

Enclosure 2

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COMMISSION REGULATION (EC) No .../..

DD/MM/YYYY

laying down requirements for the Aircraft Identification for the single European sky

(Text with EEA relevance)

**(Draft implementing rule prepared by EUROCONTROL in response to a
European Commission's mandate)**

Draft

COMMISSION REGULATION (EU) No .../..

of [...]

laying down requirements for the Aircraft Identification for the Single European Sky

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the functioning of the European Union,

Having regard to the 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)¹ amended by Regulation (EC) No 1070/2009 of the European Parliament and of the Council of 21 October 2009² and in particular Article 3(1) thereof,

Having regard to Regulation (EC) No 549/2004 of the European Parliament and the Council of 10 March 2004 laying down the framework for the creation of the single European sky (the framework Regulation)³ amended by Regulation (EC) No 1070/2009 of the European Parliament and of the Council of 21 October 2009, and in particular Article 8(2) thereof,

Having regard to Regulation (EC) No 550/2004 of the European Parliament and the Council of 10 March 2004 on the provision of air navigation services in the single European sky (the service provision Regulation)⁴ amended by Regulation (EC) No 1070/2009 of the European Parliament and of the Council of 21 October 2009,

Recitals

Whereas:

- (1) EUROCONTROL has been mandated in accordance with Article 8(1) of the Regulation (EC) No 549/2004 amended by Regulation (EC) No 1070/2009 to develop requirements for surveillance performance and interoperability of the European Air Traffic Management Network. This Regulation is based on the resulting mandate report of 9 July 2010.
- (2) The coordination of secondary surveillance radar transponder codes (hereinafter referred to as SSR codes) should be addressed by the functions carried out by the Network Manager in the context of coordination of scarce resources.

¹ OJ L96,31.3.2004, p.26

² OJ L 300, 14.11.2009, p.34

³ OJ L 96, 31.3.2004, p.1

⁴ OJ L 96, 31.3.2004, p.10

- (3) The capabilities of the airborne constituents are defined in the Commission Regulation (EU) ... of ... 2010 [*SPI implementing rule*].
- (4) Individual aircraft identification should be established in accordance with the International Civil Aviation Organisation (hereinafter ICAO) procedures before air traffic services using a surveillance system are provided to the aircraft.
- (5) Seamless operations are dependent on the unambiguous and continuous identification of individual aircraft operating as general air traffic under instrument flight rules throughout the airspace of the single European sky.
- (6) Use of discrete SSR codes, assigned in accordance with ICAO procedures and the air navigation plan for the European region, is the current method by which individual aircraft identification is established in Europe.
- (7) Traffic growth over the last decade has resulted in a routine lack of available discrete SSR codes to meet demand during peak periods, and so individual aircraft identification in European airspace cannot currently be guaranteed.
- (8) An initial operational capability to use the downlinked aircraft identification feature should be deployed in a harmonised manner within a defined volume of airspace of the single European sky by 9 February 2012 in order to reduce the overall demand for discrete SSR code assignments to achieve individual aircraft identification.
- (9) In order to optimise the availability of discrete SSR codes, improved and harmonised capabilities for the automatic assignment of SSR codes to aircraft should be deployed by those air navigation service providers that will not have a capability to use of the downlinked aircraft identification feature by 9 February 2012.
- (10) A capability to use the downlinked aircraft identification feature throughout the airspace of the single European sky should be deployed by 2 January 2020 in order to overcome the need for discrete SSR codes to identify general air traffic operating under instrument flight rules.
- (11) A reduction in the requirement for discrete SSR code assignments when using the downlinked aircraft identification feature is dependent on the integrated initial flight plan processing system identifying those flights that are eligible for the assignment of an agreed conspicuity code and on air navigation service providers assigning the agreed conspicuity code to those eligible flights when identification using the downlinked aircraft identification feature is successful.
- (12) A capability to use the downlinked aircraft identification feature to achieve individual aircraft identification is dependent on air navigation service providers deploying appropriate surveillance sensors, surveillance data processing and distribution system functionality, flight data processing system functionality, air-to-ground and ground-to-ground communications, controller display functionality, procedures and personnel training.
- (13) The degree to which air navigation service providers can actually employ the capability to use the downlinked aircraft identification feature to reduce the requirement for the assignment of discrete SSR codes is dependent on the level of equipage of aircraft with the downlinked aircraft identification feature, on the extent

that the routes of those aircraft are within contiguous coverage of systems providing the capability, and on the overarching requirement to ensure efficient and safe operations.

- (14) Warnings of the unintentional duplication of SSR code assignments to two or more aircraft should be provided to controllers in order to prevent the potential misidentification of aircraft.
- (15) The uniform application of specific procedures within the airspace of the single European sky is critical for the achievement of interoperability and seamless operations.
- (16) All changes to facilities and services that are made as a result of the implementation of this Regulation should be reflected by Member States in the ICAO European Air Navigation Plan through the normal proposal for amendment procedure.
- (17) This Regulation should not cover military operations and training as referred in Article 1(2) of Regulation (EC) No 549/2004 amended by Regulation (EC) No 1070/2009.
- (18) With a view to maintaining or enhancing existing safety levels of operations, Member States should be required to ensure that the parties concerned conduct a safety assessment including hazard identification, risk assessment and mitigation processes. Harmonised implementation of these processes to the systems covered by this Regulation requires the identification of specific safety requirements for all interoperability and performance requirements.
- (19) In accordance with Article 3(3) (d) of Regulation (EC) N°552/2004 amended by Regulation (EC) No 1070/2009, implementing rules for interoperability should describe the specific conformity assessment procedures to be used to assess either the conformity or the suitability for use of constituents as well as the verification of systems.
- (20) The measures provided for in this Regulation are in accordance with the opinion of the Single Sky Committee.

HAS ADOPTED THIS REGULATION:

Article 1

Subject matter and scope

1. This Regulation lays down requirements on the systems, the constituents thereof and associated procedures contributing to the provision of surveillance information in order to ensure the unambiguous and continuous individual identification of aircraft within the EATMN.
2. This regulation shall apply to:
 - (a) airborne constituents of surveillance systems and their associated procedures;
 - (b) ground-based surveillance systems, their constituents and associated procedures;
 - (c) systems and procedures for air traffic services, in particular flight data processing systems, surveillance data processing systems and human machine interface systems;

- (d) ground-to-ground and air-to-ground communication systems, their constituents and associated procedures used for the distribution of surveillance data.
3. This Regulation shall apply to all flights operating as general air traffic in accordance with instrument flight rules within the airspace defined in Article 1(3) of Regulation (EC) No 551/2004, amended by Regulation (EC) 1070/2009.

Article 2

Definitions

1. For the purpose of this Regulation the definitions set out in Regulation (EC) No 549/2004, amended by Regulation (EC) 1070/2009, shall apply.
2. In addition to the definitions referred to in paragraph 1 the following definitions shall apply:
 - (1) ‘aircraft identification’ means a group of letters, figures or a combination thereof which is either identical to, or the coded equivalent of, the aircraft call sign to be used in air-ground communications, and which is used to identify the aircraft in ground-ground air traffic services communications;
 - (2) ‘arriving flight’ means a flight that enters defined airspace from an adjacent sector, then transits across the defined airspace and lands at a destination within the defined airspace;
 - (3) ‘code allocation list’ means a document specifying the overall distribution of SSR codes to Member States and ATS units that has been agreed by Member States and published in the air navigation plan for the ICAO European Region;
 - (4) ‘conspicuity code’ means an individual SSR code designated for special purposes;
 - (5) ‘departing flight’ means a flight that originates at an aerodrome within defined airspace, then transits across the defined airspace and either lands at an aerodrome within the defined airspace or exits the defined airspace into an adjacent sector outside;
 - (6) ‘discrete SSR code’ means a four-digit secondary surveillance radar identity code with the last two digits not being “00”;
 - (7) ‘downlinked aircraft identification’ means the aircraft identification transmitted by airborne constituents of surveillance systems via an air-to-ground communications system;
 - (8) ‘SSR code’ means one of the 4096 secondary surveillance radar identity codes that can be transmitted by airborne constituents of surveillance systems;
 - (9) ‘over-flight’ means a flight that enters defined airspace from an adjacent sector, then transits across the defined airspace and exits the defined airspace into an adjacent sector outside.

Article 3

Performance requirements

1. Member States responsible for the provision of air traffic services in the airspace defined in Annex I shall take the necessary measures to ensure that, by 9 February 2012, a capability is implemented to be able to establish individual aircraft identification using downlinked aircraft identification for:

- (a) at least 50% of all over-flights of the defined airspace of the individual Member State; and
 - (b) at least 50% of the combined total number of all arriving flights and departing flights within the defined airspace of the individual Member State.
2. Member States shall ensure that, by 2 January 2020, a capability is implemented to be able to establish individual aircraft identification using downlinked aircraft identification for all flights.
3. Air navigation service providers establishing individual aircraft identification using downlinked aircraft identification shall ensure that they comply with the requirements laid down in Annex II.
4. Air navigation service providers establishing individual aircraft identification using discrete SSR codes outside of the airspace defined in Annex I shall ensure that, by 9 February 2012, they comply with the requirements laid down in Annex III.
5. Air navigation service providers shall ensure that:
 - (a) systems referred to in Article 1(2) (b) to (d) are deployed as necessary to support the requirements laid down in paragraphs 3 and 4;
 - (b) systems referred to in Article 1(2) (b) to (d) or procedures are deployed as necessary to enable controllers awareness of occurrences of unintentionally duplicated SSR code assignments.
6. Member States shall take the necessary measures to ensure that:
 - (a) volumes of airspace are declared to the centralised flight planning processing and distribution service referred to in point 1 of Annex II to support the requirements of paragraphs 1, 2 and 6 (b);
 - (b) the integrated initial flight plan processing system communicates to all affected air navigation service providers those flights that are eligible for the use of the conspicuity code referred to in paragraph 6 (c);
 - (c) a single conspicuity code is agreed by all Member States and coordinated with European third countries for assignment solely to aircraft where individual aircraft identification is established by using downlinked aircraft identification.

Article 4

Safety requirements

1. Member States shall take the necessary measures to ensure that any changes to the existing systems referred to in Article 1(2) (b) to (d) or the introduction of new systems are preceded by a safety assessment, including hazard identification, risk assessment and mitigation, conducted by the parties concerned.
2. During the assessments identified in paragraph 1 the requirements laid down in Annex IV shall be taken into consideration as a minimum.

Article 5

Conformity or suitability for use of constituents

1. Before issuing an EC declaration of conformity or suitability for use referred to in Article 5 of Regulation (EC) N° 552/2004 amended by Regulation (EC) No 1070/2009,

manufacturers of constituents of the systems referred to in Article 1(2) shall assess the conformity or suitability for use of these constituents in compliance with the requirements set out in Annex V, Part A, without prejudice to paragraph 2.

2. Certification processes complying with 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 an European Aviation Safety Agency and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC⁵, amended by Regulation (EC) No 1108/2009⁶, shall be considered as acceptable procedures for the conformity assessment of constituents if they include the demonstration of compliance with the applicable interoperability, performance and safety requirements of this Regulation.

Article 6

Verification of systems

1. Air navigation service providers which can demonstrate or have demonstrated that they fulfil the conditions set out in Annex VI shall conduct a verification of the systems referred to in Article 1(2) (b) to (d) in compliance with the requirements set out in Annex V, Part B.
2. Air navigation service providers which cannot demonstrate that they fulfil the conditions set out in Annex VI shall subcontract to a notified body a verification of the systems referred to in Article 1(2) (b) to (d). This verification shall be conducted in compliance with the requirements set out in Annex V, Part C.

Article 7

Additional requirements

1. Air navigation service providers shall ensure that all relevant personnel are made duly aware of the requirements laid down in this Regulation and that they are adequately trained for their job functions.
2. Air navigation service providers shall:
 - (a) develop and maintain operations manuals containing the necessary instructions and information to enable all related personnel to apply this Regulation;
 - (b) ensure that the manuals referred to in point (a) are accessible and kept up-to-date and that their update and distribution are subject to appropriate quality and documentation configuration management;
 - (c) ensure that the working methods and operating procedures comply with this Regulation.
3. Operators shall take the necessary measures to ensure that the personnel operating and maintaining surveillance equipment are made duly aware of the relevant provisions of this Regulation and that they are adequately trained for their job functions, and that instructions about how to use this equipment are available in the cockpit.

⁵ OJ L 79, 19.3.2008, p.1

⁶ OJ L 309, 24.11.2009, p.51

4. Operators shall take the necessary measures to ensure that downlinked aircraft identification is provided when operationally required as defined by Article 3(1) and 3(2).
5. Operators shall take the necessary measures to ensure that the setting of the downlinked aircraft identification referred to in paragraph 4 complies with Item 7 of the flight plan.
6. Operators of those aircraft having the capability to change the downlinked aircraft identification referred to in paragraph 4 when airborne shall take the necessary measures to ensure that the downlinked aircraft identification is not changed during the flight unless requested by the air navigation service provider.
7. Member States shall take the necessary measures to ensure compliance with this Regulation including the publication of relevant information in the national aeronautical information publications.

Article 8

Entry into force and application

1. This Regulation shall enter into force on the twentieth day following that of its publication in the Official Journal of the European Union.
2. This Regulation shall be binding in its entirety and directly applicable in all Member States.

ANNEX I

Airspace referred to in Article 3(1) and 3(4)

1. The airspace referred to in Article 3(1) and 3(4) shall include the following Flight Information Regions (FIR) and Upper Flight information Regions (UIR):
 - (a) Austria - Wien FIR;
 - (b) Czech Republic - Praha FIR;
 - (c) Belgium/Luxembourg - Brussels FIR/UIR;
 - (d) France - Bordeaux, Brest, Marseille, Paris and Reims FIRs, and the France UIR;
 - (e) Germany - Bremen, Langen and Munchen FIRs, and Hannover and Rhein UIRs;
 - (f) Greece - Athinai FIR and Hellas UIR;
 - (g) Hungary - Budapest FIR;
 - (h) Italy - Brindisi FIR/UIR, Milano FIR/UIR and Roma FIR/UIR;
 - (i) The Netherlands - Amsterdam FIR;

ANNEX II

Performance requirements referred to in Article 3(3)

1. Airspace volumes where individual aircraft identification is established by using downlinked aircraft identification shall be declared to the centralised flight planning processing and distribution service for input into the integrated initial flight plan processing system.
2. Except when one of the conditions set out in point 3 apply, the conspicuity code laid down in Article 3(6) (c) shall be assigned to an aircraft where:
 - (a) The downlinked aircraft identification matches the corresponding entry in the flight plan for that aircraft; and
 - (b) The integrated initial flight plan processing system has communicated that the aircraft is eligible for the assignment of the conspicuity code.
3. The conspicuity code shall not be assigned to aircraft referred to in point 2 if:
 - (a) Contingency measures that require the assignment of discrete SSR codes to aircraft have been put in place by an air navigation service provider experiencing unplanned ground surveillance sensor outages; or
 - (b) Exceptional military contingency measures require air navigation service providers to assign discrete SSR codes to aircraft; or
 - (c) An aircraft which is eligible for the assignment of the conspicuity code laid down in Article 3(6) (c) exits or is otherwise diverted outside the airspace volume referred to in point 1.
4. Aircraft that are not assigned the conspicuity code laid down in Article 3(6) (c) shall be assigned an SSR code that is in compliance with a code allocation list agreed by Member States and coordinated with European third countries.
5. When an SSR code has been assigned to an aircraft, a check shall be made at the earliest opportunity to confirm that the SSR code set by the pilot is identical to that assigned to the flight.
6. SSR codes assigned to aircraft being transferred from air navigation service providers in neighbouring States shall be automatically checked to see if the assignments can be retained in compliance with a code allocation list agreed by Member States and coordinated with European third countries.
7. Formal arrangements with the following minimum content shall be established with neighbouring air navigation service providers that are establishing individual aircraft identification by using SSR codes:
 - (a) An obligation to the neighbouring air navigation service providers to transfer aircraft with verified discrete SSR codes assigned in compliance with a code allocation list agreed by Member States and coordinated with European third countries;
 - (b) An obligation to notify accepting units about any observed irregularity in the operation of airborne constituents of surveillance systems.

ANNEX III

Performance requirements referred to in Article 3(4)

Individual systems used for the assignment of SSR codes shall have the following functional capabilities:

- (a) SSR codes shall be automatically assigned to aircraft in compliance with a code allocation list agreed by Member States and coordinated with European third countries;
- (b) SSR codes assigned to aircraft being transferred from air navigation service providers in neighbouring States shall be checked to see if the assignments can be retained in compliance with a code allocation list agreed by Member States and coordinated with European third countries;
- (c) SSR codes shall be classified into different categories to allow for differentiated code assignment;
- (d) SSR codes from the different categories referred to in point (c) shall be assigned according to the directions of flights;
- (e) Multiple simultaneous assignments of the same SSR code shall be made to flights operating in conflict-free directions.

ANNEX IV

Requirements referred to in Article 4

1. The performance requirements specified in Article 3(3), 3(4), 3(5)b, 3(6).
2. The additional requirements specified in Article 7(3), 7(4), 7(5) and 7(6).

ANNEX V

PART A: REQUIREMENTS FOR THE ASSESSMENT OF THE CONFORMITY OR SUITABILITY FOR USE OF CONSTITUENTS REFERRED TO IN ARTICLE 5(1)

1. The verification of compliance activities shall demonstrate the conformity or suitability for use of constituents with the applicable requirements of this Regulation whilst these constituents are in operation in the test environment.
2. The manufacturer shall manage the conformity assessment activities and shall in particular:
 - (a) determine the appropriate test environment;
 - (b) verify that the test plan describes the constituents in the test environment;
 - (c) verify that the test plan provides full coverage of applicable requirements;
 - (d) ensure the consistency and quality of the technical documentation and the test plan;
 - (e) plan the test organisation, staff, installation and configuration of test platform;
 - (f) perform the inspections and tests as specified in the test plan;
 - (g) write the report presenting the results of inspections and tests.
3. The manufacturer shall ensure that the constituents referred to in Article 5, integrated in the test environment meet the applicable requirements of this Regulation.
4. Upon satisfying completion of verification of conformity or suitability for use, the manufacturer shall under its responsibility draw up the EC declaration of conformity or suitability for use, specifying notably the applicable requirements of this Regulation met by the constituent and its associated conditions of use in accordance with Annex III point (3) of Regulation (EC) No 552/2004 amended by Regulation (EC) No 1070/2009.

PART B: REQUIREMENTS FOR THE VERIFICATION OF SYSTEMS REFERRED TO IN ARTICLE 6(1)

1. The verification of systems identified in Article 1(2) (b) to (d) shall demonstrate the compliance of these systems with the interoperability, performance and safety requirements of this Regulation in an assessment environment that reflects the operational context of these systems.
2. The verification of systems identified in Article 1(2) (b) to (d) shall be conducted in accordance with appropriate and recognised testing practices.
3. Test tools used for the verification of systems identified in Article 1(2) (b) to (d) shall have appropriate functionalities.
4. The verification of systems identified in Article 1(2) (b) to (d) shall produce the elements of the technical file required by Annex IV (3) of Regulation (EC) No 552/2004 amended by Regulation (EC) No 1070/2009 including the following elements:
 - (a) description of the implementation;
 - (b) the report of inspections and tests achieved before putting the system into service.
5. The air navigation service provider shall manage the verification activities and shall in particular:
 - (a) determine the appropriate operational and technical assessment environment reflecting the operational environment;
 - (b) verify that the test plan describes the integration of systems identified in Article 1(2) (b) to (d) in an operational and technical assessment environment;
 - (c) verify that the test plan provides full coverage of the applicable interoperability, performance and safety requirements of this Regulation;
 - (d) ensure the consistency and quality of the technical documentation and the test plan;
 - (e) plan the test organisation, staff, installation and configuration of the test platform;
 - (f) perform the inspections and tests as specified in the test plan;
 - (g) write the report presenting the results of inspections and tests.
6. The air navigation service provider shall ensure that the systems identified in Article 1(2) (b) to (d) operated in an operational assessment environment meet the interoperability, performance and safety requirements of this Regulation.
7. Upon satisfying completion of verification of compliance, air navigation service providers shall draw up the EC declaration of verification of system and submit it to the national supervisory authority together with the technical file as required by Article 6 of Regulation (EC) No 552/2004 amended by Regulation (EC) No 1070/2009.

PART C: REQUIREMENTS FOR THE VERIFICATION OF SYSTEMS REFERRED TO IN ARTICLE 6(2)

1. The verification of systems identified in Article 1(2) (b) to (d) shall demonstrate the compliance of these systems with the interoperability, performance and safety requirements of this Regulation in an assessment environment that reflects the operational context of these systems.
2. The verification of systems identified in Article 1(2) (b) to (d) shall be conducted in accordance with appropriate and recognised testing practices.
3. Test tools used for the verification of systems identified in Article 1(2) (b) to (d) shall have appropriate functionalities.
4. The verification of systems identified in Article 1(2) (b) to (d) shall produce the elements of the technical file required by Annex IV (3) of Regulation (EC) No 552/2004 amended by Regulation (EC) No 1070/2009 including the following elements:
 - (a) description of the implementation;
 - (b) the report of inspections and tests achieved before putting the system into service.
5. The air navigation service provider shall determine the appropriate operational and technical assessment environment reflecting the operational environment and shall have verification activities performed by a notified body.
6. The notified body shall manage the verification activities and shall in particular:
 - (a) verify that the test plan describes the integration of systems identified in Article 1(2) (b) to (d) in an operational and technical assessment environment;
 - (b) verify that the test plan provides full coverage of the applicable interoperability, performance and safety requirements of this Regulation;
 - (c) ensure the consistency and quality of the technical documentation and the test plan;
 - (d) plan the test organisation, staff, installation and configuration of the test platform;
 - (e) perform the inspections and tests as specified in the test plan;
 - (f) write the report presenting the results of inspections and tests.
7. The notified body shall ensure that the systems identified in Article 1(2) (b) to (d) operated in an operational assessment environment meet the interoperability, performance and safety requirements of this Regulation.
8. Upon satisfying completion of verification tasks, the notified body shall draw up a certificate of conformity in relation to the tasks it carried out.
9. Then, the air navigation service provider shall draw up the EC declaration of verification of system and submit it to the national supervisory authority together with the technical file as required by Article 6 of Regulation (EC) No 552/2004 amended by Regulation (EC) No 1070/2009.

ANNEX VI

Conditions referred to in Article 6

1. The air navigation service provider must have in place reporting methods within the organisation which ensure and demonstrate impartiality and independence of judgement in relation to the verification activities.
2. The air navigation service provider must ensure that the personnel involved in verification processes, carry out the checks with the greatest possible professional integrity and the greatest possible technical competence and are free of any pressure and incentive, in particular of a financial type, which could affect their judgment or the results of their checks, in particular from persons or groups of persons affected by the results of the checks.
3. The air navigation service provider must ensure that the personnel involved in verification processes, have access to the equipment that enables them to properly perform the required checks.
4. The air navigation service provider must ensure that the personnel involved in verification processes, have sound technical and vocational training, satisfactory knowledge of the requirements of the verifications they have to carry out, adequate experience of such operations, and the ability required to draw up the declarations, records and reports to demonstrate that the verifications have been carried out.
5. The air navigation service provider must ensure that the personnel involved in verification processes, are able to perform their checks with impartiality. Their remuneration shall not depend on the number of checks carried out, or on the results of such checks.