

**Minutes of
28th Meeting
EUROCAE WG-85
33rd Meeting
RTCA Special Committee 227**

**14-18 November 2022
Virtual/EUROCAE**

Agenda

Monday, November 14, 2022, 9 AM to 4 PM CET (03h – 10h EST)

1. Welcome and Administrative Remarks, review of RTCA/EUROCAE Policies
2. Introductions
3. Review and Approve August 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, November 15, 2022, 9 AM to 4 PM (03h – 10h EST)

1. WG-2 & WG-3 Meeting Concurrently

Wednesday, November 16, 2022, 9 AM to 4 PM (03h – 10h EST)

1. WG-2 & WG-3 Meeting Concurrently

Thursday, November 17, 2022, 9 AM to 4 PM (03h – 10h EST)

1. WG-2 & WG-3 Meeting Concurrently

Friday, November 18, 2022, 9 AM to 12 PM (03h – 06h EST)

1. Reconvene in plenary
2. Working Group 2 Summary & Change Proposals for Plenary Acceptance
3. Working Group 3 Summary & Change Proposals for Plenary Acceptance
4. Review remaining plenary dates in 2022 & 2023
5. Review Action Items
6. WG Meeting Reports

7. New Business
8. Adjourn
9. Working Groups may continue to meet until 4 PM if desired

WG-85 Chair: Okuary Osechas, DLR
 SC-227 Co-Chair: Ellen McGaughy, Collins Aerospace
 GAR(acting): Brad Miller, FAA
 Secretary: Dave Nakamura, MITRE CAASD
 RTCA Senior Director: Rebecca Morrison
 EUROCAE TPM: Alex Engel

Attendees

Name	Company/Organization
Alain Valee	
Alex Engel	EUROCAE
Alex Wanda	SATNAV AFRICA JPO
Andrew Riedel (WG3 Lead)	Boeing
Atsushi Kezuka	ENRI
Axel Friedrich	Navblue
Barry Miller	FAA
Bill Tuccio	Garmin
Bob Gaul	Garmin
Brad Miller	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
Ellen McGaughy	Collins Aerospace
Erik Ringnes (WG2 Co-Lead)	Honeywell
Fernando Diaz	ENAIRE
Guy Deker	Thales
Jan Langen	LH Systems
Jeff Meyers	FAA
Joel Dickinson	FAA
John Studenny	CMC
Kirk Kolek	Collins Aerospace
Lesley Weitz	MITRE CAASD
Michelle Yeh	FAA
Mike Cramer	MITRE CAASD
Mitch Meldrum	Honeywell
Monica Vafiades	USAF
Nathan Beeten	USAF
Okuary Osechas	DLR
Phillip Pankratz	Textron Aviation
Rebecca Morrison	RTCA
Regina Richardson	Avian
Reuss Anderson	Garmin
Ricardo De Sousa	UK NATS

Shivathsan Narayanan
Stephen Moody
Steve Horvath
Thatch VandenBergh
Tim Geels
Tim Padden
Toyohachi Yokota
Valeriu Vitan
Wade Morton
Wes Googe (WG2 Co-Lead)

DLR
Boeing
Garmin
Boeing
Collins Aerospace
USAF
JRANSA
EUROCONTROL
Boeing
American Airlines

Monday, November 14th

Welcome and Administrative Remarks

Okuary welcomed the participants to EUROCAE and opened the plenary Webex session at 9:19 AM, Monday, November 14th.

Rebecca and Alex reviewed both the RTCA and EUROCAE Anti-Trust, Proprietary, and Committee Membership Participation policies. Okuary reviewed the agenda and proposed additional topics for change proposals and possible new tasking. The changes were accepted.

SC227 Agenda

Okuary presented an revised agenda with new items for possible future tasks and for discussion of change proposals for plenary acceptance. The revised agenda was approved by the committee.

Introductions

Introductions were made in the room and on-line through roll call. Alex reviewed the housekeeping information for sign-in, restrooms, group photo and group dinner.

Review and Approve minutes

Dave walked through the minutes for the August meeting, No. 32. There were no changes. They were accepted.

Working Group 2 Plan for the Week

Wes Gooze reviewed the state of changes for DO-283C plus changes planned. The work this week will start with a review of the draft MOPS then the new change proposals. There will be two papers possible this week, one a DME integrity example and one for discussion of vertical performance.

Working Group 3 Plan for the Week

Andrew discussed the TOR timeline extension request, WG3 usage of the Aeropus voting status update on change proposals, Working Group papers (~26 in work), AI spreadsheet review, and determination of change proposals for Friday. The Aeropus voting tool is being used to aid in the determination of readiness of change proposals at the working group level.

Status of TOAC/FIM Conops Activity

Integrated RTA and IM ConOps update. This is an FAA activity. MITRE is helping write the ConOps. The genesis of this work started with the NAC Ad Hoc Tasking Group re: Issues and questions with regard to RTA, IM, equipage, timeline and benefits. It is expected that the changes in the ConOps will be addressed through activities in SC186 and SC227, and their standards. The FAA ConOps is expected to be available in December 31, 2022 (It may be a draft).

Lesley reviewed the baseline Operational environment, assumptions for ATC sequencing and scheduling capabilities, aircraft equipage including datalink, and EFB applications (e.g. weather forecast). Other assumptions described were: TBM ops in regular use, PBN procedures, RTA only enroute, low rescheduling at each runway, RTA and IM only where directed by ATC through automation generated clearance.

There may be a need for coordination between SC214 and SC227 to ensure how datalink will be available and used for the ConOps. A link alternative may be needed/available. It was noted that the datalink changes will not be there in some aircraft implementations until 2030. Among the IM constraints, ADS-B reception is assumed out to 70- 90NM and mixed flight deck equipage. Voice communication in place of datalink will affect the complexity of clearance that can be issued.

There are still no answers to the issues raised from the SC227 FRAC with regard to the IM desired changes in speed constraints/clearances used/applied and the operational effect on the TOAC function for performance margins and time windows. What SC227 can do is not clear at this time. The ConOps report may include a recommendation for additional technical work and updates to RTA standards. Areas for further harmonization of functions, performance, use, etc have been identified. The bottom line for SC227, there will be nothing for the near term MOPS. When there is something for the MASPS is TBD. The slides will be sent to Rebecca to post. AAL (Wes) pointed out that it has begun IM evaluation on some IM capable aircraft at ABQ, and noted the need for priority on IM.

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

WG2 and WG3 will run sessions in parallel.

Tuesday – Thursday, November 15th – 17th

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 that were raised from their draft MOPS material.

Friday, November 18th Plenary

Okuary convened the plenary.

The TOR update was presented acknowledging that the TOR update was not on the agenda, and if we can proceed. There was plenary agreement to proceed. The update reflects removal of Mike Cramer, who will be retiring in January, as co-chair and leaves Ellen McGaughy as the chair. The original sponsor, Peggy Gilligan was discussed. Even though she had nothing to do with the current SC227 activity, the RTCA practice is to retain the original sponsor.

The MASPS item will be removed since it was completed. The MOPS DO-257 completion (FRAC) was revised to May 2025, a 2 year extension of the original timeline. This will result in publication in either the June or September PMC depending on when in May the document is completed. SC217 is expected to complete their update for DO-201 in December, 2024. The completion of SC217 work before SC227 is desired. **The revised TOR was accepted.**

The next meeting is February 6 – 10 and was planned for Phoenix at the last meeting. Due to the Phoenix Golf tournament and Superbowl, that week and month is a problem, although delaying to the 27th would be better. There are still issues with limited room availability and costs for rooming. The group was polled to either keep the planned date or optionally go to Dallas or DC. The group decided for the Dallas/DC option for Feb 6-10. The May meeting was replanned to be in Brussels at the last meeting. Dave proposed that the Europe meeting return to the November date and May be US domestic. The May Europe meeting results in a budget issues for at least one member because the meeting falls in the same fiscal year as this meeting. The group agreed to Nov 13-17 in Brussels, pending confirmation of conference room availability, and shifting the May to Phoenix. The Aug 21-25 meeting will be in DC.

Action Items

The only action noted was for SC227 and SC217 leadership coordination, which was completed on October 7, 2022.

1. WG2 Summary

WG2 reviewed the MOPS draft on Monday and Tuesday. The internal review was for familiarization as well as checking over the accepted changes proposals incorporated. A number of comments and issues were noted. The comment originators are expected to raise them at the MOPS internal review. Change proposal and issues were discussed starting Wednesday.

M32-XY Change proposal regarding vertical performance was reviewed. A separate related proposal was discussed and was withdrawn. An update will be available for working groups meeting prior to the Feb meeting.

M32-1 Multi DME Integrity was accepted in the WG and is presented for plenary acceptance. It is on Aeropus. The committee walked through the change. One comment was that the MASPS limits to GNSS and other sensors are options, whereas MOPS specifies GNSS and others. This creates some confusion what the difference in minimum requirements in MASPS and MOPS. The MASPS requirement for FDE is not obvious about the sensor minimum being expanded to GNSS and ground nav aids. This may need additional clarity for the MOPS. The WG internal review will be an opportunity to consider if anything needs to be changed. The change proposal was accepted for incorporation into the MOPS draft. Also, the MASPS appendix B text (explaining the removal of the compliance guidance and example) was presented and will go into a change proposal to document it as well as go into the draft MOPS.

Working Groups meetings will take place before the February plenary to address the change proposals in work and a new issue related to course to fix. A meeting on the second week of January is tentative.

EASA (Dmitri) noted that they had raised other issues during the WG internal review will present them for discussed at the next working groups. A new change proposal will be developed

2. WG3 Summary

WG3 reported one change proposal ready for plenary
AI10030 Aircraft Equipment Information Vulnerabilities
Colin Odgen, Collins,

This paper presents an update that adopts the current RTCA boilerplate for this topic. **The change proposal was accepted.**

The group discussed the change proposal process. The committee has discretion on their change proposal process. It is expected that technically/substantive changes are reviewed and accepted at plenary. In any case communication with the committee chair is important to ensure support for WG choices and for input on what needs plenary coordination and approval. Not every editorial change requires plenary acceptance.

Action Item (AI33-1) to review the Committee change proposal process/flow including Mike Cramer who established the change proposal process.

The WG has been using the Aeropus voting tool in their process of finalizing change proposals. The voting tool aids in determining acceptance or engagement by WG members. The WG identified three papers that are close to being ready for plenary coordination, AI10026, AI10027, and AI10089. WG3 has an action item spreadsheet, listing all issues and tasks.

Dec 7th will be the last WG3 meeting for the year.

3. Review Action Items

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

4. New Business

There was no new business.

5. Adjourn

Working Groups may continue to meet.

Webex/Meeting Adjourned