



EUROCAE WG-117 / RTCA SC-240 WG meeting minutes

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EUROCAE WG-117 / RTCA SC-240 Topics on Software Advancements (TOSA) Plenary Meeting 9 WG meeting minutes

	Date	Name	Signature
Approved			
Reviewed			
Prepared	8/12/2021	Andrew Hoag	

MINUTES
Tuesday 7 December 2021
0900 EST

EUROCAE WG-117/RTCA SC-240 Topics on Software Advancement (TOSA) chairs: Steve Cook and Burak Ata.

EUROCAE workspace URL: <https://join.eurocae.net/WorkspaceSelector>

RTCA workspace URL: <https://aeropus.i3cloudservices.com/>

Plenary #9 was hybrid (virtual and in-person at RTCA, Washington, DC). The meeting was scheduled for one day, 7 December 2021 and detailed in the Meeting #9 calling notice sent via e-mail. The virtual meeting was held via WebEx. A joint SG meeting was held on Monday 6 December 2021 to prepare for the plenary.

1. 0909 Welcome, Introductions

Steve Cook and Burak Ata kicked off Meeting #9 noting that this was the second hybrid meeting as COVID-19 has impacted previous meetings of WG-117/SC-240. The team looks forward to additional in-person meetings.

Newcomers at the start of the meeting included Brenda Ocker (Federal Aviation Administration FAA) and Christoph Dörhöfer (Amazilia). The chairs and members of the WG/SC welcomed the new contributors.

Day 1 Agenda

- Welcome/Introductions [All]
- Review of RTCA and EUROCAE Policies and Expectations [Sebastian/Rebecca]
- Review and Adoption of Agenda [Ata/Cook]
- Approval of minutes of previous meeting and status of action items [Ferrand/Hoag]
 - Actions updates
- Management team general information
- Break
- SG-1 Status, Issues, Way Forward [Hannan/Stempel]
- SG-2 Status, Issues, Way Forward [Lillis/Serrot]
- Consider a motion to initiate OC/FRAC on the SG-2 Document
- Review of Actions
- Date of Next Meeting
- Any other business
- Adjourn

2. 0912 Review of RTCA and EUROCAE Policies and Expectations

Rebecca Morrison and Sebastian Reschenhofer reviewed the RTCA and EUROCAE policies and expectations to all present. This included:

- RTCA Anti-Trust Policy
- RTCA Proprietary Policy (*note: expected update and FAQ around January 2022*)
- There were no questions on RTCA policies.
- EUROCAE IPR Policy (intro, ownership)
- RTCA Committee Participation Membership Policy
- Participation in EUROCAE WGs
- EUROCAE GDPR and Privacy

There were no questions or additional discussion regarding the RTCA and EUROCAE policies and

expectations.

3. Review and Adoption of Agenda

The proposed agenda for Plenary #9 was adopted without objection.

4. Review of minutes of previous meeting/s and status of action items

Andy Hoag reviewed the minutes of Plenary #8.

Steve Cook made a motion to approve the minutes of Plenary #8, Burak Ata seconded.

Action Items Status

- Action #10 – no comments or questions, closed.
- Discussion on timing, references, and multiple documents:
 - Scott Beecher noted that this is a challenge/stretch. Steve agreed. Discussion: move forward without references to the lower risk, then when it is complete go back and add the references.
 - Martha asked if people would have to buy the document twice – Rebecca and Sebastian will investigate document options for purchase of the SG-2 supplement should we publish without the lower risk. **(New Action #21)**
- Action #17 – Closed. Steve noted there is no reason to keep this action open. There were no objections.
- Action #18 – Steve and Burak met with the SG1 leads on 22 October 2021 and SG2 on 25 October and discussed the details of the EASA/FAA slides. Additionally, the authorities provided input more specific to SG1 on Monday 6 December.

The consolidated action item list is attached in Table 1 and includes actions open and closed in Plenaries 8 and 9.

5. 0939 Management Team Information

Our colleague and contributor Fabrice Ferrand has passed and will be greatly missed. A card from the working group was delivered on 24 November.

The management team noted that the RTCA PMC is on 16 December 2021. Regarding delivery, Steve emphasized that the WG/SC must get usable documents out to the community. Steve affirmed that FAA's position is not to comment if the document is ready for FRAC/OC or not.

6. 0941 Status of SG1

Todd presented SG1 status. SG1 is now using a “compartmentalized” approach on text. Last week has put attention on the SG2 document. Immediately after plenary the team will resume focus on SG1.

Burak opened and reviewed the latest IP status log in the meeting.

7. 0955 15-minute break

8. 1015 Status of SG2

Patrick presented SG2 status including the updated SG2 slides. The team put in a lot hard work over three days of review sessions leading to significant document maturity. However, the SG2 team consensus is “we are not ready to enter FRAC.”



Plenary #9 : SG2 status

OTS sections and associated annex

- The DO-178C/DO-278A Supplement intent is not being met with respect to the “Add, Modify, Delete” aspect as currently the document it is only limited to just the Annex Tables. There are many sections in the document that do not appear as a reference in the annex tables, but one needs to be provided information to know whether the information is replacing or in addition to its core (one such example is section 2 data).
 - Annex Tables 1-11 are currently not clear on how to use these. It comes across that you have to do all DO-178C objectives and then extra OTS ones.
 - Annex Table – Current table of objectives is not correct for DO-278A. DO-278A has its own COTS specific objectives from section 12 and should not be referencing the normal Table A-1 through A-10. This may force the table objectives into separate appendices for each core document.
 - Need to double check to make sure if claiming both DO-178C and DO-278A that the sections are indeed the same. If they are not, need to have some type of indication which is DO-178C and which is DO-278A, which would force quite a bit of duplication. And will eventually need to add in LR which will have totally different numbering than DO-178C and DO-278A.
 - Not clear what sections are from DO-178C or DO-278A .
 - Potential solution may be to have separate set of tables for each core document
 - Structural Coverage (and MC/DC) equivalence concerns are not addressed

Patty commented on the case of “what happens when you don’t have the source code” for the OTS slide as many COTS tools do not provide source code. Patty noted that for level C there is statement coverage, data and control coupling. Those items have not been addressed when source code is not available.

There was a discussion regarding potential title changes. Rebecca noted on any potential title change that SG2 should be following RTCA/Eurocae guidance documents. Titles cannot change without a change to the terms of reference. Anything submitted must align with the terms of reference. **(New Action #22)**

9. 1040 Consider a motion to initiate OC/FRAC on the SG-2 Document

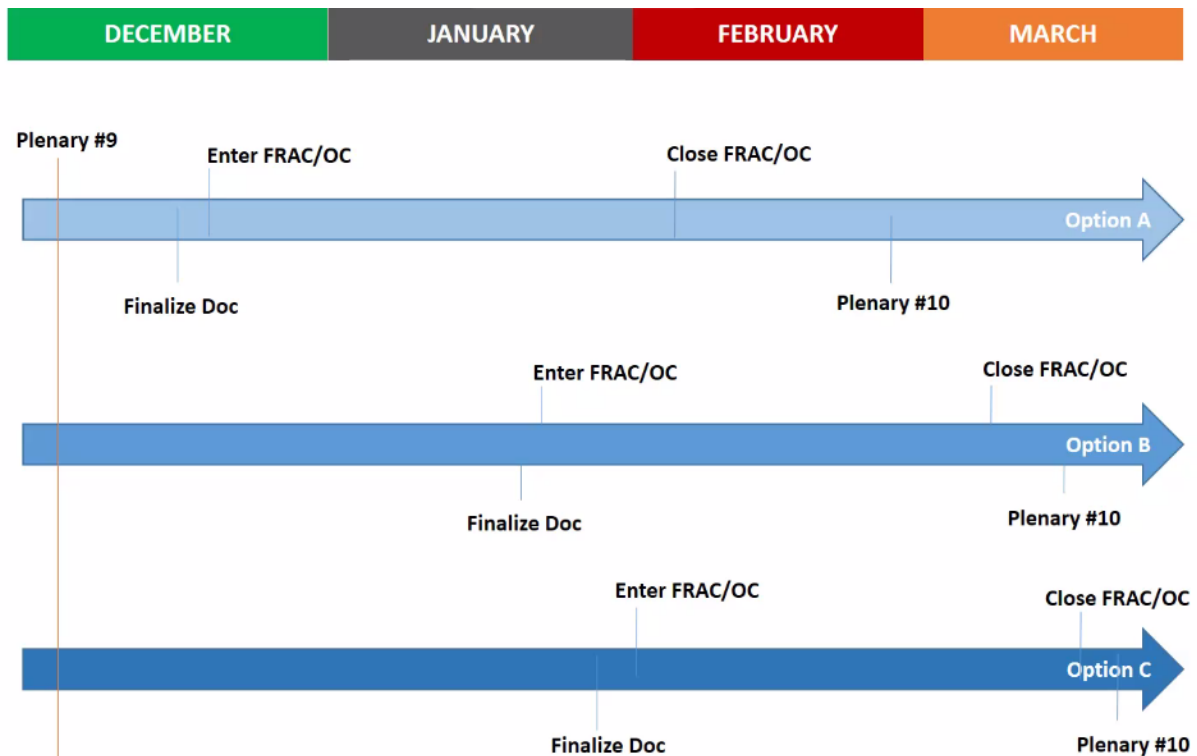
Andy made a motion to enter FRAC (final review and comment) and OC (open consultation) for the SC-240 and WG-117 SG-2 document.

Burak seconded this motion.

Steve presented “Entering FRAC/OC on SG-2 Document – Rationale”

- Document does not need to be perfect in order to enter FRAC/OC
- Content can be added, deleted, and modified in response to comments during FRAC/OC
- Beneficial to show progress to RTCA, EUROCAE, broader community
- Obtain broader review and prompt feedback
- If needed, less mature work can be deferred to future revisions of SG-2 document (e.g., compatibility with SG-1 document, service history guidance, addressing DO-178C Levels A and B) (to be confirmed)
- Requirement of 45 days for FRAC/OC plus about 2 weeks needed for leadership to review and address comments (process needs to start at least ~60 days before next Plenary)

Steve presented a notional schedule of options (A, B, and C) highlighting when the document could be finalized in a schedule.



Discussion from WebEx chat and on call:

- Martha asked about not entering FRAC until the end of January.
- Tammy noted that this should be a consensus vote.
- Martha noted that we will have thousands of comments.
- Dewi had a question on the process – why not wait until the end of January?
- Julien noted that an immature document could affect acceptance for a long time.
- Scott noted that entering FRAC for a future state of the document is not reasonable.
- Patty noted that this [timeline] could end up taking even longer than waiting for a mature document.
- Jim noted that previous committees group votes were used to move to FRAC.
- Haruka noted that consensus is needed.
- Howard noted that entering FRAC against the wishes of the volunteers may be demotivating.
- Todd noted that SG-1 has provided comments and suggested resolutions to SG-2.
- Martha asked Todd for clarification on SG-1 comments.

Objections to SG-2 entering FRAC/OC from WebEx chat or on call:

- Tammy
- Dewi
- Martha
- Jeremy
- Patty
- Andreas
- Werner
- Blake
- John
- Julien
- Jim
- George
- Howard

The WG/SC chairs decided to take a quick break and will resume the discussion on OC/FRAC of the SG2 document after.

10. 1105 15-minute break

11. 1120 return from break – resume Consider a motion to initiate OC/Frac on the SG-2 Document

Steve restarted the plenary.

Andy withdrew the motion to enter FRAC/OC for the SG2 document.

Dewi asked when the next plenary would be or agree on a date. Action 23 was opened to find a date for the next plenary. **(New Action #23)**

12. Review of Actions, Date of Next Meeting, Any other Business

Andy reviewed the actions created in Plenary #9.

- Action #21 - Understand the impact on the purchase of the SG-2 supplement should we publish without the lower risk. (Do non-members need to purchase it twice?)
- Action #22 - Updates to document title in terms of reference (service history) - coordinate with PMC agenda
- Action #23 - Burak and Steve to align with subgroup leads on a date for next Plenary. Sebastian and Rebecca will come up with a compromise that will help Martha as well in templates.

The consolidated action item list is attached in Table 1 and includes actions open and closed in Plenaries 8 and 9.

13. 1150 / 1750 CET Adjourn

The management team thanked all for their continued support and contributions and wished everyone a happy holiday season.

End of Plenary 9 / Meeting 9

**Table 1: Consolidated Action Item List, Plenary 8 – Plenary 9
(actions open; actions closed in Plenary 8 – Plenary 9)**

Action	Opened	Description	Assigned to	Due	Status	Closed
10	Plenary #5	Subgroups to define relationships (giver/receiver)	Stempel, Serrot	26-Aug-2021	Closed	Plenary #9
17	Plenary #7	SG leadership meeting - meet with leads to harmonize the schedule	Ata	5-Aug-2021	Closed	Plenary #9
18	Plenary #8	Burak and Steve to meet with Subgroup leads to develop the "flight plan" on EASA and FAA comments	Cook, Ata	14-Oct-2021	Closed	6-Dec-2021
19	Plenary #8	Present original concept at Plenary #9	Hannan	Plenary #9 (Moved to Plenary #10)	Open	
20	Plenary #8	RTCA and EUROCAE brief on FRAC and OC process and details	Morrison, Reschenhofer	Plenary #9	Closed	6-Dec-2021
21	Plenary #9	Understand the impact on the purchase of the SG-2 supplement should we publish without the lower risk. (Do non-members need to purchase it twice?)	Morrison, Reschenhofer	Post-document approval for publication	Open	
22	Plenary #9	Updates to document title in terms of reference (service history) - coordinate with PMC agenda	Management team	Coordinate with PMC	Open	
23	Plenary #9	Burak and Steve to align with subgroup leads on a date for next Plenary. Sebastian and Rebecca will come up with a compromise that will help Martha as well in templates.	Cook, Ata	14-Dec-2021	Open	

GLOSSARY OF TERMS, ABBREVIATIONS, AND ACRONYMS

This table is intended as quick reference only for minutes and does not supersede respective authoritative sources.

SC-240/WG-117 SG-1/SG-2 developed a Common Glossary available in the SG-1 workspace.

Term	Usage	See Also; Context
AL	Assurance Level	DO-278A/ED-109A
COTS	Commercial off-the-shelf	
DAL	Design Assurance Level	DO-178C/ED-12C
GA	General Aviation	
EASA	European Union Aviation Safety Agency	
EASA SORA	EASA Specific Operations Risk Assessment	
FAA	Federal Aviation Administration	
FAA MOSAIC	FAA Modernization of Special Airworthiness Certification	
FAS	RTCA/EUROCAE Forum for Aeronautical Software	
FRAC	RTCA Final Review and Comment	
HLR	High-Level Requirement	
IP	Information Paper	
IPR	Intellectual Property Rights	
ISRA	Inter-Special Committee Requirements Agreement	
LLR	Low-Level Requirement	
OC	EUROCAE Open Consultation	
OTS		
PDI	Parameter Data Item	DO-178C/ED-12C
PMC	Program Management Committee	
SC	Special Committee (RTCA)	
SG	Subgroup	
SW	Software	
TOSA	Topics on Software Advancement	
WG	Working Group (EUROCAE)	

ATTACHMENT A**WG-117/SC-240 Meeting 9 Attendance**

Surname	Firstname	Organization
Ata	Burak	Volocopter
Auzary	Odile	Safran
Bath	Patty	AVISTA, Inc
Beecher	Scott	Pratt & Whitney
Blankenberger	Martha	Rolls-Royce PLC
Bourdeau	Julien	Aviadal Consultants
Chelini	Jim	VEROCEL, Inc.
Conner	Blake	Collins Aerospace
Cook	Stephen	Northrop Grumman Corporation
Crestey	Francoise	Collins Aerospace
Daniels	Dewi	Aeronautiques Associates
Darwin	Keith	Garmin Ltd.
De Givry	Romain	FlyingBasket
Delmas	Christophe	Thales Group
Dörhöfer	Christoph	Amazilia Aerospace GmbH
Dutle	Aaron	NASA
Diggikar	Amit	Lockheed Martin
Dykes	Matthew	Textron
Fabre	Louis	Airbus
Fisch	Johannes	Lufthansa
Freese	Dietmar	EASA
Ghimire	Ritesh	Federal Aviation Administration (FAA)
Grady	Kat	Joby Aviation
Hahn	Ed	Air Line Pilots Association (ALPA)
Hartl	Andreas	Telcoadvice consulting services
Heude	Pascal	Airbus
Hoag	Andrew	Aireon, LLC
Holman	Jeremy	Garmin Ltd.
Iwaszkiewicz	Tomasz	VEROCEL, Inc.
Lillis	Mark	Triumph Engine Control Systems
Loewen	Howard	MicroPilot
Maurizio	Bernard	LEONARDO SpA
Melia	Gabriele	EASA
Melles	Amanda	Mannarino Systems & Software, Inc.
Minsker	Uzi	Israel Aerospace Industries LTD (IAI)
Momberg	Martin	Airbus
Morrison	Rebecca	RTCA, Inc.
Nakao	Haruka	Japan Manned Space Systems Corp (JAMSS)
Ocker	Brenda	Federal Aviation Administration (FAA)
Rai	Malkit	General Atomics Aeronautical Systems, Inc.
Reeve	Tammy	Patmos Engineering Services, Inc.
Reschenhofer	Sebastian	EUROCAE
Romanski	George	Federal Aviation Administration (FAA)
Sakugawa	Benedito	Agência Nacional de Aviação Civil (ANAC-Brazil)
Schauer	Werner	Frequentis AG
Serrot	Patrick	Thales Group
Snider	Tom	Honeywell International, Inc.
Soudain	Guillaume	EASA
Stempel	Todd	ENSCO, Inc.
Tudor	Nick	D-RisQ Ltd
Vukas	Mike	Federal Aviation Administration (FAA)
Waddle	John	Astronautics Corporation of America
White	Jeff	Amazon Prime Air

1. Records and control of the document

Revision	Description of changes	Author	Location	Comments
1.0	Initial version	Andrew Hoag		