and concepts		
Related rules:	Commission Implementing Regulation (EU) No 1207/2011		
Affected stakeholders:	EASA Member States; competent authorities (CAs); air navigation service providers (ANSPs); aircraft operators; air traffic controllers (ATCOs)		
Driver:	Safety	Rulemaking group:	Yes
Impact assessment:	None	Rulemaking Procedure:	Accelerated

● EASA special rulemaking procedure milestones

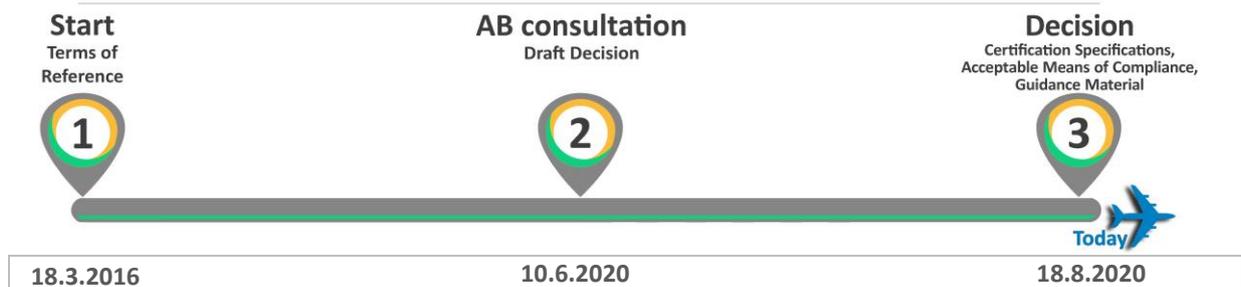


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1. About this Decision

The European Union Aviation Safety Agency (EASA) developed ED Decision 2020/014/R in line with Regulation (EU) 2018/1139¹ ('Basic Regulation') and the Rulemaking Procedure².

This rulemaking activity is included in the European Plan for Aviation Safety (EPAS) for 2020–2024³ under rulemaking task (RMT).0679. The scope and timescales of the task can be found in the related Terms of Reference⁴.

The draft text of this Decision was developed by EASA and consulted with interested parties including the relevant EASA Advisory Bodies (ATM/ANS.TEC, ATM/ANS TeB, Air Ops TeB and FS.TEC), from 10 until 24 June 2020, through Notice of Proposed Amendment (NPA) 2020-02-AP.

16 comments from 9 stakeholders were received, including 1 aircraft operator, 1 ANSP, 2 CAs, 4 operational and manufacturing associations, and 1 European ATM/ANS organisation.

EASA reviewed the comments received during the Article 16 Advisory Body consultation. The comments received and EASA's responses to them are summarised in Section 2.4.

The final text of this Decision, including the AMC and GM, has been developed by EASA.

The major milestones of this rulemaking activity are presented on the title page.

¹ Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91 (OJ L 212, 22.8.2018, p. 1) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1535612134845&uri=CELEX:32018R1139>).

² EASA is bound to follow a structured rulemaking process as required by Article 115(1) of Regulation (EU) 2018/1139. Such a process has been adopted by the EASA Management Board (MB) and is referred to as the 'Rulemaking Procedure'. See MB Decision No 18-2015 of 15 December 2015 replacing Decision 01/2012 concerning the procedure to be applied by EASA for the issuing of opinions, certification specifications and guidance material (<http://www.easa.europa.eu/the-agency/management-board/decisions/easa-mb-decision-18-2015-rulemaking-procedure>).

³ https://www.easa.europa.eu/sites/default/files/dfu/EPAS_2020-2024.pdf

⁴ ToR RMT.0679 'Revision of surveillance performance and interoperability' Issue 1, available at <https://www.easa.europa.eu/sites/default/files/dfu/ToR%20RMT.0679%20Issue%201.pdf>.

2. In summary — why and what

2.1. Why we need to issue AMC and GM — issue/rationale

The SPI Regulation details the requirements for the carriage of serviceable airborne surveillance systems by both civil and State-registered aircraft and the dates by which qualifying aircraft must be equipped with such systems, as well as the requirements for the deployment of efficient ground-based systems.

In consultation with the European Commission, stakeholders identified several significant implementation issues. Furthermore, a number of important issues were identified via a European Commission workshop on the necessary evolution of the SPI Regulation. As a result, EASA created in February 2016 RMT.0679 for the revision of the SPI Regulation.

Based on the evidence gathered and the conclusions reached through RMT.0679, EASA decided not to proceed with an opinion leading to the repeal and replacement of the SPI Regulation (in the context of the applicable Basic Regulation at that time (i.e. Regulation (EC) No 216/2008)⁵) as this would not bring significant benefits to European ATM operations. EASA issued a report to the European Commission, which contained a number of additional items primarily associated with aircraft equipage to support the implementation of the SPI Regulation. Through the report, EASA requested the European Commission to amend the SPI Regulation under the interoperability Regulation that was applicable at that time (i.e. Regulation (EC) No 552/2004⁶). Consequently, Commission Implementing Regulation (EU) 2020/587⁷ amended the SPI Regulation incorporating the items analysed in the EASA report was published.

Furthermore, following the repeal of Regulation (EC) No 552/2004 and the subsequent transfer of the interoperability implementing regulations to the EASA regulatory framework, EASA decided to issue AMC and GM to the SPI Regulation on the subjects identified as beneficial by Rulemaking Group (RMG) RMT.0679, as well as on the amendments introduced by Commission Implementing Regulation (EU) 2020/587.

2.2. What we want to achieve — objectives

The overall objectives of the EASA system are defined in Article 1 of the Basic Regulation. This Decision will contribute to the achievement of the overall objectives by addressing the issues outlined in Section 2.1.

⁵ 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) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1588687311753&uri=CELEX:32008R0216>).

⁶ Regulation (EC) No 552/2004 of the European Parliament and of the Council of 10 March 2004 on the interoperability of the European Air Traffic Management network (the interoperability Regulation) (OJ L 96, 31.03.2004, p. 26) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1588687391610&uri=CELEX:32004R0552>).

⁷ Commission Implementing Regulation (EU) 2020/587 of 29 April 2020 amending Implementing Regulation (EU) No 1206/2011 laying down requirements on aircraft identification for surveillance for the single European sky and Implementing Regulation (EU) No 1207/2011 laying down requirements for the performance and the interoperability of surveillance for the single European sky (OJ L 138, 30.4.2020, p. 1.) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1588687528047&uri=CELEX:32020R0587>).

The specific objective of this proposal is to issue AMC and GM to several articles of the SPI Regulation identified during the work of RMG RMT.0679 or during the consultation of the amendments introduced by Commission Implementing Regulation (EU) 2020/587. The AMC and GM are to provide for a common understanding of the requirements of the SPI Regulation to support their harmonised application throughout the European ATM network (EATMN).

2.3. How we want to achieve it — overview of the AMC and GM to Commission Implementing Regulation (EU) No 1207/2011

This Decision contains supporting material with respect to the following articles of the SPI Regulation as amended by Commission Implementing Regulations (EU) No 1028/2014, 2017/386 and 2020/587:

- **AMC1 Article 4 Performance requirements — SEAMLESS OPERATIONS** has been added to provide the horizontal separation minima;
- **GM1 Article 4 Performance requirements — SEAMLESS OPERATIONS** has been added to include reference to the appropriate ICAO documents;
- **AMC1 Article 5 Interoperability requirements — TRANSFER OF SURVEILLANCE DATA** has been added to make reference to the EUROCONTROL ASTERIX specification as a means to transfer data;
- **AMC2 Article 5 Interoperability requirements — SECONDARY SURVEILLANCE RADAR TRANSPONDERS** has been added to provide reference to the relevant EASA Certification Specifications (i.e. CS-ACNS);
- **AMC3 Article 5 Interoperability requirements — TRANSITIONAL ARRANGEMENTS** has been added to outline the retrofit plan requirements;
- **GM1 Article 5 Interoperability requirements — CONTINUITY OF SECONDARY SURVEILLANCE RADAR TRANSPONDERS** has been added to aid the determination of the appropriate continuity;
- **GM2 Article 5 Interoperability requirements — COOPERATIVE SURVEILLANCE CHAIN** has been added to provide reference to the application of the downlinked parameters;
- **GM3 Article 5 Interoperability requirements — SERVICEABLE SECONDARY SURVEILLANCE RADAR TRANSPONDERS** has been added to aid the understanding of a serviceable transponder;
- **GM4 Article 5 Interoperability requirements — CONTINUED OPERATIONS** has been added to aid the understanding of which aircraft may operate in the SES airspace without equipage;
- **GM5 Article 5 Interoperability requirements — EFFICIENT DEPLOYMENT SOLUTION** has been added to describe the consideration when deploying a surveillance system;
- **GM1 Article 6 Spectrum protection — EXCESSIVE INTERROGATIONS** has been added to make reference to Annex VIII (Part-CNS) to Commission Implementing Regulation (EU) 2017/373;
- **GM2 Article 6 Spectrum protection — AVOIDANCE OF HARMFUL INTERFERENCE** has been added to make reference to Directive 2014/53/EU (the ‘Radio Equipment (RED) Directive’);
- **GM1 Article 7 Associated procedures — ASSESSMENT OF THE PERFORMANCE OF THE SURVEILLANCE SYSTEM** has been added to make reference to the VERIF (verification function)



of the Surveillance Analysis Support System for ATC Centre (SASS-C) of EUROCONTROL-SPEC-147;

- **AMC1 Article 14a Flight Plans** has been added to describe how to correctly indicate the appropriate equipage status in a flight plan.

2.4. What are the stakeholders' views

Of the 16 comments received during the focused consultation with the EASA Advisory Bodies, 56 % were either accepted or partially accepted, while only 6 % (1 comment) was not accepted.

The main topic commented, with 16 % of the comments, was related to spectrum protection with respect to ensuring the availability of the 1030/1090-MHz frequency by not over-interrogating and the enhancement of an EU-wide processes to address malfunctions, over-interrogations, etc., in a harmonised way. EASA concurs with the intent of these comments and recognises the importance of ensuring the availability of the 1030/1090-MHz frequency to support the effective surveillance and hence the safety of air operations in Europe. In accordance with Commission Implementing Regulation (EU) 2015/1018⁸, failures, malfunctions and anomalies of the surveillance service are reportable events that will enable the consideration and establishment of rectification actions as required. Furthermore, recognising that the Network Manager, in accordance with Commission Implementing Regulation (EU) 2019/123⁹, is required to monitor surveillance interrogators and avionics, EASA intends to address with the Network Manager the enhancement of the processes to protect the surveillance frequencies and how to address any issue observed.

A number of other comments requested clarification as follows:

- EUROCONTROL Guidelines on the Assessment of Ground-based Surveillance Interrogations: As they do not reflect the latest SPI Regulation amendment, clarification was requested on whether the Guidelines will be updated taking into account the amendment and once the EUROCONTROL Guidelines are updated, whether there will be an update of the EASA AMC and GM. EASA understands that the EUROCONTROL Guidelines are currently being updated; once they are updated and published, the EASA AMC and GM will be updated as and when appropriate.
- Continuity of Secondary Surveillance Transponders: 'EASA should confirm that installations previously approved using "Deviation Request CS-ACNS #1" continue to meet the intentions of GM1 Article 5.' EASA confirms that the installations previously approved using Deviation Request CS-ACNS #1 will continue to be valid. A revised Deviation Request referring to the amended SPI Regulation requirements will be proposed.
- Transmission of EHS parameters: EASA is requested to develop additional AMC and GM to describe how to process the downlinked EHS parameters, including encouraging installers to ensure that all parameters that are available on the data bus are transmitted. Concerning encouraging installers to provide all available parameters, EASA considers that with respect to

⁸ Commission Implementing Regulation (EU) 2015/1018 of 29 June 2015 laying down a list classifying occurrences in civil aviation to be mandatorily reported according to Regulation (EU) No 376/2014 of the European Parliament and of the Council (OJ L 163, 30.6.2015, p. 1).

⁹ Commission Implementing Regulation (EU) 2019/123 of 24 January 2019 laying down detailed rules for the implementation of air traffic management (ATM) network functions and repealing Commission Regulation (EU) No 677/2011 (OJ L 23, 31.1.2019, p. 1).

the scope of the SPI Regulation, such encouragement is not necessary; the Regulation is specific on those parameters required for European air operations. Regarding the processing of these parameters, as this is initially linked to ground-based surveillance interrogations, EASA intends to address together with the Network Manager the continual monitoring of the situation.

Furthermore, the comment pertaining to the deletion of the guidance material that refers to the ICAO Annex 10 interrogation limits has not been accepted. The intent of this guidance material is to provide additional information on the requirement as specified in Commission Implementing Regulation (EU) 2017/373, hence referencing ICAO Annex 10 is seen as appropriate.

2.5. What are the benefits and drawbacks

The AMC and GM are considered non-controversial and, as explained above, are triggered by the need to provide additional guidance and means of compliance to several articles of the SPI Regulation following the transfer of the interoperability implementing regulations to the EASA regulatory framework. The AMC and GM are not considered new or difficult to implement and do not impose any further burden on the effected stakeholders. The impact assessment related to the SPI Regulation, published in 2011, is available in the EUROCONTROL ‘Final Report for the Draft implementing rules on Surveillance Performance and Interoperability and on Aircraft Identity’¹⁰, as well as in the EASA Final Report ‘Revision of the SPI Regulation RMT.0679 — Surveillance, performance and interoperability’.

¹⁰ Final Report for the Draft implementing rules on Surveillance Performance and Interoperability and on Aircraft Identity, SES/IOP/SPI/ACIDI/REP/2.0.



3. How do we monitor and evaluate the rules

EASA will monitor and evaluate the new AMC and GM through its regular standardisation activities and recommendations/feedback from its Advisory Bodies. This evaluation will assess how well the adopted AMC and GM are performing in providing effective support for the implementation of a harmonised surveillance function.



4. References

4.1. Related 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 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)
- Commission Implementing Regulation (EU) 2017/386 of 6 March 2017 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 59, 7.3.2017, p. 34)
- Commission Implementing Regulation (EU) 2020/587 of 29 April 2020 amending Implementing Regulation (EU) No 1206/2011 laying down requirements on aircraft identification for surveillance for the single European sky and Implementing Regulation (EU) No 1207/2011 laying down requirements for the performance and the interoperability of surveillance for the single European sky (OJ L 138, 30.4.2020, p. 1)

4.2. Related decisions

n/a

4.3. Other reference documents

- Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91 (OJ L 212, 22.8.2018, p. 1)
- Commission Regulation (EC) No 1033/2006 of 4 July 2006 laying down the requirements on procedures for flight plans in the pre-flight phase for the single European sky (OJ L 186, 7.7.2006, p. 46)
- Commission Implementing Regulation (EU) 2017/373 of 1 March 2017 laying down common requirements for providers of air traffic management/air navigation services and other air traffic management network functions and their oversight, repealing Regulation (EC) No 482/2008, Implementing Regulations (EU) No 1034/2011, (EU) No 1035/2011 and (EU) 2016/1377 and amending Regulation (EU) No 677/2011 (OJ L 62, 8.3.2017, 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 (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) 2019/123 of 24 January 2019 laying down detailed rules for the implementation of air traffic management (ATM) network functions and repealing Commission Regulation (EU) No 677/2011 (OJ L 28, 31.1.2019, p. 1)
- Regulation (EU) No 376/2014 of the European Parliament and of the Council of 3 April 2014 on the reporting, analysis and follow-up of occurrences in civil aviation, amending Regulation (EU) No 996/2010 of the European Parliament and of the Council and repealing Directive 2003/42/EC of the European Parliament and of the Council and Commission Regulations (EC) No 1321/2007 and (EC) No 1330/2007 (OJ L 122, 24.4.2014, p. 18)
- Commission Implementing Regulation (EU) 2015/1018 of 29 June 2015 laying down a list classifying occurrences in civil aviation to be mandatorily reported according to Regulation (EU) No 376/2014 of the European Parliament and of the Council (OJ L 163, 30.6.2015, p. 1)
- Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC (OJ L 153, 22.5.2014, p. 62)
- ICAO Annex 10 'Aeronautical Telecommunications', Volume IV 'Surveillance Radar and Collision Avoidance Systems', 3rd edition incorporating Amendments 1-89
- ICAO Doc 9689-AN/953 'Manual on Airspace Planning Methodology for the Determination of Separation Minima', 1st edition incorporating Amendment 1, 1988
- ICAO Doc 9426-AN/924 'Air Traffic Services Planning Manual', 1st (provisional) edition incorporating Amendment 4, 1984
- EASA Certification Specifications and Acceptable Means of Compliance for Airborne Communications, Navigation and Surveillance (CS-ACNS), Issue 2, 26 April 2019 (Annex I to ED Decision 2019/011/R)
- EASA Certification Specifications for Standard Changes and Standard Repairs (CS-STAN), Acceptable methods, techniques and practices for carrying out and identifying standard changes and standard repairs (SCs/SRs) as permitted in Part 21, Issue 3, 4 April 2019 (Annex to ED Decision 2019/010/R)
- Joint Aviation Authorities (JAA) Temporary Guidance Leaflet (TGL) 13, Revision 1 'Certification of Mode S Transponder Systems for Elementary Surveillance', 1 June 2003



- EUROCONTROL Specification for Surveillance Data Exchange Part 1 — All Purpose Structured EUROCONTROL Surveillance Information Exchange (ASTERIX), edition 2.4, 24.10.2016, ISBN: 978-2-87497-028-3 (EUROCONTROL-SPEC-0149)
- EUROCONTROL Guidelines on the Assessment of Ground-based Surveillance Interrogations, edition 1.0, 11.12.2019, ISBN: 978-2-87497-104-4 (EUROCONTROL-GUID-178)
- EUROCONTROL Specification for ATM Surveillance System Performance (ESASSP), edition 1.1, September 2015, ISBN: 978-2-87497-022-1 (EUROCONTROL-SPEC-147)

