

Report of the IFATCA Representative on the ICAO Remotely Piloted Aircraft Systems Panel (RPASP)

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SUMMARY

*Report on the activities of the IFATCA Representative on the
ICAO Remotely Piloted Aircraft Systems Panel (RPASP).*

1. INTRODUCTION

- 1.1. This information paper summarises the activities of the IFATCA Representative on the ICAO Remotely Piloted Aircraft Systems Panel (RPASP). Specifically, it refers to RPASP/WGWHL3 (17-21 March 2025, Montreal, Canada), RPASP/WGWHL3 (20-24 October 2025, Montreal, Canada), AND RPASP/24 (15-20 March 2026, Montreal, Canada).
- 1.2. The RPASP has been developing and amending Standard and Recommended Practices (SARPs) to integrate international IFR RPAS operations into the ATM environment since 2011. During the last meeting (RPASP/24), the panel has approved all the remaining packages concluding the work related to SARPs addition and amendments to Annex 1, Annex 2, Annex 4, Annex 6, Annex 10, Annex 11, Annex 14, PANS-ATM, PANS-AIM, PANS-OPS, DOC 10019, and many others. However, some work programme elements (WPEs) are still open to develop guidance materials in supporting States in implementing the provisions.
- 1.3. After having assessed the progresses and the amount of the work performed by the RPASP, also determining the time required to process all the RPAS packages, **the ICAO ANC has recommend the ICAO Council that the applicability date of the First Edition of Annex 6 — Operation of Aircraft, Part IV – International Operations – Remotely Piloted Aircraft Systems be postponed to November 2030.**
- 1.4. Considering the competition of most of the WPEs, with the aim of efficiency and productivity, the ICAO Secretariat has presented a working paper to restructure the Panel moving from the current structure (see 2.2.3) to a new format with 3 working group and 3 joint task forces (see 2.XX). The Panel agreed.

- 1.5. A heartfelt thanks to Mr Christoph Gilgen, Mr Nicholas Siele, and Mr Sergio Velotto for their hard and continuous work and support. Thanks also to the IFATCA Liaison Officer to the ICAO Air Navigation Commission Mr David Perks for supporting the IFATCA position at the ICAO ANC level.

2. DISCUSSION

- 2.1. This paper will only report the main elements and events that occurred during the period covered by the report. To have full details and understanding of all topics, readers are kindly invited to refer to the full reports available or to contact eugenio.diotalevi@ifatca.org.

2.2. RPASP scope and structure

- 2.2.1. The Remotely Piloted Aircraft Systems Panel (RPASP) coordinates and develops ICAO Standards and Recommended Practices (SARPs), Procedures and Guidance material for remotely piloted aircraft systems (RPAS), to facilitate safe, secure, and efficient integration of remotely piloted aircraft (RPA) into non-segregated airspace and aerodromes. The RPASP, in collaboration with other ICAO expert groups, undertakes specific studies and subsequently develops provisions to facilitate the safe, secure and efficient integration of RPA into non-segregated airspace and aerodromes while maintaining the existing level of safety for manned aviation. The panel which is part of ICAO's voluntary workforce, is composed of experts, nominated by States and international organizations. The RPASP coordinates their work with the various groups of experts responsible for other Annexes and disciplines, as appropriate (e.g. Airworthiness Panel (AIRP), Communications Panel (CP), Surveillance Panel (SP), Air Traffic Management Operations Panel (ATMOPSP) Flight Operations Panel (FLTOPSP), Flight Recorder Working Group (FLIREC-WG), Dangerous Goods Panel (DGP), Safety Management Panel (SMP), Aerodrome Design and Operations Panel (ADOP), Accident Investigation (AIGP)). These collaborative efforts extend beyond panels of the Air Navigation Commission (ANC) to include the Legal Committee, Committee on Aviation Environmental Protection (CAEP), Aviation Security Panel (AVSECP), Air Navigation Services Economics Panel (ANSEP) and the Aerodromes Economics Panel (AEP), Advance Air Mobility Study Group.
- 2.2.2. The RPASP meets twice a year, in the form of a Panel or as a Working Group of the Whole, with the following schedule:

| RPASP Meeting | Date | WP/IP Deadline |
|----------------------|--------------------|-----------------------|
| RPASP-WGWHL/3 | 17-21 March 2025 | 21 February 2025 |
| RPASP-WGWHL/4 | 20-24 October 2025 | 26 September 2025 |
| RPASP/24 | 16-20 March 2026 | 20 February 2026 |

- 2.2.3. Before the restructuring (effective by the end of RPASP/24), the RPASP was composed by working groups (WGs), task forces (TFs), ad hoc working groups (AHWGs) and, due to the cross-panel nature of RPAS, joint task

forces (JTFs). The detailed structure and IFATCA's participation are reported in the following table:

| | Name | IFATCA member |
|-----------------------|--|---|
| WG1 | Airworthiness | |
| WG2 | C2 Link | Eugenio Diotalevi |
| WG3 | Detect and Avoid | Christoph Gilgen, Nicholas Siele |
| WG4 | Personnel Licensing | |
| WG5 | RPAS Operations | |
| WG6 | ATM Integration | Eugenio Diotalevi |
| WG7 | Human In The System | |
| WG8 | RPAS Manual | |
| AHWG-A | Ad Hoc Working Group on Assumptions | Eugenio Diotalevi |
| AHWG-OSP | Ad Hoc Working Group on Oversight Of Service Provision | |
| RA-JTF | RPASP and ATMOPSP Joint Task Force | Eugenio Diotalevi, Rick Taylor (ATMOPSP, co-rapporteur of the RA-JTF) |
| RLP-TF | Required Link Performance Task Force | Eugenio Diotalevi |
| RPASP/SMP-JTF | RPASP and SMP Joint Task Force | Eugenio Diotalevi |
| RPASP/ADOP-JTF | RPASP and ADOP Joint Task Force | Nicholas Siele, Sergio Velotto |
| RPASPTF-I | RPASP Interception Task Force | Eugenio Diotalevi (co-rapporteur TF-I) |
| TT -AFSTG | Tiger Team – Assurance Framework Stress Test Group | Eugenio Diotalevi (rapporteur) |
| ICL - WG | Implementation of C2 Link Performance Working Group | Eugenio Diotalevi (co-rapporteur) |

2.2.4. Given the evolution of the Panel and the fact that the majority of the WPEs and deliverables were completed at the conclusion of RPASP/24, the ICAO Secretariat proposed to restructure the RPASP to ensure that it remains effective, efficient and fit-for-purpose. After several discussions, the Panel agreed on the following structure:

| | Name | Task |
|--------------|--------------------------------|---|
| C2WG | C2 Link Working Group | The working group is responsible to ensure the overall consistency regarding C2 Link provisions and guidance and to deliver a complete framework for C2 Link, including guidance and performance, with a focus on State's implementation perspective (definitions, overall framework, regulation, oversight, C2CSP, responsibilities of various States concerned, identification of "C2L Performance", "C2L Specifications", "Quality of Service required (QoS)" and their interrelations, etc.). |
| DAAWG | Detect and Avoid Working Group | The working group is a continuation of the former WG3 and it is responsible to finalise the development of the necessary guidance for Detect and Avoid, especially in relation to the necessary C2 link Performance. |
| OPSWG | Operations Working Group | This working group is responsible to develop(if necessary) and maintain SARPs and guidance materials, related RPAS, addressing topics such as airworthiness, licensing, flight operations, aerodromes design and operation, interception, and air traffic management. The group is also responsible to coordinate the joint task forces with other panels (RA-JTF, RPASP/SMP-JTF, and RPASP/ADOP-JTF). |

2.2.5. Also considering the work done as co-rapporteur of the C2 Link Performance Implementation WG, the IFATCA member to the RPASP has been asked to join the C2WG as co-rapporteur to ensure the ATM perspective remains central to the work.

2.3. Assurance Framework

2.3.1. After three working papers presented by IFATCA requesting a review of the work done, and the support to IFATCA by the Safety Management Panel Chief, at RPAS/23 the RPASP Chair eventually recognised some criticalities on the global harmonisation of all provisions developed by the Panel, and in the project management process. It became clear to everybody that actions were needed to ensure completeness and applicability of all materials delivered. For this reason, IFATCA favourably welcomed the decision from the Panel to develop an Assurance Framework ensuring integration and cohesiveness of all packages (as a whole). Activities performed are:

- Vertical Consistency: ensuring the topic/Annex specific work aligns with foundational packages (Annexes 1, 6, 8, 10)
- Horizontal Consistency: consistency between remaining packages (ATM, DAA, C2 Link, Aerodrome).
- Stress test: to ensure completeness and understandability of concepts.

2.3.2. For those specific activities, IFATCA Member was asked to lead the Stress Test Activity and, as a result, RPASP/WGWHL-3/WP11 was produced. Weekly meetings have been held, and results have identified some items requiring further developed or clarification. Most of them are minor items. However, the task was not performed as a safety analysis on the materials but, on request from ICAO Secretariat, as a tabletop exercise without questioning the effective safety of the provision developed but only checking the applicability and possible gaps on regulations.

2.3.3. The item identified by the stress test activities have been assessed by the responsible WGs and resolutions to the comments were presented and adjudicated at RPASP/WGWHL-4.

2.4. C2 Link High-level concept

2.4.1. C2 Link is for sure one of the main topics for the Panel and, being new to the aviation community, it is one of the most difficult to explain and understand outside the Panel itself. For this reason, at RPASP/WGWHL-4, a new group was established (Implementation of C2 Link Performance Working Group) with the scope of developing a high level concept to help States to understand and implement C2 Link related matters.

- 2.4.2. The group was composed by experts from different domains: for ATM, the IFATCA Member was asked to participate and also to become the co-rapporteur of the group.
- 2.4.3. The group met 23 times in 14 weeks and developed the “high-level C2 Link performance concept document” (C2LPC). The C2LPC expresses the roles and responsibilities of States and other stakeholders related to C2 Link performance requirements implementation when certifying, approving and operating RPAS.
- 2.4.4. Furthermore, the C2LPC development process helped the working group identify an initial series of areas where additional guidance is needed to support States in implementing C2 Link provisions. As a consequence, the Manual on C2 Link for RPAS will be modified with the creation of two volumes, one containing the technical part, and the other with all guidance related to the implementation, certification and oversight.

2.5. C2 Link Performance

- 2.5.1. One of the main past and future Panel’s activity is the development of C2 Link performance values. After several discussions, the ICAO Secretariat has accepted the IFATCA position that ICAO should develop and publish a set of initial values for specific operational scenarios, especially over high seas. These values will be published for every portion of airspace where RPAS operations are allowed and meeting these performances shall ensure that the airspace safety levels is maintained.
- 2.5.2. As proposed by IFATCA, and with the fundamental support of the SASP Chair, Mr David Perks (IFATCA), the first step in developing the C2 Link performance values started at RPASP/WGWHL-3 with the aim of verifying that current separation standards allow some flexibility for the introduction of the latency induced by the C2 Link itself. Final results are not published yet but there is the possibility, not so remote, that RPAS might require increased separation minima, especially in the TMA environment. On my personal opinion, this will be a major defeat for the entire Panel because one of the fundamental assumptions was and still is that the inclusion of RPAS will be transparent for ATC. IFATCA has warned the Panel and the ICAO Secretariat about this possibility tens of time since 2018, sometimes receiving the label of “problem maker” (or even worst).

2.6. DAA

- 2.6.1. Detect and Avoid is another major item for the Panel. Related SARPs and the DAA Manual have been completed, but there are still item requiring for further development especially those related to the connection between the DAA system and the C2 Link system. This connection has become so

important that, during the restructuring, the Panel has decided to maintain a WG dedicated to DAA.

2.6.2. For this, and also to demonstrate how sensitive the relation between DAA and C2 Link is, and how import the ATM background is in developing the C2 Link performance values, I would like to thank Mr Christoph Gilgen for his continuous support and advice and for his resistance against any superficial and non-sense solution proposed to solve these problems .

2.7. RPASPTF-I (RPASP Task Force Interception)

2.7.1. The IFATCA Member is the co-rapporteur of the TF together with an Advisor from Germany. The interception by military/state aircraft of an unmanned aircraft (UA) is a transversal issue because of the unique characteristic of not having the pilot on board. This issue requires clarification and SARPs to ensure a consistent approach is facilitated. Current Annex 2 — Rules of the Air provisions present significant challenges for UA interception as they place heavy reliance on visual signals from both the intercepting and intercepted aircraft to confirm intent, etc. It is further noted that the DAA system of the intercepted aircraft could trigger avoidance manoeuvres upon detection of the intercepting aircraft. RPASP-WGWHL/1 (22 - 26 June 2020) agreed on establishing a dedicated Task Force (RPASPTF-I) to facilitate a multi-disciplinary approach to this issue.

2.7.2. TF-I, as part of the inter-Panel coordination for amending Annex 2 and Annex 11, has received comments from the ICAO ATMOPSP and the ICAO FLTOPS with an additional request to perform a safety assessment on the risk introduce by intercepting an RPA, especially in the case of Lost C2 Link state. TF-I, in cooperation with SASP-MSG, has created a methodology for the assessment and, after another round of consultation with the interested Panels, all the comment were adjudicated.

2.7.3. The main amendments to Annex 2 and Annex 11 are:

- a) the introduction of new phraseology to indicate the state of lost C2 Link to be used in case communication on a common language is not possible (“LOST C2 LINK” Annex 2, Appendix A, 3-Radiocommunication during interception), and
- b) the general information to States/military/intercepting aircraft that the DAA system is active also in case of lost C2 Link and, consequently, the RPA might react automatically to every aircraft in close proximity, including those without an active transponder.

3. CONCLUSION

3.1. The work on RPASP has reached a critical milestone with the approval by the Panel of all the SARPs packages.

- 3.2. There is still work to be completed and for this reason, The Panel has decided to restructure itself to ensure that it remains effective, efficient and fit-for-purpose.
- 3.3. Due to the amount of work and the time needed by the ANC to review all materials, there is a proposal from the ANC to postpone the applicability date of Annex 6 Part IV to 2030.
- 3.4. IFATCA has always been present, active and collaborative to every initiative the Panel has proposed to improve the overall safety for the integration of the RPAS into the ATM system. This is possible thanks to the continuous commitment of all IFATCA associates involved in the Panel.
- 3.5. With the new Panel structure, IFATCA is present in all WGs, including the position of co-rapporteur of the C2WG.

4. RECOMMENDATIONS

It is recommended that this report is accepted.