



RTCA Paper No 264-24/SC227-087  
EUROCAE Paper No: 325-24 / WG85-62

**Minutes of 40<sup>th</sup> RTCA Special Committee 227 Meeting**  
**Joint with EUROCAE WG-85 4D Navigation Performance, 37<sup>th</sup> Meeting**  
**August 22 and 23, 2024 8am CDT – 2pm CDT (15h-21h CEST)**

**Note: Plenary will adjourn if business is complete**

*Working Sessions August 19-21 from 8am CDT-4pm CDT (15h-23h CEST)*  
*and August 22 and 23 from 2pm-4pm CDT (21h-23h CEST)*

**Collins Aerospace**

**5450 C Ave NE, Building 131 (room Ash)**

**Cedar Rapids, IA 52402**

**AGENDA (As Published)**

1. Welcome and administrative remarks, and review of RTCA/EUROCAE Policies
2. Introductions
3. Review and consider a motion to approve minutes of May 2024 meeting.
4. Discussion of the Status of comment resolution on DO-283C/ED-323
5. Consider a motion to approve closing the FRAC/OC process by accepting the implementation of all comments for DO-283C/ED-323
6. Discussion of the status of comment resolution on DO-236E/ED-75F
7. Consider a motion to approve closing the FRAC/OC process by accepting the implementation of all comments for DO-236E/ED-75F
8. Consider a motion to send DO-236E/ED-75F to RTCA and EUROCAE for publication.
9. Consider a motion to send DO-283C/ED-323 to RTCA and EUROCAE for publication

10. Review and approve changes to the SC-227 Terms of Reference
11. Continue with WG-3 approved change proposals and working papers
12. Any other business
13. Review Action Items
14. Adjourn

**ATTENDEES**

Chairpersons:

- EUROCAE WG-85 Okuary Osechas, Zurich University of Applied Sciences (ZHAW)
- RTCA SC-227 Ellen McGaughy, Collins Aerospace

EUROCAE WG-85 TPM: Mark Watson

RTCA Senior Director: Rebecca Morrison

RTCA GAR: Barry Miller, FAA Aircraft Certification

Acting Secretary: None

Others attending:

Name	Company
Andrew Riedel	Boeing
Barry Miller	FAA
Bennie Hutto	National Air Traffic Controllers Association (NATCA)
Benoit Legault	CMC
Bill de Groh	APA
Bill Tuccio	Garmin
Bradford Miller	FAA
Collin Ogden	Collins Aerospace
Craig Boxrucker	ALPA
Daniel Nelson	NATS
Davide Ferraro	Leonardo Company
Daxil Patel	Collins Aerospace
Dinesh Kumar Kushwaha	Collins Aerospace

Dimitri Garbi	EASA
Doug Phifer	FAA
Erik Ringnes	Honeywell
Francis X Govers III	Collins Aerospace
Guy Deker	Thales Group
Jeff Meyers	FAA
Joel Dickinson	FAA Flight Standards
John Barry	FAA Aircraft Certification
Jorge Alvarez	Wisk Aero
Kendal Hershberger	Garmin
Kevin Schwemmer	Textron
Mitch Narins	Strategic Synergies, LLC
Nat Beeten	US Air Force
Nick Tallman	FAA
Nico de Gelder	Netherlands Aerospace Center (NLR)
Monica Vafiades	US Air Force
Regina Richardson	Naval Air Systems Command (NAVAIR)
Reuss Anderson	Garmin
Shrivathsan Narayanan	Collins Aerospace
Silviu Ceparu	Bombardier Aerospace
Stephen Moody	Boeing/Jeppesen
Steve Horvath	Garmin
Tim Geels	Collins Aerospace
Tim Padden	US Air Force
Tom Yochum	Boeing
Toyohachi Yokota	Japan Radio Air Navigation Systems Associate (JRANSA)
Trent Prange	FAA
Valeriu Vitan	EUROCONTROL
Vijay Pisini	Collins Aerospace
Wes Googe	American Airlines

## **MINUTES**

### **Monday, August 19, 2024 – Working Group Sessions**

- WG#1 and WG#2: Continued resolving FRAC comments.
- WG#3: Continued developing Change Proposals and addressing Action Items.

### **Tuesday, August 20, 2024 – Working Group Sessions**

- WG#1 and WG#2: Continued resolving FRAC comments.
- WG#3: Continued developing Change Proposals and addressing Action Items.

### **Wednesday, August 21, 2024 – Working Group Sessions**

- WG#1 and WG#2: Continued resolving FRAC comments.
- WG#3: Continued developing Change Proposals and addressing Action Items.

### **Thursday, August 22, 2024 – Plenary**

- Preamble: At 8am the Plenary meeting opened with introductions, and overviews of policies and planned work for the week. Participation was in person and virtual via WebEx.
- Minutes: The SC-227 Plenary #39 Minutes from the Jan 29-Feb 2, 2024, meeting in Washington DC were reviewed and re-distributed for comments.
- WG#1 and WG#2 RNP for RNAV MASPS and MOPS status:
  - FRAC/OC is not finished. Therefore FRAC/OC could not be closed, and the documents could not yet be sent for publication. Virtual working groups and a virtual Plenary will be scheduled to finish by the November Plenary.
  - Open Action Item: WG#1 and WG#2 need to prepare a request to ICAO for permission to use specific material in ICAO documents. The request should be presented at the next Plenary.

- WG#3 Data Driven Charts/Electronic Aeronautical Chart Displays MOPS:
  - C10154 Update to Executive Summary: Reviewed and approved.
  - C10139 Address EMD decluttering vs DDC: Reviewed and approved
  - C10039 Aerodrome Moving Map Display: Reviewed and approved after removing reference to heliports and vertiports.
  - AI/C10148 DO-257B/ZZT EMD/EACD Headings, Voice, Consistency Review (Summary): Overviewed and approved, with review of detailed changes to occur in the upcoming RAC.
  - C10125 Verify how DO-ZZT EACD vs static/fixed vs DDC is used throughout the document: Reviewed and accepted
  - C10150 EACD 2.6.2.2.2.3 verify item #4 verify to add to EMD: Reviewed and accepted, in conjunction with adding an action item.
  - C10118 Define EFB: Reviewed and approved.
  - C10151 Zoom, Pan, and Range: Reviewed and approved.
  - C10107 Standard Symbols: Reviewed and accepted.
  - C10152 Ownship: Accepted in conjunction with AI/CI10148.
- Thursday's Plenary concluded.

### **Friday, August 23, 2024 - Plenary**

- At 8am Plenary resumed.
- Minutes: The SC-227 Plenary #39 Minutes from the Jan 29-Feb 2, 2024, meeting in Washington DC were accepted.
- Next meetings
  - Virtual Plenary: Friday, October 18, 2024, tentatively 10am-12:00 Eastern?
  - 2024, Nov. 18-22, Brussels, confirmed
    - Monday, Nov 18<sup>th</sup> at EuroControl, only one room is needed
    - Tuesday-Friday, Nov 19<sup>th</sup>-22<sup>nd</sup>, at EASA (Plenary Wednesday afternoon, Thursday and Friday)

- 2025, Feb 3-7, Wash DC, RTCA, location confirmed
- 2025, May 19-23, location **not** yet confirmed (tentatively Wash DC, RTCA, and October 31<sup>st</sup> is the last date to propose an alternative location)
- 2025, August 18-22 (tentatively Wash DC, RTCA, and April 30<sup>th</sup> is the last date to propose an alternative location)
- 2025, November 17-21 (no location discussed yet)
- WG#3 (DO-ZZT)
  - C10061 Display Characteristics from Database: Reviewed and accepted in conjunction with adding new action items.
  - C10031 Design Assurance Level: Reviewed and accepted.
- Action Items:
  - For WG#1 and WG#2, draft TOR changes for new scope, after publishing DO-236E and DO-283C,
    - To make recommendations jointly with WG-85 to strengthen requirements for multi-sensor navigation
    - For manufacturers to work directly with MITRE with mutual benefit to all parties to
      - Validate MASPS/MOPS requirements in MITRE simulations, analogous to what MITRE did for SC-186, to determine whether new requirements are needed or whether existing requirements need changed or could be relaxed (e.g. 1% ETA and TOAC).
      - Develop common set of dynamic test scenarios for manufactures to use in approving RNP Equipment for TOAC and 1% ETA.
      - MITRE results will guide FAA ConOps and Airspace planning.
  - WG#1 and WG#2 need to prepare a request to ICAO for permission to use specific material in ICAO documents. The request should be presented at the next Plenary.
- New Business: Per the immediately preceding Actions Items



- Plenary concluded.
- WG#1 and WG#2 continued in working group (not plenary) FRAC/OC resolution of RNP MASPS and RNP MOPS

**Webex/Meeting Adjourned**