



RTCA Paper No.: 196-23/SC227-075
EUROCAE Paper No: EUR 307-23 / WG85-51

21 August 2023

**Minutes of
35th Meeting
RTCA Special Committee 227
30th Meeting
EUROCAE WG-85**

**22 - 26 May 2023
Virtual/Phoenix**

Agenda

Monday, May 22, 2023, 8 AM to 3 PM MST

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 - Thursday, May 23 - 25, 2023, 8 AM to 3 PM MST

1. 8 AM to 2 PM: WG-2 & WG-3 Meeting Concurrently
2. 2 PM to 3 PM: WG-2 & WG-3 Meet Jointly, if needed. Otherwise, continue separately

Friday, May 26, 2023, 8 AM to 12 PM MST

1. Reconvene in plenary
2. Review Plenary dates and locations for 2023 and 2024
3. Review Action Items
4. Working Group 2 Meeting Report & Plans/Schedules/Readiness for SC227 Internal Review of MOPS (RAC) and FRAC
5. Consider a motion to hold an internal Review and Comment, initiate OC/FRAC, or delay starting formal review of DO-283C.
6. Working Group 3 Meeting Report
7. New Business
8. Adjourn
9. Working Groups may continue to meet until 3 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 |
| Alex Wanda | SATNAV Africa |
| Andrew McKenzie | NAV Canada |
| Andrew Riedel (WG3 Lead) | Boeing |
| Axel Friedrich | Navblue |
| Barry Miller | FAA |
| Brad Miller | FAA |
| Benny Hutto | NATCA |
| Bill Tuccio | Garmin |
| Bob Gaul | Garmin |
| Brad Miller | FAA |
| Brandon Lint | FAA |
| Brandon Weaver | DLR |
| Brian Gilbert | Boeing |
| Brian Lieu | UASC |
| Charles Phifer | FAA |
| Collin Ogden | Collins Aerospace |
| Daniel Nelson | UK NATS |
| Dave Nakamura | MITRE CAASD |
| David DeSmedt | EUROCONTROL |
| Davide Ferraro | Leonardo |
| 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 |
| Gary Petty | FAA |
| Gerhard Berz | EUROCONTROL |
| Guy Deker | Thales |
| James Venslauskas | RTCA |
| Jan Langen | LH Systems |
| Jeff Kerr | FAA |
| Jeff Meyers | FAA |
| Joel Dickinson | FAA |
| John Barry | FAA |
| Kendall Hershberger | Garmin |
| Mark Watson | EUROCAE (new TPM for WG85 after August) |
| Michael Felux | Honeywell/ZHAW |

| | |
|-------------------------|-------------------|
| Mike Cramer | Cramer Consulting |
| Mitch Meldrum | Honeywell |
| Mitch Narins | GWU |
| 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 |
| Sherwin Chen | Boeing |
| Shivathsan Narayanan | DLR |
| Stephane Dubet | DGAC |
| Stephen Moody | Boeing |
| Steve Horvath | Garmin |
| Tim Geels | Collins Aerospace |
| Tim Padden | USAF |
| Tom Yochum | Boeing |
| Toyohachi Yokota | JRANSA |
| Trent Prange | FAA |
| Valeriu Vitan | EUROCONTROL |
| Wes Googe (WG2 Co-Lead) | American Airlines |
| Yee Xiong | UASC |

Monday, May 22nd

Welcome and Administrative Remarks

Ellen welcomed the participants to the meeting hosted by Honeywell and opened the plenary Webex session at 8:10 AM.

Rebecca reviewed both the RTCA Anti-Trust, Proprietary, and Committee Membership Participation policies. It was noted that the Proprietary policy chart needs is being updated. Alex reviewed EUROCAEs policies. He noted that EUROCAE documents are also considered IP. Alex stated that a party had patented a solution contained in a document. This is not acceptable behavior. It was resolved by being licensed back free of charge. RTCA and EUROCAE documents shared outside of the committee or member organizations require permission from RTCA and EUROCAE. Rebecca noted there are some differences between the types of memberships. EUROCAE allows for the open plenary participation policy of RTCA. Contact the respective organization for more information.

Introductions

Introductions were made in the room and on-line through roll call. Rebecca reviewed the information for sign-in.

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.

Review and Approve minutes

Dave walked through the minutes for the November meeting, No. 34. There were no changes made other than some editorial corrections. The minutes were accepted.

Working Group 2 Plan for the Week

WG2 will review M35-1 and Comment papers. If WG2 finishes early, joint time with WG3 is intended.

Working Group 3 Plan for the Week

WG3 presented their schedules with a goal of Dec 2024 for a draft of DO-257C. A detailed estimate of work hours and the number of WG meetings was provided. A list of 10 papers will be discussed this week. Those which are completed will be presented at plenary. Regarding coordination with SC217 documents, Rev C must wait for SC217 if cross references are made. This is to avoid complications with all document users and external organizations. Both sets of documents can be released simultaneously. The presentation will be posted to the meeting folder.

EUROCAE will not participate jointly on DDC from WG85 but the WG85 TORs do not specifically limit their activity. A joint activity is not required from SC227 WG3. Many European members are already participating in SC227 WG3. It's up to SC227 WG3 to determine if a EUROCAE TAC action should be requested.

WG3 is continuing to use the Aeropos voting capability for their papers.

Status of TOAC/FIM Conops Activity

Dave stated that Lesley Weitz reported no new information on the availability of the Conops to SC227.

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

WG2 and WG3 will run sessions in parallel and if needed will meet jointly for the last hour each day. It was proposed to start WG2 discussion on M35-1 tomorrow. An informational presentation on M35-1 was made

before WG2 and WG3 went to breakout sessions. The summary identified concerns in 5 areas, specifically with terminology, EPU characteristics, Alerting, Error Allocations and VNAV. WG2 will have the remainder of the day to review the papers and presentation, with discussion starting Tuesday morning. A group dinner is planned for Wednesday.

Tuesday – Thursday, May 23rd – 25th

WG-2 and WG-3 were in work group and joint sessions where needed.

Friday, May 26th Plenary

Ellen convened the plenary of SC227 and WG85.

Future Meetings

The Aug 21-25 meeting was planned for DC. Other candidates include Collins, Cedar Rapids and Jeppesen, Denver, pending facility availability. Denver is the first choice, Cedar Rapids is second. A confirmation could be made in two weeks. However, it was pointed out the approved Feb meeting minutes state DC was the choice. One travel reservation has been made. The August meeting will be in DC.

Nov 13-17 will be in Brussels, it could be at EASA or EUROCONTROL. It was noted that the EUROCONTROL buses are no more but there are other means to get to EUROCONTROL. EASA is located in the city, making it easier to reach. Discuss again in August.

2024:

February, could be a wrap up of the MOPS and a MASPS update. The PMC is in March so early February e.g. 12-16, would be best, allowing time for document preparation, possibly the end of January. DC is a potential location for February. This will be tight regarding the 4 week requirement to have documents to the PMC. Jan 29-Feb 2 gives more time for RTCA. The group agreed with having the meeting the last week of January. The meeting location is TBD.

May 13-17 location is TBD

August 19-23 location is TBD

Nov 18-22 location is TBD

Review Action Items

The list was reviewed and highlighted where status changed. WG3 will provide additional items for the list in the next three weeks, tentatively around June 16th

WG2 Summary and Change Proposals

Change proposal M35-1 was presented by Erik. Papers M35-2 and Mike Cramers commented M35-1 were left to the authors to add to the M35-1 discussion as appropriate. One issue with the updated change proposal was that M35-1 was not based on the latest draft text. However, the text correlation was resolved in the working group discussion. The agreed-to changes will be incorporated into the draft for WG2 internal review.

A new runway transition issue was raised. A new change proposal will be provided for a special plenary session. A working group session on WG2 is planned for June 5. A special plenary session will be scheduled on June 16th, Friday, 7AM Phoenix time. This will finalize the draft changes in and allow time to update the MOPS as well as meet the 30 day RAC review time requirement.

There is an outstanding action from the review of M35-1, a new clarifying note that's to be added. The WG expects the change addition to be discussed and made as part of the RAC at the latest.

The Change Proposal was accepted by the plenary for incorporation into the MOPS draft update.

Consider motion for RAC or OC/FRAC for RNP MOPS or Delay Starting Formal Review

Change proposal M35-1 was anticipated to be the last before finalizing the draft and proceeding to RAC. A new issue has been raised that the WG feels should be addressed by a small update to the MOPS flight planning requirements. The change would result in requirements for implementation that results in functional capability specific to some existing in-service equipment, raising concerns with IP. The group expects to develop requirements that allow freedom in how the equipment capability is implemented and avoid IP conflicts. Participation by the manufacturer with the implemented design should ensure that issues with IP are avoided. This change will be addressed in a two 2 hour sessions. One will be for WG finalization of the M35-1 note. This will be followed by a special on-line only plenary session scheduled for June 16th. **The M35-1 paper was accepted by the plenary including the noted action which will be addressed separately.**

Dave stated that the work progress on the MOPS and the emergence of more significant issues at the end of this document cycle, results in a concern with differences between MASPS and MOPS. Specifically, a number of the differences agreed to this week increase the likelihood of confusion about information and requirements contained in the documents and which document is the prevailing standard. A proposal is that the MOPS continue to FRAC then hold for release. At the same time, reopen the MASPS via a TOR update, then harmonize it with the MOPS. The MASPS FRAC would be timed such that both documents could remain harmonized. Going forward, both documents would be updated and FRAC'ed simultaneously. Until the MASPS update is authorized by the PMC, any preliminary work would be performed without authorization and risk.

Rebecca presented possible TOR changes for the new MASPS tasking and deliverables. The MOPS and MASPS deliverable dates are now Feb 2024. **The plenary approved the TOR change** which will be coordinated with EUROCAE for the terms for WG85.

WG3 Summary and Change Proposals

WG3 completed three change proposals for plenary

C10098 Sections 1.1-1.3 Intro,

This updates the introductory material, with regard to DDC on EACD. This adds EACD to existing already published material for the EMD. Further elaboration on the unique aspects of EACD are also described and defined in the current and new specified sections. **The paper was accepted by the plenary.**

C10058 Section 3

This proposes the new installation guidance for the EACD. EACD is incorporated into the EMD guidance as well and well as new material. The new material is about considerations for static/fixed charts and data driven charts. **The paper was accepted by the plenary.**

C10033 Symbols, Labels, Data Fields, Control, etc

This addresses how the EMD section criteria apply to EACDs. The discussion was to gain a better understanding of the new criteria, minimum requirements and how they may be applied. There were some questions on applicability. Working group actions were noted. Post meeting discussions will continue on some parts. **This paper was not accepted by the plenary** and will return to the working group for more discussion and changes.

Other papers in work were identified, they were C10111, and C10031.

New Business

Alex announced that Mark Watson will be taking his place as TPM.

Dave announced that he is stepping down as secretary of the committee and will continue just as a member of the committee and with WG1. Anyone with interest in taking this role should contact Ellen and Rebecca.

The EASA member raised an issue with regard to not having an LOA for chart data. An action was taken to get EASAs view on this with a committee objective to have consistency of acceptance for chart data for EACD. New action for SC227.

In discussion and questioned is whether or not EUROCAE will be joint on DO-257.

Webex/Meeting Adjourned