RTCA PROGRAM MANAGEMENT COMMITTEE
MEETING SUMMARY
December 15, 2022

The RTCA Program Management Committee (PMC) convened in a hybrid format at 8:30 a.m. on December 15, 2022, 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.

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

C. Chair Hegarty welcomed new PMC members Justin Madden from Airlines for America (A4A) and Carleen Adams from Federal Aviation Administration (Office of NextGen).

D. Chair Hegarty recognized a few retiring Special Committee (SC) Chairs – Mike Cramer (SC-227 from The MITRE Corporation), Dawn Gidner (SC-230 from Honeywell International, Inc.) and Patrick Krohn (SC-213 from Universal Avionics Systems Corp). All PMC members extend their thanks and appreciation for the years devoted to the aviation community. Rumor has it that Rocky Stone (SC-206 and SC-186) is retiring from United Airlines but is looking at means to continue support so final adieu was held.

AGENDA ITEM 2
Review / Approve

A. With a motion to approve from Member Turner and seconded by Member Barber, the summary of the September 15, 2022 meeting was approved with editorial comments received from Garmin. (RTCA Paper No. 214-22/PMC-2312)

B. The following administrative SC Terms of Reference (TOR) revisions were presented. Approval was moved by GAR DeCleene, seconded by Member Arbuckle. All were approved.

- SC-230 – Airborne Weather Detection Systems – Removing one Co-Chair (Dawn Gidner – Honeywell) due to retirement. (RTCA Paper No. 337-22/PMC-2376)

- SC-231 – Terrain Awareness Warning System (TAWS) – Changing GAR from Charisse Green (FAA) to Rich Adler (FAA) due to Charisse moving to new position within FAA. (RTCA Paper No. 338-22/PMC-2377)

- SC-239 – Low Range Radar Altimeter – Changing GAR from Charisse Green (FAA) to Barbara Clark (FAA) due to Charisse moving to new position within FAA. (RTCA Paper No. 339-22/PMC-2378)

- SC-229 – 406 MHz Emergency Locator Transmitters (ELTs) – Changing GAR from Charisse Green (FAA) to Trent Prange (FAA) due to Charisse moving to new position within FAA. (RTCA Paper No. 340-22/PMC-2379)

- SC-237 – Helicopter Terrain Awareness Warning System – Changing GAR from Charisse Green (FAA) to Rich Adler (FAA) due to Charisse moving to new position within FAA. (RTCA Paper No. 341-22/PMC-2380)

AGENDA ITEM 3
Publication Consideration/Approval

A. DO-396 Volumes I and II – *MOPS for ACAS sXu Functionality*, presented by SC-147, Traffic Alert & Collision Avoidance System (TCAS)

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

This document sets forth minimum operational performance standards for the Airborne Collision Avoidance System sXu (ACAS sXu) equipment, designed for platforms with a wide range of surveillance technologies and performance characteristics typical of smaller Unmanned Aircraft Systems (sUAS).

Incorporated within these standards are system characteristics that should be of value to users, designers, manufacturers, and installers. These characteristics accommodate the requirements of various users.

The supplement (Volume II) is an Algorithm Design Description (ADD) document, which includes prescriptive and suggested detect and avoid algorithms for ACAS sXu. The algorithms are presented in the Julia programming language with informational commentary text.

- Approval was moved by Member McDowell, seconded by Member Hahn. The PMC approved the document. It will be published as DO-396 Vol I and II.

B. White Paper – *Summary of Activities and Potential Changes to DO-317C and DO-381A Change 1,* **presented by SC-186, Automatic Dependent Surveillance - Broadcast (ADS-B)**

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

In August 2021, RTCA Special Committee (SC)-186 and EUROCAE Working Group (WG)-51 agreed to commence monthly meetings for ADS-B In topics. The ADS-B In Discussion Group provides a forum for FAA, EUROCONTROL, and industry discussion on ADS-B In related research and ongoing activities. Additionally, the group was tasked to identify any potential changes to avionics standards arising from the ongoing activities and to support successful implementation of the existing standards.

This white paper documents recommended updates to the Aircraft Surveillance Applications (ASA) Minimum Operational Performance Standards (MOPS), DO-317C/ED-194B, ADS-B In Discussion Group meeting topics, and results from a survey designed to gather recent industry perspectives on the importance of ADS-B In applications. Consistent with past surveys, industry participants are interested in nearer-term ADS-B In applications requiring fewer changes to Air Traffic Control (ATC) automation systems and requiring simpler clearances. Industry remains hesitant to pursue equipping with more complex ADS-B In applications until the FAA commits to the necessary ATC automation system changes.

Note: The White Paper title is suggested to be "Summary of ADS-B In Discussion Group Activities" vs. the title designated in the TOR.

There was a suggestion to present this white paper's recommendations to the NextGen Advisory Committee. RTCA will assist SC-186 Leadership on this task (action).

- Approval with title change was moved by Member Hennig, seconded by Member Arbuckle. The PMC approved the document. It will be available to RTCA members only through AerOpus due to sensitive information included in the paper (RTCA Paper No. 301-22/PMC-2349).

C. DO-230L – *Standards for Airport Security Control Systems,* **presented by SC-224 – Standards for Airport Security Access Control Systems**

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

The document provides guidance on acquiring and designing Airport Security Access Control Systems, as well as the integration, testing, system performance evaluation, and operational requirements related to such access control systems. This updated document incorporates the latest technological advances with substantive changes in the biometrics, credentialing, physical access control system, perimeter intrusion detection, security operations center, and communications sections with minor changes throughout other sections of the document such as facilitation and cybersecurity. Advances in Biometrics technology, Artificial Intelligence (AI), neural networks,

and facial recognition have been included in the biometrics section including international plans and references.

There was some discussion on use of uncrewed vs. unmanned (to align with SC-228 and the Advanced Aviation Advisory Committee (AAAC) guidance) as well as ensuring there is communication between SC-224 and SC-216. Dr. Branker indicated he was an active member of SC-216.

- Approval was moved by Member Williams, seconded by Member Hahn. The PMC approved the document. It will be published as DO-230L.

D. White Paper – *Vehicle to Vehicle Communications*, presented by SC-228, Minimum Performance Standards for Unmanned Aircraft Systems

- James Williams and Brandon Suarez, SC-228 Co-Chairs, with Randy Jacobson and Bryan Barmore (Task Leads), presented.

The paper made recommendations on next steps for RTCA in addressing the needs of the operator community for vehicle-to-vehicle data exchange including surveillance information, trajectory intent, and other information beneficial for air traffic operations.

Proposed recommendations included:
- Determine appropriate Special Committee to lead this work
  - Determine a more appropriate name for link
- Charge that SC with:
  - Creating a report on potential spectrum options and key identifying characteristics
  - Develop MASPS, OSED, and any other documents necessary for a MOPS
    - Captures the currently identified application that would use the V2V link
    - Describes the airspace environment

Discussion followed on next actions. PMC Members agreed the paper should be made available to all and request feedback, encourage sharing and continued conversation. Coincidentally and very timely, RTCA is hosting an AAM Workshop in January (agenda item 7A) where these recommendations could also be part of the discussion.

It was pointed out that there were some inconsistencies on figures and call outs – recommend fix before posting (action).

- Approval of the document and posting for follow on was moved by Member Hennig, seconded by Member Roy. The PMC approved the document. It will be posted on the RTCA SC-228 Public site (RTCA Paper No. 302-22/PC-2350).

AGENDA ITEM 4
Integration and Coordination Committee (ICC)

No report presented.

AGENDA ITEM 5
Action Item Review

A. Add ICAO Representative to PMC Invite

- Terry McVenes, RTCA President, presented.

President McVenes indicated RTCA is still awaiting a point of contact from ICAO. Member Roy indicated he knew who was supposed to be named as our contact but there have been manpower issues. Both recommended this item not be tracked as an action since President McVenes will be spending more time at ICAO and should be able to handle more directly. Action OBE.

B. Presentation to ICAO Panel on RTCA activity (to include SC formation)

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

ICAO Frequency Spectrum Management Panel (FSMP) Chair (and PMC member) Andy Roy provided an update to the group at their last meeting. There was interest in the RTCA work (both SC-239 and SC-242). Further shared presentations may be in order between the FSMP and the two SC's. From PMC perspective, this action is closed.

C. Regroup between RTCA and EUROCAE Secretariats on Way Forward for SC-240/WG-117

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

SC-240 presented a revised TOR to address a way forward (agenda item 6I). GAR DeCleene indicated no requirements on software are needed. Compliance for craft less than 55 pounds is already published. There is no DO-178 compliance - different criteria for others. Will continue to monitor, but at the time the FAA sees no need for DO-178 revision or inclusion.

D. Investigate potential RTCA Way Forward for DESIDe

- Terry McVenes, RTCA President, presented.

Although not much feedback was received from PMC members (agenda item 5J), the Secretariat agrees there are multiple disadvantages which includes having to learn a software package that doesn't solve our problems, doesn't improve collaboration within RTCA (more likely to introduce more problems) and adds more risk to data security that we have NO control over. So unfortunately, at this time we are not going to pursue further consideration for integrating DESIDe into RTCA processes. Action closed.

Member Turner asked about possibility of taking documents and pulling "shalls" – that type of tool would be more valuable. President McVenes commented that the new DRM tool won't do that either, but RTCA is keeping eyes open for the capability. Member Hackenberg indicated there

is a comprehensive need for time phased requirements – industry needs to look at comprehensively. President McVenes suggested that could possibly be a good research project for the Tech Center.

E. SC-216 new TOR to Coordinate with EUROCAE WG-72

- Karan Hofmann, SC-216 Program Director, presented.

The first Plenary for SC-216 and WG-72 since April was conducted October 19-21, 2022. The topic of coordination of deliverable documents in TOR was discussed and proposed changes were approved for presentation to PMC and TAC. Proposed TOR was presented as agenda item 6F. Action closed.

F. Reformat DO-387 Change 1, verify contents, and conduct OOC Ballot for Approval

- Karan Hofmann, PMC Secretary, presented.

Following the recommendation of PMC members and the RTCA Secretariat, SC-228 reformatted their presented version (document as a whole) of DO-387 Change 1 at the September meeting. The committee accomplished the change in the proper format (just the changes), ensured verification by the committee that nothing was missed and then an out of cycle (OOC) ballot for PMC approval was completed (agenda item 6A). Action closed.

G. Presentation on formats for various document types (Errata, Change, Revision)

- Rebeca Morrison, SR. Director, Standards and Technologies, presented.

During the discussion on DO-387 Change 1 at the September PMC meeting, PMC members provided several suggestions on what they felt would be helpful to industry. RTCA was tasked and will provide a presentation on the format of the various types of documents.

Director Morrison provided an overview of the definitions of document modifications (Corrigendum/Errata, Change, and Revision) with respect to type, allowed scope, procedure, and publication title. The format for changes (change pages vs. inclusion in the complete document) brought up the discussion point. Member Arbuckle brought up the desire for the complete document to include the adjustments with change tracking feature. There has been inconsistency with the change format in the store.

There were differing opinions from PMC members on which format would be better. Possibly make both types available in the store. And consider if the inclusive version would have track changes or not.

After much discussion, it was agreed to run a test case to measure the difficulty of having both types available and acceptance by the store customers. SC-186's DO-361 Change 1 was agreed to be this case (action).

RTCA will also coordinate with EUROCAE on the change format for consistency (action).

- The presentation is posted in AerOpus (RTCA Paper No. 333-22/PMC-2372).

H. Request SC-239 provide presentation on status at the PMC

- Jean Luc Robin and Seth Frick (SC-239 Co-Chairs) and Rebecca Morrison (SC-239 Program Director), presented.

SC-239 Leadership provided an update on group activity per request of PMC members. They have completed comment period for new interim document (to be designated DO-399) and still working through the 735 comments received (5 non-concur and 97 high), including many from non-RTCA/EUROCAE members.

Chair Frick comments that the group was working hard to accommodate the non-member inputs within the RTCA/EUROCAE process, but there is a risk for delay in the process for the MOPS down the road. A Review and Comment (RAC) will occur for the MOPS, some risk in timeline, but the group feels it is needed for a more robust document for FRAC.

President McVenes asked if the plan for MOPS development was going to be as open to non-members as with DO-399. Director Morrison indicated they will follow the process and any changes/adjustments will go through the PMC.

Member Turner asked what kind of inputs they were seeing from the public comments. Chair Frick indicated little help – many were mis-categorized and solutions not addressing document content or addressing non-RTCA documents. Many appear to be more for MOPS than this interim document.

President McVenes indicated that it was important to include the public and glad of the participation, but behavior issues are not good. These actions delay publication. We have a process, let's follow it.

GAR DeCleene followed up on President McVenes' point – the FAA is looking for the MOPS, not interested in the interim document. Reduce risk to finish the MOPS on schedule. Chair Hegarty agreed the schedule is paramount. Director Morrison stated we should provide feedback to commenters through email and any non-concurs will be handled by Secretariat and the PMC. Group needs to press for MOPS.

The group discussed the formal RTCA process to disposition public comments and also the need to expedite for SC-239. Member Barber asked if the process was documented well enough. If not, maybe tweak to adjudicate public comments – particularly if out of scope of document.

Chair Frick thanked PMC members for input. They are in unchartered waters and they welcome the opportunity to adjust process as needed or possible.

Member Roy said he had supported SC-239 this week – definite perception differences between aviation and telecom industry.

Chair Robin said some comments and related discussion are not a good use of the SC's time. There is inconsistency in comment input, and it would be beneficial to limit time spent on comments that are out of scope.

Chair Hegarty said the SC Handbook provides guidance regarding public participation. Chair Frick agreed with making more awareness of what is allowed and what is not. Member Kauffman summarized by suggesting possibly add a slide to presentations to include that FRAC comments need to provide accurate information and specific text or will not be considered.

GAR DeCleene again indicated the priority is the MOPS. On last topic, comments/criticism will continue even with document published.

Member Hennig asked what's next – OOC request for approval? Recommend spring meeting for process discussion? Chair Hegarty suggested if it was necessary to request OOC approval, perhaps the group could meet in January to complete FRAC resolution and then allow 10 days for PMC review.

Member Hoekema expressed concern when MOPS goes to FRAC/OC. Possibly include in introduction page these points.

Chair Robin expressed another topic – input parameters are needed that are outside of the control of the SC (e.g., permitted 5G emission characteristics worldwide). This could a be showstopper. Chair Frick indicated maybe several parameters could be categorized as showstoppers – some outside SC and aviation community control. Chair Hegarty recommended documenting any assumptions.

Member Turner asked if these particular parameters have any analysis being done today? Both Chairs indicated "yes". So, Member Turner recommended going with what's being done now.

Chair Hegarty thanked the group for their efforts.

Within Backup slides, Director Morrison covered there should be a complete update completed by January 13th and the schedule calls for getting the document to the PMC by January 23rd for a two-week OOC. There could be an Ad Hoc to handle any issues.

This initial action closed, but next update from SC-239 to the PMC will be at March PMC meeting.

- The presentation is posted on AerOpus (RTCA Paper No. 325-22/PMC-2365).

I. **Share all data from SC-240 Survey Results with PMC Members**

- Karan Hofmann, PMC Secretary, presented.

PMC members requested all the data from the SC-240 Survey. They were posted in AerOpus on September 21, 2022. Action closed.

J. PMC members have inputs on DESIDe to RTCA by October 30, 2022

- Karan Hofmann, PMC Secretary, presented.

Very little input was received. Feedback received was not favorable for possible use within RTCA or individual company practices. Action closed.

K. Get account for new PMC member on DESIDe test server

- Karan Hofmann, PMC Secretary, presented.

New PMC member was provided an account on the DESIDe server. Action closed.

L. Share EASA paper on datalink with PMC Members

- Karan Hofmann, PMC Secretary, presented.

PMC members requested to have access to the EASA paper on datalink. Hette Hoekema provided the paper, and it was posted in AerOpus on September 14, 2022. Action closed.

M. Incorporate SC Rubric questions in Chair Report

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

Following the presentation by Terry McVenes at the September PMC meeting, PMC members recommended getting SC leadership input on the Rubric questions provided by the Advisory Board committee. All agreed to add to the Chair Report form. This was accomplished and is part of this meeting's reports (agenda item 6L). Action closed.

- The presentation is posted in AerOpus (RTCA Paper No. 333-22/PMC-2372).

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 item was reviewed by electronic ballot since the last PMC meeting:

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- DO-387 Change 1 – *Minimum Operational Performance Standards (MOPS) for Electro-Optical/Infrared (EO/IR) Sensor Systems for Traffic Surveillance* – from SC-228, Minimum Performance Standards for Unmanned Aircraft Systems – approved October 28, 2022.

B. SC-135 – Environmental Testing – Revised TOR

- Kyle McMullen, SC-135 Chair, presented.

The group requested to change delivery date on two documents due to difficulty of completing the number of change proposals. Additionally, they requested to eliminate a document revision due to lack of support for its use.

There was also discussion on relationship with EUROCAE WG-14. It was pointed out members attend each other's meetings to exchange information and publish technically equivalent documents. WG-14 includes ground equipment in their document that is not joint effort.

- Approval was moved by Member Turner, seconded by Member Williams. The proposed revised TOR was approved (RTCA Paper No. 342-22/PMC-2381).

C. SC-186 – Automatic Dependent Surveillance Broadcast (ADS-B) – Revised TOR

- Jessie Turner (SC-186 Co-Chair) and Lesley Weitz (SC-186 WG4 Task Lead) presented.

The group requested to accomplish another White Paper to continue review of potential changes to DO-317C and DO-361A Change 1. There was also an administrative change (phone number of one Co-Chair). Member Barber provided some editorial inputs that were accepted by the committee leadership.

- Approval was moved by Member Hahn, seconded by GAR DeCleene. The proposed revised TOR was approved (RTCA Paper No. 349-22/PMC-2388).

D. SC-206 – Aeronautical Information and Meteorological Data Link Services– Revised TOR

- Eldridge Frazier, SC-206 GAR, presented.

The group requested to include the D-ATIS service into DO-364A (already in work for revision) rather than a separate new document. Additionally, they requested to slip delivery of DO-364A by nine months despite continuous work through total virtual work during pandemic. Both requests are in coordination with EUROCAE WG-76 TOR change.

Member Hoekema applauded the effort to consolidate all into one document, as previously mentioned at PMC meetings that there are possibly too many data link documents.

- Approval was moved by Member Hahn, seconded by Member Barber. The proposed

revised TOR was approved (RTCA Paper No. 343-22/PMC-2382).

E. SC-213 – Enhanced Flight Vision Systems/Synthetic Vision Systems – Revised TOR

- Thea Feyereisen and Patrick Krohn, SC-213 Co-Chairs, presented.

The group offered delivery dates for the three new Minimum Aviation System Performance Standards (MASPS) that have been in a holding status.

Co-Chair Feyereisen also wanted to acknowledge Co-Chair Krohn's upcoming retirement and extend thank you for all support. Chair Hegarty extended thank you from the PMC and wished him the best in retirement.

- Approval was moved by GAR DeCleene, seconded by Member Turner. The proposed revised TOR was approved (RTCA Paper No. 344-22/PMC-2383).

F. SC-216 – Aeronautical Information Systems Security – Revised TOR

- Patrick Morrisey, SC-216 Co-Chair, presented.

The group requested to correct and align the titles of documents and to change a proposed MOPS to a guidance document (in alignment with agenda item 5E). These changes are in sync with EUROCAE WG-72's TOR and Task Sheets. This document type was instigated by action from September PMC meeting (agenda item 5E).

- Approval was moved by Member Hennig, seconded by Member Turner. The proposed revised TOR was approved (RTCA Paper No. 345-22/PMC-2384).

G. SC-227 – Standards of Navigation Performance – Revised TOR

- Ellen McGaughy and Mike Cramer, SC-227 Co-Chairs, presented.

The group requested to push back completion due date for DO-257C. This new date will better align with schedule for SC-217 which is impacted by this document and allows more time to work through emerging complex issues. Co-Chair Cramer is also retiring and is leaving Chair McGaughy as the Chairman. Chair Hegarty extended a thank you and good luck for the retirement.

There were some inputs from Garmin provided during the PMC review period that were shared with all PMC members prior to this meeting. Those adjustments were included in the final version presented.

- Approval was moved by GAR DeCleene, seconded by Member McDowell. The proposed revised TOR was approved (RTCA Paper No. 346-22/PMC-2385).

H. SC-228 – Minimum Performance Standards for Unmanned Aircraft Systems – Revised TOR

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

The group requested to change the name of the SC to align with new AAAC/FAA recommendation on changing UAS to uncrewed aircraft systems, as well as other wordage dealing with UAS operations. They also cleaned up the TOR for documents already delivered, requested delivery date changes on almost all items following a re-evaluation of work plan, added an OSED revision and two new MASPS for supporting taxi operations. There was also an administrative adjustment to change the company affiliation of one of the Co-Chairs.

Garmin provided inputs prior to the presentation that were shared with all PMC members prior to this meeting. Those adjustments were included in the final version presented.

- Approval was moved by Member Turner, seconded by Member Hahn. The proposed revised TOR was approved (RTCA Paper No. 347-22/PMC-2386).

I. SC-240 – Topics on Software Advancement – Revised TOR

- Russ Uthe, SC-240 Chair, presented.

The group requested changes to completion dates of their three deliverables. These were coordinated with EUROCAE WG-117.

The point was brought up on the intended audience for the lower risk document. GAR DeCleene said they would not be actively participating in SG-1, as the FAA already has policy addressing new entrants that are not based on RTCA DO-178, and they have not identified a need to extrapolate RTCA DO-178 requirements to address these applications. Member Hoekema said this approach was not ok with EASA and they were considering pulling out as well. EASA is going to consider what they need and how better to define the scope.

PMC members agreed that SG-1 work should be put on hold pending inputs from EASA. SC-240 should concentrate on SG-2 work. The PMC will hold on final consideration of the proposed TOR until March meeting to follow:
- Possible review of RTCA and EUROCAE needs (although no action against SC-240/WG-117 or Secretariats)
- Awaiting decision/inputs from EASA, as we have FAA's position.

J. SC-FAS – Forum for Aeronautical Software – SC Activation and TOR Approval

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

As the SC-240 TOR was not resolved (agenda item 6I), this will require further work prior to course of action for FAS. From RTCA/EUROCAE coordination meeting, President McVenes and Director General von Groote have action to come up with a path forward.

K. FAA Actions Taken on Previously Published Documents – Update

- Bruce DeCleene and Robert Bouza, Federal Aviation Administration, presented.

FAA Published/Closed Guidance since previous PMC, RTCA Published Documents Pending FAA Guidance, and FAA plans for RTCA Documents pending PMC approval were reviewed.

Specific items of note discussed were:

- DO-396 – No active plan to reference
- DO-230 – FAA not primary stakeholder
- Three new AC's Released since last PMC: 00-71, 00-72, and 20-189
- One TSO Released since last PMC: TSO-C157d
- White Papers and MASPS are not going to be tracked further
- The SC-216 documents (DO-326A, DO-355A, and DO-356A) are being accepted as method of compliance to existing special conditions through applicant specific issue papers
    - Cybersecurity Rule (25.1329) going out in May (DO-326A)
- Three TSO's out for public comment through December 28th with publication in February 2023: C112f, C154d, and C154d
- TSO-C195c in closing stretches for public review (DO-317C)
- TSO-C213a being prepared for final publication (DO-362A)
- TSO-207b has been started and targeted for completion July 31, 2023
- Expect TSO C159 Change 1 to incorporate DO-262F Change 1
- DO-399 and DO-292A are not intended to be used by FAA

GAR DeCleene indicated the plan is to provide information into use of all RTCA documents – still working on collecting data. Member Turner asked for clarification on FAA not using the SC-228 drone documents. The FAA is working on rule making on drones in airspace – not identifying dependance on any documents on larger drones, but possibly down the line. They are entertaining any inputs for certification (with exceptions considered).

Chair Hegarty thanked the team for the update.

- Presentation is posted on AerOpus (RTCA Paper No. 331-22/PMC-2371).

L. Special Committees - Chairmen's Reports – Review

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

Reports were received from all active committees except SC-222 to fill out the newly added Rubric questions.

SC-135 presented on revised TOR (agenda item 6B).

SC-147 – Presented today on document (agenda item 3A).

SC-186 – Presented today on document and revised TOR (agenda item 3B and 6C)

SC-206 – Presented today on revised TOR (agenda item 6D).

SC-213 – Presented today on revised TOR (agenda item 6E).

SC-216 – Presented today on revised TOR (agenda item 6F).

SC-224 – Presented today on document (agenda item 3C).

SC-227 – Presented today on document (agenda item 6G).

SC-228 – Presented today on document and revised TOR (agenda items 3D and 6H).

SC-240 – Presented today on revised TOR (agenda item 6I).

SC-242 – Presented today on revised TOR (agenda item 7D).

GAR DeCleene commented appreciation for working the incorporation of the Rubric questions – may identify things that need to be discussed at the PMC if not already. Director Morrison reiterated that the Chair Report can continue to be adjusted/tweaked.

- The individual committee reports are posted on AerOpus (RTCA Paper No. 313-22/PMC-2361).

M. International Coordination – Status Update

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

RTCA and EUROCAE held their annual coordination meeting November 30-December 1, 2022 at EUROCAE in Saint Denis, France. President McVenes reported coordination between the two organization remains strong. Discussion included some areas of concern as well as several activities in process that are candidates for joint work.

PMC members expressed concern with hearing different perspectives from FAA and EASA – particularly in the area of AAM. Any possible means to get organizations to work together? President McVenes indicated we need to look forward and be proactive. And that RTCA was looking on how to expand international efforts.

Another action from this meeting was alignment of types of documents between RTCA and EUROCAE.

President McVenes also mentioned the need for active participation from all of RTCA – to include Board of Directors, Advisory Board, and the PMC.

- The Annual Coordination Meeting presentation is posted in AerOpus (RTCA Paper No. 334-22/PMC-2373) and the EUROCAE update is posted on AerOpus (RTCA Paper No. 328-22/PMC-2368)

AGENDA ITEM 7
Other Business

A. AAM/UAM

- Terry McVenes, RTCA President, presented.

President McVenes started by thanking all for support for the Spectrum Summit held December 13-14 prior to this PMC meeting. There was a lot of talk on the topic of AAM because there is so much to do. RTCA wants to ask members what would meet their needs of the possible things we could do. Thus, RTCA has scheduled a member-only in-person AAM Workshop for January 11th. President McVenes made it clear RTCA wants the appropriate participation and the purpose it not to try to segment to various SDO's – want to work together - need to know where to start. Member Hoekema recommended to include EUROCAE WG-102 and EASA in efforts. Member Kauffman mentioned that GAMA had a very productive meeting and possibly include the debrief from that meeting as part of the workshop. PMC members requested a feedback presentation at the next meeting on the workshop (action).

B. SAE RUST Task Force and RTCA Collaboration

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

Director Morrison provided a summary of a new RTCA activity. SAE approached RTCA under their MOU on a potential joint effort on an evaluation with respect to using the RUST programming language on safety critical systems. RTCA agreed to support in the effort. The SAE RUST Taskforce members will have access to read-only version of three needed RTCA documents (DO-178C, DO-332, and DO-330).

FAS Chair Patty Bath and SC-240 Chair Rush Uthe are monitoring the work, which will not conclude until sometime in 2024. Joint publication is complicated by the RTCA public Final Review and Comment Process, but if a clearer path becomes available it might happen.

PMC members agreed any further updates would only be needed if significant for the PMC.

- Presentation is posted on AerOpus (RTCA Paper No. 335-22/PMC-2374).

C. Forum on Digital Flight Operations

- Terry McVenes, RTCA President, presented.

President McVenes indicated that he and Brandon Suarez had presented to the last AAAC and received many follow up requests. The follow up action includes RTCA to hold a Forum on Digital

Flight Operations. It will focus on the development of digital flight operation parameters. It will be divided into three phases with kick off scheduled for January 13, 2023. The idea is to start small with something produced (possibly a White Paper) over a short period (say 6 months).

PMC members requested to continue to receive updates on related activities (action).

D. SC-242 – Spectrum Compatibility – Revised TOR

- Ed Hahn, SC-242 Chair, presented.

The group requested a change to the titles of the two deliverable reports. This is a joint effort and this request came from the EUROCAE TAC. The group also reported a slight delay in delivery of the first report due to not receiving all input requests from other active SCs on their systems on the original timeline.

- Approval was moved by GAR DeCleene, seconded by Member Arbuckle. The proposed revised TOR was approved (RTCA Paper No. 348-22/PMC-2376).

E. DO-297 Errata - *Integrated Modular Avionics (IMA) Development Guidance and Certification Considerations* – Presentation

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

A member identified a printing error which was confirmed by reviewing the Word version of the document (which has a EUROCAE technically equivalent ED-124). This recommended Errata will include the entire table.

- Approval was moved by GAR DeCleene, seconded by Member McDowell. This errata will be attached to DO-297 in the store.

AGENDA ITEM 8
Schedule for Committee Deliverables and Next Meeting Date

Documents expected for the March 16, 2023, meeting:

- 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*
    NOTE: Likely to ask for OOC approval after March 2023 Meeting

- SC-239, Low Range Radar Altimeter
    - DO-399 – *Guidance Document on Radar Altimeter Radio Frequency (RF) Interference Rejection and Tolerance*
    NOTE: Likely to ask for OOC approval.

The dates for the next four PMC meetings were confirmed: Thursday, March 16, 2023; Thursday, June 22, 2023; Thursday, September 21, 2023, and December 14, 2023.

AGENDA ITEM 9
New Action Item Summary

See PMC Action Item Table.

/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 15, 2022 ATTENDANCE LIST		
PMC MEMBERS:		
Christopher	Hegarty	The MITRE Corporation Chair
Carleen	Adams	Federal Aviation Administration
Doug	Arbuckle	Federal Aviation Administration
Clay	Barber	Garmin, Ltd.
Bruce	DeCleene	Federal Aviation Administration Government Authorized Representative
Davis	Hackenberg	National Aeronautics and Space Administration
Edward	Hahn	Air Line Pilots Association
Jens	Hennig	General Aviation Manufacturers Association
Hette	Hoekema	European Aviation Safety Agency
Karan	Hofmann	RTCA, Inc. Secretary
Donald	Kauffman	Honeywell International, Inc.
Justin	Madden	Airlines For America
Mike	McDowell	Collins Aerospace
Jim	McClay	Aircraft Owners and Pilots Association
Terry	McVenes	RTCA, Inc.
Andrew	Roy	Aviation Spectrum Resources, Inc.
Jessie	Turner	The Boeing Company
Heidi	Williams	National Business Aviation Association

OTHER ATTENDEES:		
Rich	Adler	Federal Aviation Administration
Bryan	Barmore	National Aeronautics and Space Administration
Walter	Bender	The Johns Hopkins University
Ruy	Brandao	Honeywell International, Inc.
Jonathan	Branker	Federal Aviation Administration
Robert	Bouza	Federal Aviation Administration
Daniel	Chiew	Collins Aerospace
Barbara	Clark	Federal Aviation Administration
Mike	Cramer	The MITRE Corporation
Thea	Feyereisen	Honeywell
Eldridge	Frazier	Federal Aviation Administration
Seth	Frick	Honeywell
Randy	Jacobson	Collins Aerospace
Kyle	McMullen	National Institute for Aviation Research

Ellen	McGaughy	Collins Aerospace
Ted	Kalthoff	Aero Bombardier
Sai	Kalyanaraman	Collins Aerospace
Patrick	Krohn	Universal Avionics Systems Corp
Bob	Lee	GXA Consulting
Rebecca	Morrison	RTCA, Inc.
Patrick	Morrissey	Collins Aerospace
Dave	Nakamura	Advanced PFN Solutions
Troy	Niles	Universal Avionics Systems Corp
Dave	Pierce	GE Aerospace
Trent	Prange	Federal Aviation Administration
Di	Reimold	Federal Aviation Administration
Jean Luc	Robin	Airbus
Stuart	Searight	Federal Aviation Administration
Josh	Silbermann	The John Hopkins University
Alan	Sigmund	Federal Aviation Administration
Brandon	Suarez	Reliable Robotics
Michelle	Swearingen	Federal Aviation Administration
Brandi	Teel	RTCA, Inc.
Russ	Uthe	Collins Aerospace
Alain	Vallee	EUROCAE
Steve	Van Trees	Federal Aviation Administration
Lesley	Weitz	The MITRE Corporation
Christer	Wilkinson	AECOM
Jim	Williams	Aura Network Systems

Program Management Committee
December 15, 2022

TRACKING NUMBER (Meeting Date and agenda item from which original action resulted)	**ACTION**	**ACTION ASSIGNED TO**	**DUE DATE**	**STATUS**
	PMC ACTION ITEM TABLE			
03/18/2021 Agenda Item 7D	03/18/2021 – Add ICAO representative to PMC invite 06/17/2021 – Initial contact made, still coordinating 09/16/2021 – Still awaiting input 12/16/2021 – Still awaiting input 03/17/2022 – Reported closer to getting a name 06/23/2022 – More follow up needed 09/15/2022 – Still in work 12/15/2022 – Recommended not to track as AI	Terry McVenes & Andy Roy	Sep 2022	OBE
12/16/2021 Agenda Item 5B	12/16/2021 – Presentation to ICAO Spectrum Panel on activity, SC formation, etc. 03/17/2022 – Being coordinated 06/23/2022 – Still in coordination 09/15/2022 – Presentations between FMSP and SC-242/WG-124 being coordinated 12/15/2022 – Follow on communication being handled at SC level	Terry McVenes, Al Secen, and Andy Roy	Sep 2022	Closed
12/16/2021 Agenda Item 6I	12/16/2021 – Regroup between Secretariats on way forward on SC-240/WG-117 03/17/2022 – Conditional approval of revised TOR – more work needed 06/23/2022 – Workshop held for inputs 09/15/2022 – Coordination continues	RTCA and EUROCAE Staffs & SC-240 Leadership	Dec 2022	Open
03/17/2022 Agenda Item 5D	03/17/2022 –Investigate way forward on DESIDe program within RTCA 12/15/2022 – Determined DESIDe will not fit into RTCA at the current time	RTCA Staff	Dec 2022	Closed
06/23/2022 Agenda Item 6C	06/23/2022 – Possible SC-216 adjustments to new TOR in coordination with EUROCAE WG-72 09/15/2022 – To be addressed at Oct joint Plenary 12/15/2022 – TOR presented addressing concerns	SC-216	Dec 2022	Closed
09/15/2022 Agenda Item 3C	09/15/2022 – Reformat DO-387 Change 1, verify contents, and conduct OOC Ballot for approval 12/15/2022 - Completed	SC-228 and RTCA Staff	Dec 2022	Closed

09/15/2022 Agenda Item 3C	09/15/2022 – Presentation on formats for various document types (Errata, Change, Revision) 12/15/2022 – Presentation completed	Rebecca Morrison	Dec 2022	Closed
09/15/2022 Agenda Item 4A	09/15/2022 – Request SC-239 provide presentation on status at PMC meetings 12/15/2022 – Status update was provided – continue at future PMC meetings – not track as AI	SC-239 Leadership	Dec 2022	Closed
09/15/2022 Agenda Item 5D	09/15/2022 – Share all data from SC-240 survey results with PMC members 12/15/2-22 - Completed	RTCA Staff	Dec 2022	Closed
09/15/2022 Agenda Item 5E	09/15/2022 – PMC members have inputs on DESIDe to RTCA by 30 Oct 12/15/2022 - Completed	PMC Members	Oct 2022	Closed
09/15/2022 Agenda Item 5E	09/15/2022 – Get account for new PMC member on DESIDe test server 12/15/2022 - Accomplished	Karan Hofmann	Oct 2022	Closed
09/15/2022 Agenda Item 6C	09/15/2022 – Share EASA paper on datalink with PMC members 12/15/2022 - Completed	Hette Hoekema	Dec 2022	Closed
09/15/2022 Agenda Item 7B	09/15/2022 – Incorporate SC Rubric questions in Chair Report 12/15/2022 - Completed	Rebecca Morrison	Dec 2022	Closed
12/15/2022 Agenda Item 3B	12/15/2022 – Present White Paper recommendations to NextGen Advisory Committee	SC-186 and RTCA	Mar 2023	Open
12/15/2022 Agenda Item 3D	12/15/2022 – Fix inconsistencies in White Paper before posting	SC-228 and RTCA	Jan 2023	Open
12/15/2022 Agenda Item 5G	12/15/2022 – Test Case of two types of Change format for store – DO-361 Change 1	SC-186 and Doug Arbuckle	Mar 2023	Open
12/15/2022 Agenda Item 5G	12/15/2022 – Coordinate with EUROCAE on Change format	Rebecca Morrison	Mar 2023	Open
12/15/2022 Agenda Item 7A	12/15/2022 – Provide feedback from Jan AAM Workshop to PMC	RTCA	Mar 2023	Open
12/15/2022 Agenda Item 7C	12/15/2022 - Provide update on Forum on Digital Flight Operations to PMC	RTCA	Mar 2023	Open

Program Management Committee
December 15, 2022