



# Terms of Reference

for rulemaking task RMT.0624

## Technical requirements for the provision of remote aerodrome air traffic services

ISSUE 2

### Issue/rationale

The introduction and development of new technologies enables the provision of aerodrome air traffic services (ATS), for both aerodrome air traffic control (ATC) services and aerodrome flight information services (AFIS), from geographically independent locations/facilities that are equipped with visual surveillance systems instead of direct visual observation. The concept is usually referred to as ‘remote tower operations’.

As a follow-up to the substantial work undertaken to produce, develop and further expand soft law on the provision of remote aerodrome ATS, EASA continues to engage in the rapid evolution of the research and implementation of the remote tower concept from its various perspectives, in particular the technological, operational and human-performance developments. For this purpose, EASA amends the Terms of Reference for RMT.0624 Issue 1 to update the objectives, the processes and the milestones in order to maintain its regulatory framework up to date with the evolution of the remote tower concept. The purpose of RMT.0624 remains the support of the safe implementation of the newest development of the provision of this type of ATS.

<b>Action area:</b>	SESAR deployment		
<b>Affected rules:</b>	GM on remote aerodrome air traffic services — Issue 2		
<b>Affected stakeholders:</b>	Air navigation service providers (ANSPs); aerodrome operators; competent authorities (CAs); developers of air traffic management (ATM) systems		
<b>Driver:</b>	Safety	<b>Rulemaking group:</b>	Yes
<b>Impact assessment:</b>	Light	<b>Rulemaking Procedure:</b>	Standard

● EASA rulemaking process milestones



## 1. Why we need to change the rules — issue/rationale

The introduction and development of new technologies enable the provision of aerodrome ATS, ATC or AFIS from a remote location. This concept also provides the possibility to use the remote facility for contingency purposes. The approach followed by several stakeholders proves that the implementation of the concept of the remote provision of aerodrome ATS allows for optimised interaction with aircraft, vehicles and persons that operate within the airspace and/or the areas of interest at the aerodrome. The direct visual observation by personnel being physically present at the aerodrome is replaced by visual surveillance systems (e.g. cameras and other sensors) that reproduce the 'out-the-window' (OTW) view, adding information from other sources (if and when available), such as radar, ground movement sensors (e.g. A-SMGCS), multilateration or other positioning and surveillance systems providing the position of moving objects within the aerodrome movement area and its vicinity.

To facilitate the production of European Union (EU) legislation on the subject, EASA launched Rulemaking Task RMT.0624 in 2014. The work resulted in the issuance of guidance material (GM) with ED Decisions 2015/014/R<sup>1</sup> and 2015/015/R<sup>2</sup>, successively repealed by ED Decision 2019/004/R<sup>3</sup> issued on 19 February 2019. The value of the EASA work on the remote tower concept is widely recognised; reference to EASA documents is included in ICAO Doc 4444 'PANS-ATM' to provide guidance on the subject at global level.

The increasing implementation of the provision of remote aerodrome ATS throughout Europe, as well as the continuous evolution of the technology and the industry standards, indicate that the existing EASA material could benefit from further development in the short- and medium-term. The maintenance of such material would effectively support the affected stakeholders in implementing the concept safely and efficiently.

## 2. What we want to achieve — objective

ToR RMT.0624 Issue 2 intends to extend the scope of RMT.0624 Issue 1 in order to consider and address new developments and operational experience gained with the effective implementation of the provision of remote aerodrome ATS in several countries, utilising different concepts and technical solutions.

The general objectives of RMT.0624, as per revised ToR Issue 2, are to:

- support the implementation of the provision of remote aerodrome ATS;
- review and, if necessary, further refine and complement the existing EASA material;
- support the harmonisation of as well as ensure the safe provision of ATC.

RMT.0624 Issue 2 work will focus on the further development of specific regulatory, technological and operational aspects, considering but not limited to the following:

- both single and multiple mode of operation;
- human factors/performance related to the new technology;
- aerodrome constraints (placement of equipment versus obstacle surfaces);
- hotspot cameras in a conventional tower (TWR);
- multiple mode of mixed conventional and remote aerodrome ATS;

<sup>1</sup> <https://www.easa.europa.eu/document-library/agency-decisions/ed-decision-2015014r>

<sup>2</sup> <https://www.easa.europa.eu/document-library/agency-decisions/ed-decision-2015015r>

<sup>3</sup> <https://www.easa.europa.eu/document-library/agency-decisions/ed-decision-2019004r>

- cybersecurity issues;
- third-party communication (leased commercial telecommunication lines) between remote tower sensors and operational facility: risks and mitigations;
- maintain alignment of the RMT.0624 deliverables with the current EU regulatory framework.

The primary objective is to ensure that remote aerodrome ATS are provided with, at least, the same level of safety as if the service were provided locally, and that operations and airspace users are not negatively affected by the new concept. As the baseline, according to Regulation (EU) 2017/373<sup>4</sup>, any implementation of the provision of remote aerodrome ATS shall fulfil the requirements relevant to the changes to the ATM/ANS functional system.

The deliverables shall support the functions, technical enablers and responsibilities associated to the aerodrome control service, aerodrome flight information service (AFIS) and alerting service (ALRS) to be carried out by air traffic controllers (ATCOs) and aerodrome flight information officers (AFISOs) respectively.

### 3. How we want to achieve it

A rulemaking group (RMG) shall be established to support EASA in the execution of this RMT. The RMG shall hold an appropriate number of meetings. Additional focused consultations may be held, in particular during the review of the comments received during the notice of proposed amendment (NPA) consultation.

### 4. What are the deliverables

Attending to the evolution of the activities that are within the scope of this RMT, EASA will appropriately produce the following corresponding rulemaking deliverables:

- an NPA with the draft implementing rules (IRs) and, if applicable, acceptable means of compliance (AMC) and/or guidance material (GM) concerning the technical and operational requirements for the provision of remote aerodrome ATS, including an impact assessment (IA);
- a comment-response document (CRD) to the NPA referred to above;
- an opinion including the EASA draft proposal for IRs concerning the technical and operational requirements for the provision of remote aerodrome ATS, if applicable.
- a decision(s) with AMC and/or GM.

### 5. How we consult

In addition to the NPA consultation, focused consultations may also be organised, prior to the publication of the final deliverable of the planned rulemaking activities and during their review process. This will be determined during the drafting phase, and may include:

- meetings with stakeholders,
- workshops, and/or
- ATM/ANS TeB and TEC ad hoc consultations.

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<sup>4</sup> 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).

## 6. Interface issues

ATCO licencing is the subject of RMT.0668<sup>5</sup>. When any issue related to ATCO licencing is identified in the context of RMT.0624, close coordination with the RMT.0668 activities and working arrangements will be established and ensured. Any amendment to the ATCO licencing provisions proposed from the work of RMT.0624 will be addressed by RMT.0668.

The activities of RMT.0624 may trigger considerations for future amendments to Regulation (EU) 2017/373 and the associated AMC and GM. Appropriate coordination will be ensured with the activities of RMT.0719 'Regular update of ATM/ANS rules (IR/AMC/GM)'<sup>6</sup> for this purpose.

The progress of the work of EUROCAE WG-100 Remote & Virtual Tower (RVT) shall also be considered, in particular with regard to the technological developments.

## 7. Profile and contribution of the rulemaking group

Profile of the rulemaking group (RMG) and its members:

- The RMG shall be composed of approximately 10 experts representing competent authorities, ANSPs, system developers (industry), unions/ATCO representatives, and aerodrome operators.
- The RMG members shall have knowledge of and experience in ATM/ANS regulatory aspects, ATS operational environment (preferably including the remote provision of services), certification standards, ATS systems development, and human factors.

## 8. Reference documents

### 8.1. Related regulations

- 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 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) 2015/340 of 20 February 2015 laying down technical requirements and administrative procedures relating to air traffic controllers' licences and certificates pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council, amending Commission Implementing Regulation (EU) No 923/2012 and repealing Commission Regulation (EU) No 805/2011 (OJ L 63, 6.3.2015, p. 1)
- 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)

<sup>5</sup> Regular update of the air traffic controller licencing rules (implementing rules, acceptable means of compliance, guidance material) (<https://www.easa.europa.eu/document-library/terms-of-reference-and-group-compositions/tor-rmt0668>).

<sup>6</sup> <https://www.easa.europa.eu/document-library/terms-of-reference-and-group-compositions/tor-rmt0719>

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 Regulation (EU) No 139/2014 of 12 February 2014 laying down requirements and administrative procedures related to aerodromes pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 44, 14.2.2014, p. 1)

## 8.2. Affected decisions

- Executive Director Decision 2019/004/R of 15 February 2019 issuing Guidance Material on remote aerodrome air traffic services and repealing Decision 2015/014/R of the Executive Director of the Agency of 3 July 2015 ‘Guidance Material on remote aerodrome air traffic services’ — Issue 2 AND amending Acceptable Means of Compliance and Guidance Material to Part ATCO of Regulation (EU) 2015/340 ‘AMC & GM to Part ATCO — Issue 1, Amendment 2’
- Decision 2013/013/R of the Executive Director of the European Aviation Safety Agency of 17 July 2013 adopting the Acceptable Means of Compliance and Guidance Material to 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 255/20101
- Executive Director Decision 2016/023/R of 13 October 2016 amending the Acceptable Means of Compliance and Guidance Material to Commission Implementing Regulation (EU) No 923/2012 ‘AMC and GM to the rules of the air — Amendment 1’
- Executive Director Decision 2015/010/R of the Executive Director of the Agency of 13 March 2015 adopting Acceptable Means of Compliance and Guidance Material to Commission Regulation (EU) 2015/340

## 8.3. Reference documents

- Commission Regulation (EU) 2015/340 of 20 February 2015 laying down technical requirements and administrative procedures relating to air traffic controllers' licences and certificates pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council, amending Commission Implementing Regulation (EU) No 923/2012 and repealing Commission Regulation (EU) No 805/2011 (OJ L 63, 6.3.2015, p. 1)
- ICAO Annex 11 ‘Air Traffic Services’
- ICAO Doc 4444 ‘Procedures for Air Navigation Services — Air Traffic Management (PANS-ATM)’
- ICAO Doc 9750 ‘Global Air Navigation Plan (GANP)’, 4th Edition
- ICAO Working Document for The Aviation System Block Upgrades — 28 March 2013 (section B1-RATS Remotely Operated Aerodrome Control)
- EUROCONTROL Manual for Aerodrome Flight Information System (Edition number 1.0)
- SESAR D04 — OSED for Remote Provision of ATS to Aerodromes, including Functional Specification, Edition 00.04.01 (SESAR)
- SESAR D08 — Remote Provision of ATS to a Single Aerodrome VALR, Edition 00.04.00 (SESAR)
- SESAR D03 — Remote and Virtual Tower: Rules & Regulations Assessment Report, Edition 00.01.01 (SESAR)
- SESAR OFA06.03.01 Remote Tower — Safety Assessment Report for Single Remote Tower, Edition 00.01.00 (SESAR)
- SESAR PP 6.9.3 Intermediate HP Assessment Report, Edition 00.01.01



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- 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 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)
  - ICAO Annex 3 ‘Meteorological Service for International Air Navigation’
  - Subpart D ‘Instruments, Data, Equipment’ of Annex IV ‘Commercial Air Transport Operations’ (Part-CAT) and Subpart D ‘Instruments, Data and Equipment’ of Annex VI ‘Non-Commercial Air Operations with Complex Motor-Powered Aircraft’ (Part-NCC) 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 (the air operations Regulation) (OJ L 296, 25.10.2012, p. 1)
  - EUROCAE Minimum Aviation System Performance Standard For Remote Tower Optical Systems; EUROCAE ED-240A, October 2018

