

**Minutes of
34th Meeting
RTCA Special Committee 227
29th Meeting
EUROCAE WG-85

6 - 10 February 2023
Virtual/Dallas (American Airlines)**

Agenda

Monday, February 6, 2023, 9 AM to 4 PM CST (10 AM – 5 PM EST)

1. Welcome and Administrative Remarks, review of RTCA/EUROCAE Policies
2. Introductions
3. Review and Approve November 2022 Meeting Minutes
4. Presentation by WG-2 of planned work for the week
5. Presentation by WG-3 of planned work for the week
6. Status of TOAC/FIM Conops Activity
7. Suspend plenary, convene WG-2 & WG-3 to end of day

Tuesday, February 7, 2023, 9 AM to 4 PM CST (10 AM – 5 PM EST)

1. WG-2 & WG-3 Meeting Concurrently

Wednesday, February 8, 2023, 9 AM to 4 PM CST (10 AM – 5 PM EST)

1. WG-2 & WG-3 Meeting Concurrently

Thursday, February 9, 2023, 9 AM to 4 PM CST (10 AM – 5 PM EST)

1. WG-2 & WG-3 Meeting Concurrently

Friday, February 10, 2023, 9 AM to 12 PM CST (10 AM – 1 PM EST)

1. Reconvene in plenary
2. Review Plenary dates in 2023
3. Review Action Items
4. Working Group 2 Meeting Report & Change Proposals for Plenary Acceptance
5. Working Group 3 Meeting Report & Change Proposals for Plenary Acceptance
6. New Business
7. Adjourn
8. Working Groups may continue to meet until 4 PM if desired

SC-227 Chair: Ellen McGaughy, Collins Aerospace

WG-85 Chair: Okuary Osechas, DLR
 GAR: Barry Miller, FAA
 Secretary: Dave Nakamura, MITRE CAASD
 RTCA Senior Director: Rebecca Morrison
 EUROCAE TPM: Alex Engel

Attendees

Name	Company/Organization
Aaron Jacobson	Boeing
Alex Engel	EUROCAE
Alex Milns	EUROCAE
Andrew Riedel (WG3 Lead)	Boeing
Axel Friedrich	Navblue
Barry Miller	FAA
Benny Hutto	NATCA
Bill de Groh	APA
Bill Tuccio	Garmin
Bob Gaul	Garmin
Brad Miller	FAA
Brandon Lint	FAA
Brandon Weaver	DLR
Collin Ogden	Collins Aerospace
Daniel Nelson	UK NATS
Dave Nakamura	MITRE CAASD
David DeSmedt	EUROCONTROL
Dimitri Garbi	EASA
Dinesh Kushwaha	Collins Aerospace
Doug Phifer	FAA
EAS Department	ALPA
Ellen McGaughy	Collins Aerospace
Erik Ringnes (WG2 Co-Lead)	Honeywell
Fernando Diaz	ENAIRE
Gang Feng	Boeing
Guy Deker	Thales
James Venslauskas	RTCA
Jan Langen	LH Systems
Jeff Meyers	FAA
Joel Dickinson	FAA
John Barry	FAA
Kendall Hershberger	Garmin
Michelle Yeh	FAA
Mike McDowell	Collins
Mitch Meldrum	Honeywell
Monica Vafiades	USAF
Nathan Beeten	USAF
Nick Tallman	FAA
Okuary Osechas	DLR
Phillip Pankratz	Textron Aviation
Rebecca Morrison	RTCA
Regina Richardson	Avian
Reuss Anderson	Garmin
Ricardo De Sousa	UK NATS
Sasho Neshevski	EUROCONTROL

Shivathsan Narayanan
Stephane Dubet
Stephen Moody
Steve Horvath
Tim Geels
Tim Padden
Tom Yochum
Valeriu Vitan
Wes Googe (WG2 Co-Lead)
Yee Xiong

DLR
DGAC
Boeing
Garmin
Collins Aerospace
USAF
Boeing
EUROCONTROL
American Airlines
UASC

Monday, February 6th

Welcome and Administrative Remarks

Ellen welcomed the participants to the meeting hosted by American Airlines at Dallas and opened the plenary Webex session at 9:04 AM. Wes also welcomed the group and provided information regarding the meeting site.

Rebecca reviewed both the RTCA and EUROCAE Anti-Trust, Proprietary, and Committee Membership Participation policies. It was noted that the Proprietary policy chart needs to be updated to reflect the need to coordinate any issue through the committee chair vs working group, etc. Rebecca noted there are some differences between the types of memberships. Contact the respective organization for more information.

SC227/WG-85 Agenda

Ellen presented the agenda for plenary acceptance. It was pointed out that the agenda should include plenary time for review/approval of WG change proposals. The revised agenda was approved by the committee.

Introductions

Introductions were made in the room and on-line through roll call. Rebecca reviewed the information for sign-in, and group photo. Wes suggested a BBQ place for the group dinner.

Review and Approve minutes

Dave walked through the minutes for the November meeting, No. 33. There were no changes made other than some editorial corrections. The minutes were accepted. A list of the working group and committee issues, actions and completion status was reviewed. It will be posted to Aeropus, along with the minutes.

Working Group 2 Plan for the Week

Erik reviewed the state of changes for DO-283C plus changes planned. There will be four papers possible this week; one is on vertical path performance limit, one for path terminators, one for direct-to/intercept revisions, and one to formalize the appendix B change agreed to at the last meeting. The group will also discuss the draft and preparation to issue for 227 internal review in plenary for the next meeting.

Working Group 3 Plan for the Week

Andrew discussed the WG3 revised schedule and work tasks. SC227 and SC217 will have a joint leadership meeting this week with regard to their work tasks and schedules. There are approximately 12 papers that will be discussed this week. Some may be presented to plenary. There may be a breakout meeting this week with Michelle Yeh (FAA) regarding some of the terminology for the MOPS.

Status of TOAC/FIM Conops Activity

Dave stated that Lesley Weitz has reported that the FIM/TOAC Conops was completed and is now in internal review at the FAA. Any further information will be reported when its available. **Status will be provided at the May meeting (Action Item 34-1).**

Plenary suspended, Adjourned to WG-2/WG-3 Sessions

WG2 and WG3 will run sessions in parallel.

Tuesday – Thursday, February 7th – 9th

WG-2 and WG-3 were in work sessions. There were two joint working group sessions where WG3 coordinated and consulted with WG2 on issues stemming from their draft MOPS material.

Friday, February 10th Plenary

Ellen convened the plenary.

Future Meetings

The next meeting is May 22 - 26 in Phoenix. Erik will send out meeting location information to Rebecca since the facility is near Sky Harbor, not the Deer Valley offices. The Aug 21-25 meeting will be in DC. The Nov 13-17 will be in Brussels

Action Items

The action item list was reviewed. Any new items will be noted in the minutes and posted.

AI33-1, review of the change proposal process was assigned to Mike Cramer who retire and is no longer active with the committee. It will be closed. **Dave will post the process flow chart and leave to the committee to determine what else may need to be done. AI34-2.**

1. WG2 Summary and Change Proposals

7 change proposals were completed this week. They are posted to Aeropus. The plan is to post an updated MOPS for FRAC in two weeks. Allow for 45 days review and get comments a week before the May FRAC meeting. This represents an earlier FRAC. For transparency, this will be communicated via the Aeropus email as well as the RTCA website. EASA expressed concern with the moving the FRAC earlier. They would like more time to look at other possible improvements to the document.

M32-3, VPPL Clarification. This clarified VPPL though the addition of notes about VPPL, and the relationship to TSE. Some editorial changes were made based upon inputs received and **the paper was accepted.**

M33-1, Consistency with TSO-C115 Exceptions and ARNP. The paper adds two path terminators to those contained in the MOPS including those added by M31-2. The revisions also clarify what are the preferred RNP path terminators and what RNAV path terminators may be applicable in procedures. **This was accepted.**

M32-2, Appendix B. The paper is a formalization of the flimsy shown and accepted at the November meeting. It explains why the previous appendix text was removed. It also contains some editorial clean up of appendix references. **This was accepted.**

M34-1 MOPS Updates to Incorporate Additional TSO Exceptions. The change revises the MOPS to harmonize its requirements with the exceptions cited in TSO-C115. This completes the exceptions harmonization which were also the subject of other previously accepted change proposals for path terminators and path transitions, including M33-1. **This was accepted.**

M34-3 Editorial Changes for Lateral Containment Concept. This reorganizes the text with respect to the terminology definitions. The definitions are now more in line where the term is first used. Additionally, the Appendix A glossary contains the same terms but removes some portions that only make sense for the text in the Lateral Containment Concept section. Retention of the glossary will facilitate locating the definitions for readers of the main body of the MOPS and avoids the confusion of having to locate the terms in the LCC section. **This was accepted**

M34-4 Editorial Changes for ARNP. This changes the item RNAV Holding to RNP Holding to be consistent with the about to be issued Edition 5 of the ICAO PBN Manual. **This was accepted**

M12-1a Rev 1 Direct-To/User Defined Course to Fix. The course to fix text was revised to incorporate what was in the published MASPS. Notes were also noted. **This was accepted.**

These are the last of the change proposals except for what is noted in new business regarding RAC/OC/FRAC.

2. WG3 Summary and Change Proposals

AI C10087 Supplemental Chart Information -no Additional Chart Information was presented. This added to the EACD general requirements. **This was accepted.**

WG3 is continuing on their list of work issues for the upcoming meetings. The support of the committee GAR was noted as very helpful to the group.

3. Review Action Items

See notes above regarding the action items, specifically the SC227 and SC217 coordination which was completed.

4. New Business

MOPS RAC, OC/FRAC

WG2 proposed for the next step of work to proceed to OC/FRAC on the MOPS at the May meeting. The group discussed EASA concerns with the schedule and state of contents of the MOPS. The EASA member feels that the material does not adequately reflect their views about issues with RNP approvals, and the future of RNP especially regarding DME. The EASA member will develop a change paper before the May meeting. **AI34-3**

Rebecca suggested that WG2 have meetings beforehand to discuss working papers. Erik agreed that meetings would be scheduled as needed. The strong reservations expressed by the EASA member regarding some of the existing material in the MOPS, and the challenge of time to develop recommended changes, led to the decision to delay the RAC to August and OC/FRAC to November, tentatively. The May meeting will focus on a paper that will be submitted for the meeting by the EASA member, as all outstanding change proposals have been accepted for inclusion in the MOPS. The EASA member will be providing a change proposal prior to the May meeting. If it is available sooner, Erik will schedule a working group meeting to review and guide any needed changes. If not, this will happen at the WG2 session in May.

Rebecca reviewed the FRAC and OC process. The whole MOPS, old and new material, is subject to review, comment, discussion and resolution. Comments made will be designated high, medium, low, editorial or non-concur by the commenter. Actions are assigned for issues that are not easily resolved, requiring more time. The same process is used for RAC.

Post-meeting note: The SC227 RAC and FRAC process being followed is amended with regard to redesignation of selected editorial comments. This is where the commenter unintentionally submits a substantive comment that is more than rewording or simple clarification, and changes the meaning or requirement. The redesignated comments are brought forward to the RAC and FRAC comment resolution discussions.

5. Adjourn

Working Groups concluded for the day.

Webex/Meeting Adjourned