RTCA PROGRAM MANAGEMENT COMMITTEE
MEETING SUMMARY
December 14, 2023

The RTCA Program Management Committee (PMC) convened in a hybrid format at 8:30 a.m. on December 14, 2023, with some members present at RTCA and others participating via Webex. The attendance list and action items are attached.

AGENDA ITEM 1
Welcome and Introductions

A. Chair Hegarty welcomed the group, asked attendees to introduce themselves and to note their organization of affiliation. Proxies are noted in the attendance list.

B. Secretary Hofmann reviewed the anti-trust statement, proprietary policy, and membership policy.

C. Chair Hegarty gave special recognition for retiring RTCA President Terry McVenes and longtime PMC Member Doug Arbuckle. Folks were given the opportunity to give testimonials to these valued members. We wish them well.

D. The group welcomed incoming RTCA President Carol Huegel.

AGENDA ITEM 2
Review / Approve

A. With a motion from Member Turner and seconded by Member Arbuckle, the September 21, 2023, meeting summary was approved. (RTCA Paper No. 278-23/PMC-2487)

B. The following administrative Special Committee (SC) Terms of Reference (ToR) revision was presented. Approval was moved by Member Hahn, seconded by Member Kauffman. The revision was approved.

- SC-223 – Internet Protocol Suite (IPS) and Aeronautical Mobile Airport Communication System (AeroMACS) – Changing Chairman from retiring Aloke Roy to Dongsong Zeng (MITRE). Also updated some administrative clean up. (RTCA Paper No. 338-23/PMC-2530)

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- A special thank you was extended to Aloke Roy for his contributions and support.

AGENDA ITEM 3
Publication Consideration/Approval

A. White Paper: *Summary of Activities and Potential Changes to DO-317C and DO-361A Change 1 – Year 2*, **presented by SC-186, Automatic Dependent Surveillance-Broadcast (ADS-B)**

- Lesley Weitz, SC-186 WG4 Task Lead, presented.

This white paper documents recommended updates to the Aircraft Surveillance Applications (ASA) Minimum Operational Performance Standards (MOPS), DO-317C/ED-194B, and to the Flight-deck Interval Management (FIM) MOPS, DO-361A/ED-236A; ADS-B In Discussion Group meeting topics; and highlights recent research documents on supporting Air Traffic Control (ATC) automation, ADS-B In benefits, and expected documentation of results from the ADS-B In Retrofit Spacing (AIRS) Evaluation.

Some of the recommended changes to the standards are proposed in the revised ToR for SC-186 (agenda item 6D).

- Approval was moved by GAR DeCleene, seconded by Member Hahn. The PMC approved the document. It will be available to RTCA members only through AerOpus (RTCA Paper No. 297-23/PMC-2493).

B. DO-381A - *MOPS for GBSS for Traffic Surveillance*, **presented by SC-228, Minimum Performance Standards for Uncrewed Aircraft Systems**

- James Williams and Brandon Suarez, SC-228 Co-Chairs, presented.

This standard contains Minimum Operational Performance Standards (MOPS) for the Ground Based Surveillance System (GBSS) for Traffic Surveillance systems implemented with Unmanned Aircraft Systems (UAS) transiting and performing extended operations in Class C, D, E, and G airspace, along with transiting Class B airspace. It includes equipment to enable UAS operations near terminal areas during approach and departure in Class C, D, E and G airspace and off-airport locations. It does not apply to small UAS (sUAS) as defined in Title 14 of the Code of Federal Regulations (CFR) Chapter 107. Likewise, it does not apply to operations in the Visual Flight Rules (VFR) traffic pattern of an airport, nor to surface operations. These standards specify the surveillance system characteristics that should be useful for designers, manufacturers, installers and users of the equipment.

- Approval was moved by Member Arbuckle, seconded by Member Turner. The PMC approved the standard. It will be published as DO-381A.

C. DO-377B – *Minimum Aviation System Performance Standards (MASPS) for C2 Link Systems Supporting Operations of Uncrewed Aircraft Systems in U.S. Airspace*,

presented by SC-228, Minimum Performance Standards for Uncrewed Aircraft Systems

- James Williams and Brandon Suarez, SC-228 Co-Chairs, presented.

This standard presents and justifies the Minimum Aviation System Performance Standards (MASPS) for a Command and Control Link System (C2 Link System) used to monitor and control an Uncrewed Aircraft System (UAS). The C2 Link System carries the information exchanges between a Control Station (CS) and an Uncrewed Aircraft (UA). This MASPS is not the only way to determine such standards but is one that was determined to be viable by the members of Special Committee SC-228.

This B version of DO-377 is an expansion of the efforts in RTCA DO-377 and DO-377A. It adds an additional CONOPS, Low Altitude Delivery Supporting Small Package Delivery, and five new scenarios, two air taxi, two surface taxi and one small package delivery using advanced technologies.

- Approval was moved by GAR DeCleene, seconded by Member Turner. The PMC approved the standard. It will be published as DO-377B.

D. DO-398A - *Operational Services and Environment Definition (OSED) for Uncrewed Aircraft Systems Detect and Avoid Systems (DAA)*, presented by SC-228, Minimum Performance Standards for Uncrewed Aircraft Systems

- James Williams and Brandon Suarez, SC-228 Co-Chairs, presented.

The is a standalone OSED that accompanies DO-365 – MOPS for Detection and DAA systems. Updates included in this revision include operations relevant to ACAS Xr:

- High density operational environments
- Hover, slow flight, vertical flight segments
- Low altitude operations, obstacle and terrain proximity

- Approval was moved by GAR DeCleene, seconded by Member Turner. The PMC approved the standard. It will be published as DO-398A.

E. DO-405 – *Minimum Operating Performance Standard (MOPS) for Helicopter Terrain Awareness Warning System (HTAWS) for Onshore Helicopter Operations*, presented by SC-237, Helicopter Terrain Awareness Warning Systems

- Michael Deer, SC-237 Chair, presented.

This standard defines the Minimum Operational Performance Standards (MOPS) for an Onshore Helicopter Terrain Awareness and Warning System (Onshore HTAWS), which provide alerting to reduce the risk of controlled flight into terrain accidents, as a supplement to the Forward Looking Terrain Avoidance (FLTA) HTAWS functions defined in DO-309. Onshore HTAWS

modes are similar to Offshore HTAWS modes defined in DO-376/ED-285. These standards specify system characteristics that are intended to be useful to designers, manufacturers, installers, and users of Onshore HTAWS.

- Approval was moved by Member Madden, seconded by Member Turner. The PMC approved the standard. It will be published as DO-405. It will be published concurrently with EUROCAE ED-316 in January 2024.

F. DO-292A – *Assessment of Radio Frequency Interference Relevant to the GNSS L5/E5A Frequency Band,* **presented by SC-159, Navigation Equipment Using the Global Navigation Satellite System (GNSS)**

Although the FRAC comments are resolved and the group in Plenary approved forwarding it to the PMC, this standard was not finalized in sufficient time to be presented at this PMC meeting. Expect to be presented at the March 2024 PMC meeting.

G. DO-352B - *Interoperability Requirements Standard for Baseline 2 ATS Data Communications, FANS 1/A Accommodation (FANS 1/A Baseline 2 Interop Standard)***, presented by SC-214, Standards for Air Traffic Data Communication Services - Out Of Cycle Approval Request**

- Claire Robinson, SC-214 Chair, presented.

This standard defines and allocates the set of minimum requirements for the operational, safety, and performance aspects for implementation of data communications services supporting ATS. Revision B work focused on maintaining consistency with DO-350B and DO-351B and the ICAO GOLD.

Although FRAC resolution is complete and the group approved forwarding the standard to the PMC, it was not completed in sufficient time to be presented at this PMC meeting. The group asked for an out-of-cycle approval due to the upcoming 2027 B2 mandate; these standards are needed by ground system developers as soon as possible.

PMC members agreed a two-week review for approval would be sufficient.

- The presentation is posted on AerOpus (RTCA Paper No. 300-23/PMC-2496).

H. DO-353B - *Interoperability Requirements Standard for Baseline 2 ATS Data Communications, ATN Baseline 1 Accommodation (ATN Baseline 1 - Baseline 2 Interop Standard)***, presented by SC-214, Standards for Air Traffic Data Communication Services - Out Of Cycle Approval Request**

- Claire Robinson, SC-214 Chair, presented.

The purpose of this standard is to define the set of requirements for the interoperability aspects of Baseline 2 data link systems. As with DO-352B, DO-353B work focused on maintaining

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consistency with DO-350B and DO-351B and the ICAO GOLD.

Although FRAC resolution is complete and the group approved forwarding the standard to the PMC, it was not completed in sufficient time to be presented at this PMC meeting. The group asked for an out of cycle approval due to the upcoming 2027 B2 mandate; these standards are needed by ground system developers as soon as possible.

PMC members agreed a two-week review for approval would be sufficient.

- The presentation is posted on AerOpus (RTCA Paper No. 300-23/PMC-2496).

I. **DO-402 – *MOPS for Wireless Avionics Intra-Communication (WAIC) within 4200-4400 MHz*, presented by SC-236, Standards for Wireless Avionics Intra-Communication within 4200-4400 MHz –Out Of Cycle Approval Request**

- Steve Rines and Uwe Schwark, SC-236 Co-Chairs, presented.

This standard is designed to provide certification guidance and offer a basis for TSO / ETSO authorization. The major aspects covered in this document are the crucial RF-requirements to establish conditions for safe coexistence of WAIC and own-ship Radio Altimeter systems. Additionally, it offers general requirements on Cyber Security for the design of certain kinds of WAIC equipment.

The standard has undergone FRAC/OC and all member comments have been resolved. There were 16 comments from members of the public with 6 comments marked as "non-concur". Comments were resolved at a September 2023 Plenary, and public commentors appeared to accept their comments were out-of-scope for a MOPS. Awaiting to receive official acknowledgement of the public commentors acceptance of "non-concurs" answered with "No Change."

Letters will be going out to the non-members concerning their "non-concur" comments. President McVenes said he had received several emails stating concerns about interference from WAIC that would be felt 100 km from aircraft and wondered if this was true. Co-Chair Rines said not if installed and shielded properly.

Senior Director Morrison indicated they had resolved the last non-member "non-concur" but need to send a letter for documentation. Following the EUROCAE process, if downgraded to "high" it can be rejected. Member Arbuckle asked if what was discussed here was sent to them. Senior Director Morrison said that this was done long distance during FRAC. The MOPS doesn't forbid shielding but it is not really the proper place to address.

Chair Hegarty commented that since some non-concurs remain to be fully addressed, this MOPS hasn't yet run through the whole RTCA process. Member Barber commented that there may be a misunderstanding and asked if there is any explanation in the MOPS to clarify system level installation. Co-Chair Rines answered yes, in Section 3. Member Barber suggested possibly including some installation related description in the front of the standard that could reduce the potential for misunderstanding.

Chair Hegarty said if we receive positive replies then can continue work. He queried about timeline needs. Co-Chair Rines replied that there are two ARINC documents scheduled for May release that reference this standard.

Member Hoekema commented that maybe additional material on installation should be addressed in the MASPS. Co-Chair Schwark replied that the MASPS has very specific scope and non-members had not reviewed the MASPS. No WAIC performance requirements should be in the MASPS. Potential interference in WAIC band limitations should not be in MOPS.

Member Hoekema indicated that part of the Ad Hoc task force may have a misconception of the intent of the MOPS. External interference environment and installation assumptions may be addressed in MASPS. Co-Chair Schwark replied that conversation had not been carried out but valid point.

Member Hoekema asked when responses from individuals that submitted non-concurs will be received – possibly by 30 December? Senior Director Morrison said RTCA would give them 30 days.

GAR DeCleene said the FAA plans to publish a TSO on this standard, but now on hold. Compatibility between WAIC, RADALT, and telecom industry needs to be worked. It's not ready.

Co-Chair Rines agreed, but said that two TSO's would be needed to handle Wi-Fi communication between systems, but agree on RF.

Chair Hegarty summarized that once we receive responses and resolution is agreed, then an out-of-cycle approval could be accomplished. Otherwise, no other action at this time.

- The presentation is posted on AerOpus (RTCA Paper Nos. 314-23/PMC-2503).

J. DO-403 – *System Performance and Interoperability Requirements for Non-Cooperative UAS Detection Systems***, presented by SC-238, Counter UAS – Possible Out Of Cycle Approval Request**

- Adam Robertson (SC-238 Chair) and Tricia Fantinato (SC-238 GAR) presented.

This standard is intended to summarize the different aspects of the Counter UAS (C-UAS) system and to have a better understanding of the C-UAS system components at the detection level. This standard identifies performance requirements parameters of the Counter UAS detection system as it has been defined in the ED-286 / DO-389 Operational Services and Environment Definition (OSED) for Counter UAS in Controlled Airspace.

- Approval was moved by Member Turner, seconded by Member Arbuckle. The PMC approved the standard. It will be published as DO-403. It will be published concurrently with EUROCAE ED-322.

AGENDA ITEM 4
Integration and Coordination Committee (ICC)

No report presented.

AGENDA ITEM 5
Action Item Review

A. **Assemble List of Possible Standards for Review**

- Rebecca Morrison, Senior Director, Standards and Technologies, presented.

Senior Director Morrison reported that the review process will refine as time progresses. Awaiting input from the ICC (agenda item 5B). The path forward will include following up with special committees as needed. PMC members agreed this is an ongoing activity and should be reported to this body as required but will not be tracked an action item.

President McVenes commented on the new Human Factors training course. DO-372 (from SC-233) was used as basis, but while developing the course realized the document needs to be updated, obviously with input from the FAA.

- The presentation is posted on AerOpus (RTCA Paper No. 324-23/PMC-2513).

B. **ICC Assist with Request of Review of Standards**

- Rebecca Morrison (Senior Director, Standards and Technologies) and Clay Barber (ICC Chair) presented.

This action is still in progress. Action remains open but will be tracked and reported in future meetings as part of ICC reports under agenda item 4.

C. **Ad Hoc on FRAC Comment Handling for Non-Members Comments**

- Brett Eastham, RTCA COO, presented.

Mr. Eastham reported on the Ad Hoc activity and summarized suggestions for handling non-member comments. The group met twice. They reviewed the Open Consultation/Final Review and Comment processes specifically related to WG-119/SC-236 and WG-96/SC-239. They also reviewed the current status of and recommendations for support of comment resolution and helping to find a path forward. Group agreed to handle the two situations separately, addressing SC-239/WG-119 first.

Preliminary recommendations include:
- Keep public commenting.
- Public commentors would follow the Dissent Process if a non-concur is not resolved.

- If a comment is not resolvable, engage the PMC and the TAC early to determine if an outside independent technical reviewer may help resolve the comments.

For SC-239/WG-119, EUROCAE Ad Hoc members will seek to discuss directly with public commentors to address if their comments may be resolved regarding the technical position.

Chair Hegarty thanked Mr. Eastham for the summary. He added that some comments may not be resolvable, and if this is clear early on we should follow the dissent process. Member Arbuckle expressed concern; if not careful, this could slow up process.

President McVenes stated a listening session has been scheduled with telecom folks early in the new year. Looking for open communication. Chair Hegarty said that communication should be professional, but when reaches a brick wall, moving forward is necessary even if it requires use of the dissent process. President McVenes added it's not like all comments were not accepted, just a few outstanding issues. Member Hoekema commented he was a little more optimistic on the prospects for achieving consensus, as for Europe they have the European Commission on their side, working with states together to work response for CTIA.

Member Roy indicated RTCA and EUROCAE members should have more say. Non-members should not have the same benefits. Possibly make clearer on website benefits and how to become member.

Member Hoekema felt this is a regulatory issue – and recommended using regulators to help resolve. Member Kauffman commented that would just be kicking the can down the road. Develop the standard and then FAA may not be able to use as it is considered "unsafe"?

Senior Director Morrison pointed out that in the backup slides there is a timeline that indicates no engagement until MOPS goes out for FRAC. The group would like to close DO-399, but realize the MOPS is the priority.

Chair Hegarty told PMC members that any additional comments on this topic should be forwarded to Mr. Eastham.

- The presentation is posted on AerOpus (RTCA Paper No. 320-23/PMC-2509).

D. **Provide suggested questions to Ad Hoc associated with agenda item 5C**

- Karan Hofmann, PMC Secretary, presented.

Questions were forwarded to PMC members for possible input to Ad Hoc. Action is closed.

E. **Ad Hoc for Draft Charter for Possible Technical Pilot Advisory Committee**

- Wes Googe, Technical Pilot, American Airlines, presented.

Mr. Googe provided a report on the draft charter bringing needed flight operational input to the work that many of the SCs are doing today in RTCA. Chair Hegarty asked about consensus on the draft. The comment came up that the charter seemed to be suggesting an individual vs. a group. Member Hennig commented that this was good discussion but noted the SC-186 update indicated two airlines were active in their work. He asked if this charter suggested a separate technical pilot group to be involved with many SC's. Overall, supports the idea but would still encourage SC-186 type of activity. Mr. Googe responded that yes SC-186 had technical pilots, but there was a common interest to support the effort. This is not always the case for all SC's work; for example, SC-227 is another group that could use technical support but does not have direct involvement.

Chair Hegarty asked if President McVenes was concerned with having an additional representative on the PMC. President McVenes agreed it is very important to have pilot input in standards and that operational input allowed to go beyond focusing only on engineering aspects for standards. RTCA has ALPA and A4A on the PMC and really doesn't want to add a layer to delay the current process. President McVenes continued that he was reluctant to support this approach; that possibly RTCA would be better served to ask ALPA and A4A for support. This is a necessary part of having influence on standards. He applauds the efforts in bringing this to the PMC's attention, as operational input is needed. But we need to leverage what we already have in place vs. adding layer/process.

Incoming President Huegel agreed with President McVenes. Possibly use A4A's Air Traffic Management Committee with a reach back capability. A4A Member Madden thanked the group for the feedback and supported President's McVenes and Huegel's position. Recognized Mr. Googe's efforts to support standards development. However, this would pull one group of SMEs and could potentially lead the PMC down the wrong road. Member Madden doesn't support as presented, but rather support Presidents' suggestion. If the charter went forward, it would need further review by organization members.

Chair Hegarty summarized with new President there might be other inputs. Thanks to Mr. Googe for presenting. Recommended further discussion by a smaller group. Change this action from a charter drafting to further follow on discussion/investigation for President Huegel, Member Madden, Member Hahn, and Mr. Googe.

Mr. Googe added that some folks on the Technical Pilots Group are not part of A4A or ALPA, but they are motivated. May need further or more detailed support from the SC Chairs.

- The draft charter is posted on AerOpus (RTCA Paper No. 316-23/PMC-2505).

F. **Provide copy of ICC Charter to Ad Hoc associated with agenda item 5E**

- Rebecca Morrison, Senior Director, Standards and Technologies, presented.

A copy of the ICC Charter was provided. Action is closed.

G. **Share Change Example Types with PMC Members**

- Karan Hofmann, PMC Secretary, presented.

The change format examples were provided to PMC members. Action is closed.

H. RTCA and EUROCAE Discuss Possible Change in Standard Format

- Rebecca Morrison, Senior Director, Standards and Technologies, presented.

This was covered as part of agenda item 6N which includes a summary of the annual RTCA/EUROCAE Coordination held at RTCA in November. Action is closed.

I. SC-242/WG-124 Consider Standard Name Change

- Ed Hahn, SC-242 Chair, presented.

This action is still under consideration by the SC/WG. Action remains open.

J. Include Clean Up Suggestions to SC-214 ToR Prior to Publication

- Karan Hofmann, PMC Secretary, presented.

The suggested changes were accomplished, and the ToR was published. Action is closed.

- The final version is available on the public website (https://www.rtca.org/sc-214/) (RTCA Paper No. 256-23/PMC-2483).

K. Provide DataCom White Papers for Distribution to PMC Members

- Karan Hofmann, PMC Secretary, presented.

The white papers were provided to PMC members. Action is closed.

L. Update of SC-235's Progress on DO-227B

- John Trela, SC-235 Chair, presented.

This action was covered as part of agenda item 6H. Action is closed.

M. Provide Link to NASA Digital Standards Presentation

- Karan Hofmann, PMC Secretary, presented.

The link to NASA Digital Standards Presentation was provided to PMC members. Action is closed.

N. **SC-231 provide Chair Report for December PMC Meeting**

- Rebecca Morrison, Senior Director, Standards and Technologies, presented.

Report was received.

Member Hennig asked about Ground Collision Avoidance System (GCAS) being incorporated into TAWS standard. SC-231 GAR Adler indicated that previous version of ToR tasked for a review of some NTSB Safety Recommendations A-17-035 and A-18-015, as well as recommendations from the GAJSC WG which were provided in a White Paper to the PMC (completed in June 2020). The White Paper deals with providing means to auto-inhibit systems and means to minimize nuisance alerts with respect to GCAS (from NASA) requiring review of outcomes and determination of path forward. Further development was needed on GCAS for general aviation.

There has been further development since then and SC-231 should now be in position to review and possibly revise TAWS MOPS or create a new GCAS MOPS.

GAR DeCleene asked about the Active Monitor Status of the SC. Would a recommendation to become fully active with a task come from the SC or the FAA to update TAWS from the NTSB recommendations? The FAA is interested in including this in the standard, but does industry want this?

Chair Hegarty said that ToR actions are outlined, and that the SC could bring it forward.

Senior Director Morrison mentioned that anyone can bring a letter to the RTCA President and ask for an out of cycle ToR if needed.

GAR DeCleene encouraged the SC to provide feedback.

Action is closed.

AGENDA ITEM 6
Discussion

A. **Out of Cycle Actions since last PMC Meeting – Presentation Summary**

- Karan Hofmann, PMC Secretary, presented.

As a reminder and for formal documentation, the following items were reviewed by electronic ballot or assessment action since the last PMC meeting:

- SC-222 Aeronautical Mobile Satellite (Route) Service (AMS(R)S) – DO-262F Change 2: *Minimum Operational Performance Standards for Avionics Support Next Generation Satellite Systems (NGSS)* – approved October 27, 2023

- SC-242 Spectrum Compatibility - Report #1: *Survey on Radio Frequency (RF) Performance of Standards for Aeronautical RF Systems* – approved November 17, 2023
- SC-214 Standards for Air Traffic Data Communication Services – DO-351B Vol I Errata: *Interoperability Requirements Standard for Baseline 2 ATS Data Communications (Baseline 2 Interop Standard)* – approved December 4, 2023

Thank you to PMC members for their attention and timely responses to these matters.

B. SC-239 – Low Range Radar Altimeter – Update

- Jean Luc Robin and Seth Frick, SC-239 Co-Chairs, presented.

SC-239 Leadership provided an update on group activity:

Awaiting Ad Hoc inputs on DO-399/ED-310 on handling non-member comments. The report from RTCA and EUROCAE Leadership to SC-239:

- Ad hoc group (6prs); tasked with an independent review and to recommend a process for handling the DO-399 "dissent" received and closing OC/FRAC; tasking also includes a broader process review and committee generic clarifications on the full FRAC process including the "dissent" process for public reviewers.
- RTCA/EUROCAE leadership will subsequently provide direction to SC-239 with respect to disposition of comments and further development of DO-399, as appropriate.
- 1st Ad Hoc group meeting occurred in November 2023

SC-239/WG-119 continues to focus 100% on the MOPS DO-155A/ED-30A.

- In-person meeting dedicated to SG4 (RA performances) in December is organized by Garmin in Kansas with the goal to complete all SG4 requirements ready for RAC and to start test procedures.
- In-person meeting dedicated to SG5 (RFI tolerance) ran the week of the 6 November 2023 hosted by AVSI at Texas A&M. A new ITM proposal has been made by an RA manufacturer, which is above the highest from DO-399 that is supportable by at least two RA manufacturers. Need another RA manufacturer agreement for validation.
- SG7 dedicated to RA Antenna (best rejection assessment) has started and is co-chaired by Thales and Free Flight. Good participation from RA Antenna Manufacturers. Aircraft manufacturers have been tasked to indicate their installation constraints.
- Next Plenary is planned for 8 February 2024 during which a RAC will be considered to be opened. Conditions to open the RAC have been decided within the committee leadership meeting. In a nutshell: all requirements need to be completed (not necessarily yet validated). Key parameters of the procedures agreed. At least 2 RA transceiver manufacturers agree to the ITM.
- Plenary in Spring planned in June 2024 with the goal to launch the FRAC.

On schedule for September 2024 presentation to PMC/TAC for publication approval. However, the group may request an out of cycle review for publication by the end of 2024.

Co-Chairs Robin and Frick commented that they had received additional radar altimeter manufacturers' inputs. Member Hoekema thanked the group for their update and cautioned on using wording "second best" – why not "best". Co-Chairs acknowledged advice, with added comment that this is best supported by manufacturers' inputs.

Member Turner asked about the schedule and how antenna matters fit into it all. Co-Chair Robin indicated that they were tasked to verify with current antenna. They will take the best and then verify improvement for the future. They want the best receiver possible, so overseeing one requirement may have a big impact. Need 2-3 manufacturers to commit to testing. This is a definite risk and makes it hard to keep to the schedule. They have created a new sub-group just to address antennas.

GAR DeCleene thanked the group for the update and asked a follow-up question concerning antenna performance requirements and if the effect of the footprint will be reviewed. Co-Chair Frick mentioned possibly a separate TSO for antenna. And that they could improve the out-of-band antenna design, but that would affect installation, etc. They are not trying to drive major antenna design.

GAR DeCleene indicated this was a moment to celebrate where SC-239/WG-115 are now and with antenna manufacturers involved. He mentioned the FAA helped with research funding. They hope to reduce risk, but the schedule is tight. They were also testing the effect of compatibility with modulation designs – trying to be good stewards of spectrum.

Chair Hegarty asked who was doing the research. Co-Chairs indicated it was AVSI.

Co-Chair Robin summarized that the next Plenary is 8 February to start RAC.

Senior Director Morrison thanked the group for their dedication.

- The presentation is posted on AerOpus (RTCA Paper No: 318-23/PMC-2507)

C. SC-159 – Navigation Equipment Using the Global Navigation Satellite System (GNSS) – Revised ToR

- Chris Hegarty, SC-159 Co-Chair, presented.

The group requested delivery date changes for three of their deliverables – DO-373A, DO-401A, and the BeiDou White Paper. Status of DO-292A was addressed under agenda item 3F. The FAA also announced a change of GAR from Barbara Clark (moving to leadership position within the FAA) to Hamza Abduselam.

A profuse thank you is extended to Barbara for all her support – especially to SC-159.

- Approval was moved by Member Turner, seconded by Member Arbuckle. The proposed revised ToR was approved (RTCA Paper No. 334-23/PMC-2526).

D. SC-186 – Automatic Dependent Surveillance-Broadcast (ADS-B) – Revised ToR

- Jessie Turner, SC-186 Chair, presented.

The group proposed DO-317C Change 1 to update test vectors to address data discrepancies and standard deficiencies, to add CDTI-Assisted Visual Separation (CAVS) applications requirements to align with TSO-C195c, and make editorial changes as identified in the SC-186 WG-4 White Paper "Summary of ADS-B In Discussion Group Activities" as published in 2023 (agenda item 3A).

- Approval was moved by Member Arbuckle, seconded by GAR DeCleene. The proposed revised ToR was approved (RTCA Paper No. 334-23/PMC-2526).

E. SC-206 – Aeronautical Information and Meteorological Data Link Services– Revised ToR

- Mark Libant (SC-206 Co-Chair) and Eldridge Frazier (SC-206 GAR) presented.

The group requested to change the delivery date for their MASPS (DO-364A/ED-XXX) to December 2024 and to add two new deliverables – update to DO-358B for September 2025 and an RTCA Report on recommendation(s) regarding possible standards to support Aircraft-Based Meteorological Observation Dependent Applications.

All activities are planned to be joint efforts with EUROCAE WG-76 and are being presented to the EUROCAE TAC in January.

- Approval was moved by Member Hahn, seconded by Member Kauffman. The proposed revised ToR was approved (RTCA Paper No. 337-23/PMC-2529).

F. SC-224 – Standards for Airport Security Access Control Systems – Revised ToR

- Dr. Christer Wilkinson (SC-224 Co-Chair) and Dr. Jonathan Branker (SC-224 Task Lead) presented.

The group is on track for completion of DO-230M with presentation expected at March 2024 PMC meeting. Looking ahead to future updates to this guidance standard, they requested the PMC authorize them to include the next two versions of the standard in their deliverables ToR table.

Garmin had provided an administrative editing input.

- Approval with the Garmin input was moved by GAR DeCleene, seconded by Member Hahn. The proposed revised ToR was approved (RTCA Paper No. 333-23/PMC-2525).

G. SC-228 - Minimum Performance Standards for Uncrewed Aircraft Systems – Revised

ToR

- James Williams and Brandon Suarez, SC-228 Co-Chairs, presented.

The group requested to add an RTCA Report to Users of DO-377B to address concerns about the definition of availability and continuity raised in the DO-377B FRAC and describe methods that can be used by UAS OEM, UAS operators and C2CSPs when deriving C2 Link System Quality of Service Requirements from DO-377B to their deliverables. Additionally, the group requested a revision of DO-366A to update DAA requirements for ACAS Xr and Xu, as well as additional clarity improvements. They also suggested some editorial cleanup of the ToR.

There was some discussion about EUROCAE WG-105 – although only standard on use of cellular commercial networks for C2 Links, there is interest in working possibly two other standards. Need to review and consider the scope of these other standards. Also, possible down the road, DO-366 could eventually be updated jointly.

- The work start was approved but the actual ToR wording needs refinement on some concerns into accountability and referencing FRAC or non-FRAC of proposed report. (Action)

H. SC-235 – Non-Rechargeable Lithium Batteries – Revised ToR

- John Trela (SC-235 Chair) and Jeff Densmore (SC-235 Secretary) presented.

Due to a lengthy FRAC resolution for DO-227B and the extensive changes to the standard from this resolution process, the group reached consensus to accomplish a second FRAC. Thus, the SC requested a delay in delivery of this revision.

The group mentioned they want to include a change log and are looking for examples wanting to keep it simple, but useful. RTCA has provided a couple of examples from other standards, but none quite seem to fit the need. Member Barber recommended looking at the FAA Order change format.

Member Hoekema inquired if there was going to be a Plenary in February. Chair Trela indicated specific date of the Plenary would be set once all comments are received from the current open FRAC.

Member Hoekema mentioned for EASA, eventually compliance will require DO-227B while DO-227A will not be accepted for clean sheet requiring more testing. What about the value added? Chair Trela replied that would be a high level of acceptance related to a special condition for means of compliance, so would this require more testing? Member Hoekema indicated yes that the test requirements were ambiguous and would need to be increased for these batteries installed with life cycle expected of 5 years. Thus, want to start with a clean sheet. Chair Trela indicated the SC agrees more testing needed but DO-227A is still valid. The original 1995 DO-227 didn't address all the issues. Wondered if there would be a transition period as this standard is designed as prescriptive document. Mr. Bouza (FAA) recommended further dialog with EASA counter parts

would be needed. The FAA allows DO-227A for current compliance items. Chair Trela said the SC-235 GAR agreed the change log will be useful to point out the differences between A and B versions. Secretary Densmore commented that if the only standard acceptable was DO-227B, there would be non-concurs from the new FRAC cycle. This issue is driven more by discussion than concern with deficiencies with DO-227A. If only DO-227B is acceptable, this would be a huge load on manufacturers and installers.

Chair Hegarty summarized that a discussion between the FAA and EASA as Mr. Bouza suggested would be helpful. Secretary Densmore commented that if this coordination was not accomplished before FRAC resolution is complete, it would draw publication out further.

- Approval was moved by Member Turner, seconded by Member Hahn. The proposed revised ToR was approved (RTCA Paper No. 332-23/PMC-2519).

I. Advanced Air Mobility Activity – Update

- Terry McVenes, RTCA President, presented.

President McVenes reported there had been no additional meetings since the last PMC meeting. There were writing assignments organized around the DoT RFI in May. This draft is still in progress. Inputs will be combined and reviewed internally with AAM Workshop participants.

Another white paper was suggested by AAM Workshop participants. An outline and initial draft is being worked by small group and will be reviewed internally with AAM Workshop participants.

Member Kauffman asked about way forward. President McVenes indicated there was no specific roadmap currently. Need to determine if an existing standard can be modified to accommodate AAM. Or if new standards are needed, do not want to stifle creativity.

Member Kauffman asked about the GAMA discussion and the CNS Working Group White Paper. President McVenes indicated RTCA was not working directly on that with GAMA.

- The presentation is posted on AerOpus (RTCA Paper No. 329-23/PMC-2516).

J. Digital Flight Operations Activity – Update

- Brandon Suarez, SC-228 Co-Chair, presented.

Mr. Suarez reported the work of the DFO group is basically done – the drafting and review process is complete. They hope to have the document "published" by the end of the year. There was a question on what to call the document – White Paper or Industry Paper or Report. It was agreed that Mr. Suarez would get together with Incoming President Huegel to determine title and to coordinate means for release before the end of the year. This is an RTCA Secretariate matter and not a PMC action. President Huegel commented that the Advisory Board Program Advisory Committee is discussing alternative titles for papers, including Industry Consensus Papers.

K. FAA Actions Taken on Previously Published Standards – Update

- Robert Bouza, FAA Representative, presented.

The FAA report was reviewed and discussed. The summary of items presented include:

FAA Closed Actions since previous PMC:
- DO-385A – TSO-C219a signed 1 December 2023; AC still being worked

RTCA Published Documents Pending PMC Approval:
- Deliverable Use of Standard in development: 2 AC's and 2 TSO's
- DO-292A – No FAA Guidance to be published
- DO-381A, DO-377B, DO-398A – Applicable to project specific policy
- DO-403 – TBD

RTCA In Work Documents Projections:
- Revised ACs Expected: 17
- Revised TSOs Expected: 10
- Still TBD: 3
- Expected N/A: 4

RTCA Published Documents Pending FAA Action:
- Revised ACs Expected: 19
- Revised TSOs Expected: 3
- Still TBD: 4
- Expected N/A: 2

Notes:
- DO-402 was entered in error on published list so not counted in RTCA Published Document Pending FAA Action.
- AC's and TSO related to batteries were hoping to be updated by end of 2024 but will depend on when the DO-227B is published.

- The full report is posted on AerOpus (RTCA Paper No. 325-23/PMC-2514).

L. EASA Action Status Summary – Report

- Hette Hoekema, EASA PMC Representative, presented.

Member Hoekema presented an overview of upcoming changes per Executive Direction Decision on CS-25 (ditching survivability), CS-ETSO Amendment 18 (new ETSO-C219a Airborne Collision Avoidance System (ACAS) Xa/Xo), CS-ETSO Amendment 19 (several ESTO's covered), and CS-ACNS (Certification specification for the installation of ACAS).

Member Turner asked about the ACAS Amendment – were there a significant number of comments? Considering the number of comments from the workshop – they might be useful.

Overall status? Member Hoekema requested to please send an email, as the team thinks they can handle it.

- The presentation is posted on AerOpus (RTCA Paper No. 331-23/PMC-2518).

M. Special Committees - Chair's Reports – Review

- Rebecca Morrison, Senior Director, Standards and Technologies, presented.

Reports were received from SC-135, SC-213, SC-216, SC-217, SC-222, SC-224, SC-227, SC-230, SC-231, SC-235, SC-238, SC-240, and SC-242.

Other Reports and special attention items:

SC-135 – Held second Plenary this week so two reports submitted.

SC-159 – Presented discussion on revised standard and a ToR revision (agenda items 3F and 6C).

SC-147 – Presented status update (agenda item 7D).

SC-186 – Presented White Paper and a ToR revision (agenda items 3A and 6D).

SC-206 – Presented a ToR revision (agenda item 6E).

SC-214 – Presented out of cycle request on two revised standards and a ToR revision (agenda items 3G, 3H, and 7E).

SC-216 – Held two Plenaries since last PMC meeting, so two reports – expect revised ToR mid-2024 with possibly two new deliverables.

SC-222 – Have a revision to their ToR from a Plenary held day before this meeting – will request an out of cycle review.

SC-224 – Presented a ToR revision (agenda item 6F).

SC-228 – Presented three revised standards and a ToR revision (agenda items 3B, 3C, 3D, and 6G).

SC-235 – Presented response to action item and a ToR revision (agenda items 5L and 6H).

SC-236 – Presented out of cycle request on new standard (agenda item 3I).

SC-237 – Presented a new standard (agenda item 3E).

SC-238 – Presented new standard (agenda item 3J).

SC-239 – Presented status update (agenda item 6B).

- Reports are posted on AerOpus (RTCA Paper No. 315-23/PMC-2504).

N. International Coordination – Status Update

- Terry McVenes (RTCA President) and Rebecca Morrison (Senior Director, Standards and Technologies) presented.

RTCA hosted the annual RTCA and EUROCAE Coordination Meeting November 7-8, 2023. Main topics discussed were:

Potential New Activity Topics
- New GBAS Standard
- Runway Weather Information Systems
- Take off performance monitoring

Policy Updates
- Committees are not allowed to record meetings
- Committees are not allowed to use AI applications to produce their work
    o This wording is being coordinated for a future policy slide update
    o Hope to finalize in January 2024

Additional Topics
- Met with the Public Commenting Ad Hoc Members to kick off activity
- Met with the FAA and EASA about how RTCA and EUROCAE can best support them

Follow on Activities from Future Connectivity Summit
- EUROCAE convened a workshop for all EUROCAE datalink committees to discuss the status of standards, across all organizations, related to datalink
- EUROCAE coordinated with RTCA to invite RTCA Chairs for groups that were joint
- First meeting was on November 22, 2023
- Follow on workshop planned in 2024 which will also include the FAA GAR's

EUROCAE published two non-joint documents and four joint documents since the last PMC meeting.

Upcoming EUROCAE Events:
- TAC 97 16-17 January 2024 at EUROCAE
- Symposium 24 & 25 April 2024 in Lucerne
- TAC 98 26 April 2024 in Lucerne

Member Turner asked if the change format from the September PMC meeting that everyone thought was a good idea was discussed (agenda item 5H). Senior Director Morrison reported that we would go with what the SC provides. But note, if integrated then the entire document is open for FRAC.

Member Turner pointed out that the ToR scope is approved by the PMC, so the SC can respond "out of scope". Senior Director Morrison agreed, but pointed out that if a non-concur is received for joint documents, EUROCAE must resolve and cannot use "out of scope". It is best to put in the ToR the way you want it published. Member Turner indicated SC-186's change (discussed under agenda item 6D) wants to do an incorporated change. All agreed this needed to be specified in the ToR and in this case also must be coordinated with EUROCAE and WG-81. (Action)

- The update is posted on AerOpus (RTCA Paper No. 326-23/PMC-2515).

AGENDA ITEM 7
OTHER BUSINESS

A. AI/ML Workshop - Update

- Terry McVenes, RTCA President, presented.

RTCA hosted a hybrid Artificial Intelligence/Machine Learning Workshop with about 200 participants on November 28, 2023. It was conducted based on conservations with RTCA industry members and the FAA. The focus was to discuss what needs to be done vs. what is already being done.

Primary outcomes included:
- Do not duplicate efforts with SAE AG-34/EUROCAE WG-114.
- Don't establish standards too early.
- Need more foundational work.
- Narrow boundaries scope.
- Separate process for performance.

There was a Call-to-Action Summary:
- Develop one or more standards providing examples on capability specification, verification procedures and safety assurance for AI/ML based systems.
- Develop measures and guidelines addressing trustworthiness of AI/ML in flight critical applications.
- Perform a survey of its existing standards to evaluate the impact of AI/ML.
- Assess existing efforts supporting incorporation of AI/ML in aviation systems design and development assurance to identify where it should coordinate with other groups and where it can make unique/complementary contributions.
- Operationalize the use of future AI/ML Documents.

Nest Steps:

- Development of RTCA Report
- Survey of existing standards
- Evaluate for future work

Member Kauffman commented this is still in infancy and that US and Europe are taking different approaches, so could prove difficult.

Member Hoekema commented that you don't want to develop standard too early. This industry will survive on standards and collaboration. AI is moving too fast – maybe too late!

- The presentation is posted on AerOpus (RTCA Paper No. 330-23/PMC-2517).

B. RTCA Document/Standard Types - Update

- Rebecca Morrison, Senior Director, Standards and Technologies, presented.

Senior Director Morrison provided an overview of the types of RTCA documents/standards, their process related to Final Review and Comment and availability in the public store.

Chair Hegarty recommended the ToR template include wording to designate if a Report will be FRAC-ed or not (action)

- The presentation is posted in AerOpus (RTCA Paper No. 321-23/PMC-2510).

C. Publications from September 2023 PMC Meeting - Update

- Rebecca Morrison, Senior Director, Standards and Technologies, presented.

There were some publication issues with four of the standards approved at the September PMC meeting. These included:

- DO-401 – Changes requested from Document Editor (integrated errata forthcoming for approval because errata cannot be done as a separate sheet)
- DO-350B – Changes requested from EUROCAE after formatting the document for EUROCAE publication (since never officially posted in store, no errata issued; DO-230B technically equivalent with ED-228B with Corrigendum 1)
- DO-351B – Changes requested from EUROCAE after formatting the document for EUROCAE publication (OOC Errata Approval – agenda item 6A)
- DO-404 – Directly references DO-350B and DO-351B (Documents pulled from store and reposted when other documents were approved; Errata will be issued changing references format)

Member Arbuckle suggested for all joint documents be reviewed by the committee prior to submission for approval. Although this adds time, may cause less trouble in the long run. Chair Hegarty suggested merging the formats. Senior Director Morrison said this has been done overall as much as possible, but the font and paper size are hard to overcome.

Chair Hegarty thanked for the update and commented it was a good thing for PMC members to know.

- The presentation is posted in AerOpus (RTCA Paper No. 323-23/PMC-2512).

D. SC-147 – Traffic Alert & Collision Avoidance System (TCAS) – Status Update

- Stuart Searight and Ruy Brandao, SC-147 Co-Chairs, presented.

The group requested to make the Julia Code (an actual instance of Algorithm Design Description (ADD)) available through RTCA vs. the FAA Program Management Office (PMO). This code is used by the FAA PMO for part of their implementation of the ACAS X logic. This is not a complete ACAS X system implementation, but the core logic. Implementors prefer to have Julia Source Code to either "jump start" or help to verify their instance of the ACAS X logic.

SC-147, in joint Plenary with WG-75, approved inclusion of the Julia Code as part of the supplemental material for all ACAS X MOPS.

Member Kauffman asked if RTCA standards are considered governed by U.S. export laws and expressed that giving the Julia code appears to be providing more of "how" to do something vs. "what" to do to meet requirements. Concern was expressed about a scenario whereby an embargoed country attempts to download the code if it is provided as part of the supplemental. Is this something the Department of Commerce should be aware of? Co-Chair Searight indicated they were not speaking from a legal perspective, rather TCAS and ACAS X are pretty prescriptive, and notably important for safety. This code is very ADD-like and much more is needed for the whole product to be implemented. Co-Chair Brandao commented that Julia Code is almost a copy of Vol II – this would just make a machine-readable version available.

Member Kauffman commented that this may be procedural process, but maybe in the past as part of when RTCA was in FAC role since US Government agencies can approve the public release of export controlled technical data.

Chair Hegarty commented that maybe we need legal advice for making things like this publicly available. Co-Chair Brandao reiterated that this is almost Vol II verbatim. And Co-Chair Searight added this is just the machine readable for a "jump start".

Chair Hegarty asked about the EUROCAE side. EUROCAE representative Vallee indicated he could not answer the question. Co-Chair Brandao asked if this was possibly part of MOU that it be hosted by RTCA?

GAR DeCleene noted a potential issue if there is a discrepancy between the ADD and the Julia Code and stated from tactical perspective, standard takes precedence. If a discrepancy is found, the SC would have to address. From a strategic perspective, model-based engineering, AI, etc., anything machine readable may be totally different in a year.

President Huegel said this was a big action. Chair Hegarty indicated this is not an action for the PMC, as it is not part of the ToR. President Huegel agreed and noted RTCA will take the action to explore the concerns raised by Member Kauffman.

Senior Director Morrison described the delivery mechanism for the Julia Code. This would not be available in the store, rather an individual would have to reach out to an RTCA Program Director with a request. This is connected to published MOPS, so this matter is not holding up SC work. We would need a mechanism for control of release. Would need to take embargo only restrictions into account.

Member Kauffman said there was a list of country codes that you cannot release to and Senior Director Morrison said our standards are not export coded. Member Kauffman offered that maybe they should be export coded to mitigate the risk of sharing with embargoed countries. All agreed action for RTCA and EUROCAE for follow up investigation. (Action)

Additionally, SC-147 presented schedule risk update referencing their two MOPS scheduled for completion in September 2025. However, recent budget cuts to FAA Program Office are forcing delays on completion of next ACAS Xr logic version and completion of initial draft of both MOPS. The PMC can expect a revised ToR request as soon as full impact is understood and accounted for.

- The presentation is posted on AerOpus (RTCA Paper No. 308-23/PMC-2501).

E. SC-214 – Standards for Air Traffic Data Communication Services – Revised ToR

- Claire Robinson, SC-214 Chair, presented.

The group requested to add a change to DO-280B per request of EUROCONTROL. They are also changing Secretary from Todd Kilbourne (Mosaic) to Rochelle Perea (The Boeing Company). They also suggested some administrative clean-up.

- Approval was moved by Member Turner, seconded by Member Hahn. The proposed revised ToR was approved (RTCA Paper No. 335-23/PMC-2527).

AGENDA ITEM 8
Schedule for Committee Deliverables and Next Meeting Date

Standards expected for the March 14, 2024, meeting:

- SC-224, Standards for Airport Security Access Control Systems
    - DO-230M – *Standards for Airport Security Access Control Systems*

- SC-159, Navigation Equipment Using the Global Navigation Satellite System (GNSS)
    - DO-292A – *Assessment of Radio Frequency Interference Relevant to the GNSS L5/E5A Frequency Band*

- SC-214, Standards for Air Traffic Data Communication Services
    - DO-352B - *Interoperability Requirements Standard for Baseline 2 ATS Data Communications, FANS 1/A Accommodation (FANS 1/A Baseline 2 Interop Standard)*, Out of Cycle Approval Request

- DO-353B - *Interoperability Requirements Standard for Baseline 2 ATS Data Communications, ATN Baseline 1 Accommodation (ATN Baseline 1 - Baseline 2 Interop Standard),* Out of Cycle Approval Request

- SC-236, Standards for Wireless Avionics Intra-Communication within 4200-4400 MHz
  - DO-402 – *MOPS for Wireless Avionics Intra-Communication within 4200-4400 MHz,* Out of Cycle Approval Request

The dates for the next four PMC meetings were discussed: Thursday, March 14, 2024; Thursday, June 20, 2024 (possible change due to US holiday day prior); Thursday, September 26, 2024; and December date to be polled.

POST MEETING NOTE: June PMC meeting date was changed to June 27, 2024, and the December PMC meeting date was designated as December 12, 2024.

AGENDA ITEM 9
New Action Item Summary

See PMC Action Item Table.

Moved by President McVenes and seconded by Member Kauffman, the meeting adjourned at 3:10 p.m.

/Signed/
Karan Hofmann, Secretary
RTCA Program Management Committee

CERTIFIED to be a true and accurate report of the meeting.

/Signed/
Christopher Hegarty, Chair
RTCA Program Management Committee

Program Management Committee – December 14, 2023
ATTENDANCE LIST

PMC MEMBERS:

Christopher	Hegarty	The MITRE Corporation Chair (Partial Proxy for Nancy Mendonca, Jeff Troy and Heidi Williams)
Carleen	Adams	Federal Aviation Administration
Doug	Arbuckle	Federal Aviation Administration
Clay	Barber	Garmin, Ltd.
Bruce	DeCleene	Federal Aviation Administration Government Authorized Representative
Edward	Hahn	Air Line Pilots Association
Jens	Hennig	General Aviation Manufacturers Association
Hette	Hoekema	European Union Aviation Safety Agency
Karan	Hofmann	RTCA, Inc. Secretary
Carol	Huegel	RTCA, Inc.
Donald	Kauffman	Honeywell International, Inc.
Justin	Madden	Airlines For America
Jim	McClay	Aircraft Owners and Pilots Association
Mike	McDowell	Collins Aerospace
Terry	McVenes	RTCA, Inc.
Andrew	Roy	Aviation Spectrum Resources, Inc.
Greg	Schwab	Federal Aviation Administration
Jessie	Turner	The Boeing Company

OTHER ATTENDEES:

Rich	Adler	Federal Aviation Administration
Robert	Bouza	Federal Aviation Administration
Ruy	Brandao	Honeywell International, Inc.
Jonathan	Branker	Federal Aviation Administration
Mike	Deer	Bell Helicopters
Jeff	Densmore	Radiant Power
Tricia	Fantinato	Federal Aviation Administration
Eldridge	Frazier	Federal Aviation Administration
Seth	Frick	Honeywell
Wes	Googe	American Airlines
Marv	Hammond	Tech Providers
Yasuo	Ishihara	Honeywell International, Inc.
Bob	Lee	GXA Consulting
Mark	Libant	NAVCANADA

Program Management Committee – December 14, 2023		
ATTENDANCE LIST		
Rebecca	Morrison	RTCA, Inc.
Thomas	Mustach	Federal Aviation Administration
Norm	Perira	Federal Aviation Administration
Dave	Redman	AVSI
Steve	Rines	Safron
Adam	Robertson	Fortemtech
Jean Luc	Robin	Airbus
Claire	Robinson	Universal
Uwe	Schwark	Airbus
Stuart	Searight	Federal Aviation Administration
Brandon	Suarez	Reliable Robtics
Brandi	Teel	RTCA, Inc.
John	Trela	The Boeing Company
Steve	Van Trees	Federal Aviation Administration
Alain	Vallee	EUROCAE
James	Venslauskas	RTCA, Inc.
Don	Walker	Airbus
Lesley	Weitz	The MITRE Corporation
Matt	Wiebold	Collins Aerospace

	PMC ACTION ITEM TABLE			
TRACKING NUMBER (Meeting Date and agenda item from which original action resulted)	**ACTION**	**ACTION ASSIGNED TO**	**DUE DATE**	**STATUS**
06/22/2023 Agenda Item 4A	06/22/2023 – Assemble list of standards possible for review 09/21/2023 – Standards for 2018 reviewed; continue backward review for catch up 12/14/2023 – Awaiting input from ICC for path forward and designated ongoing project – moved to report as required status vs. track as action item	RTCA Staff	Dec 2023	Changed to Report vs. Action Item
06/22/2023 Agenda Item 6G	06/22/2023 – Ad Hoc to address how to handle FRAC non-concur or out of scope comments from non-members 12/14/2023 – Report provided, but final recommendations and actions still to be considered / finalized	RTCA and EUROCAE	Mar 2024	Open
06/22/2023 Agenda Item 7A	06/22/2023 – Ad Hoc to draft Charter for a possible Technical Pilot Advisory Committee to serve all active SCs 09/21/2023 – Update provided; work on Charter continues 12/14/2023 – Change from Charter action to further investigation on possible operational support to RTCA's standards development	Carol Huegel, Wes Googe, Ed Hahn, Justin Madden	Mar 2024	Open
09/21/2023 Agenda Item 5B	09/21/2023 – Share Change Example Types with PMC members 12/14/2023 – Action Accomplished	Karan Hofmann	Oct 2023	Closed
09/21/2023 Agenda Item 5B	09/21/2023 – RTCA and EUROCAE discuss possible change in standard change format 12/14/2023 – Will be coordinated by SC/WG and specified in respective ToRs	RTCA and EUROCAE	Dec 2023	Closed
09/21/2023 Agenda Item 5E	09/21/2023 – ICC assist with request to 216, 230, and 229 to review specified standards for possible updates 12/14/2023 – Still working, but changed to follow under ICC agenda item vs. action item	ICC and RTCA Secretariat	Dec 2023	Changed to ICC Item
09/21/2023 Agenda Item 5G	09/21/2023 – provide questions sent out related to Ad Hoc on Non-Member Comment Responses 12/14/2023 – Action Accomplished	Rebecca Morrison	Dec 2023	Closed

09/21/2023 Agenda Item 5H	09/21/2023 – Provide copy of ICC Charter to Mr. Googe as example for Ops Ad Hoc action 12/14/2023 – Action Accomplished	Rebecca Morrison	Oct 2023	Closed
09/21/2023 Agenda Item 6C	09/21/2023 – SC-242/WG-124 consider name change to the Spectrum Guidance Standard 12/14/2023 – Still working	SC-242 / WG-124	Mar 2024	Open
09/21/2023 Agenda Item 6D	09/21/2023 – Include clean up suggestions to SC-214 ToR prior to publication 12/14/2023 – Action Accomplished	Claire Robinson, Brandi Teel, and Karan Hofmann	Oct 2023	Closed
09/21/2023 Agenda Item 6D	09/21/2023 – Provide DataCom White Papers for distribution to PMC Members 12/14/2023 – Action Accomplished	Jens Hennig, Hette Hoekema	Dec 2023	Closed
09/21/2023 Agenda Item 6J	09/21/2023 – Update on status of SC-235's progress on DO-227B 12/14/2023 -Action Accomplished	SC-235	Dec 2023	Closed
09/21/2023 Agenda Item 7A	09/21/2023 – Provide link for NASA presentation on Digital Standards 12/14/2023 -Action Accomplished	Nancy Mendonca	Dec 2023	Closed
09/21/2023 Agenda Item 7E	09/21/2023 – Provide Chair Report for next PMC meeting to provide update on potential DO-367A 12/14/2023 – Action Accomplished	SC-231	Dec 2023	Closed
12/14/2023 Agenda Item 6G	12/14/2023 – Reword revised ToR proposal and indicate Report action with respect to FRAC (or just RAC)	SC-228 Leads, Don Kauffman	Mar 2024	Open
12/14/2023 Agenda Item 6N	12/14/2023 – Coordinate with EUROCAE and change ToR appropriately to specific change format to be used for deliverable	SC-186	Mar 2024	Open
12/14/2023 Agenda Item 7B	12/14/2023 – Update ToR Template to include Handling of Report with respect to FRAC	RTCA	Mar 2024	Open
12/14/2023 Agenda Item 7D	12/14/2023 – Investigate possible Export Control restrictions with respect to RTCA and EUROCAE standards	RTCA and EUROCAE	Mar 2024	Open