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RTCA Paper No. 157-21/SC216-123

Saint Denis, 22 June 2021  
Washington, 22 June 2021

**EUROCAE WG-72 Plenary Meeting #62 / RTCA SC-216 Plenary Meeting #53  
“Aeronautical Systems Security”**

<b>Date</b>	<b>11 June 2021 9:00am – 3:00pm Eastern 1400-2000 Central Europe</b>
<b>Place</b>	<b>Virtual Meeting-Webex</b>
<b>Venue</b>	
<b>Hosted by</b>	<b>RTCA</b>

**Attendance:**

	<b>Contact</b>	<b>Organisation</b>	<b>11th June</b>
	Aaron Renshaw	American Airlines	
	Adrian Waller	Thales	X
<b>AC</b>	Alain Combes	Airbus	X
	Andy Boff	Egis Aviation	X
<b>AG</b>	Anna Guegan	EUROCAE	x
	Armelle Gauthé	Airbus	X
	Caroline Prado	The Boeing Company	X
	Casey Thiesen	United Airlines	x
	Christian Haury	SAFRAN	x
<b>CG</b>	Clive Goodchild	BAE Systems	X
<b>CR</b>	Cyrille Rosay	EASA	X
DP	David Pierce	GE Aviation	X
<b>JB</b>	Dr Jonathan Branker	FAA	X
	Ed Hahn	ALPA	X
	Eric Mok	Universal Avionics	X
	Garv Stephenson	Wisk Aero	X
	Gilles Descargues	Thales	X
	Imran Akhter	NATS UK	X
	Jakub Kunat	Egis Aviation	X
JH	Jerry Hancock	Inmarsat	X
<b>JF</b>	John Flores	FAA	X
	Judicael Gros Desirs	Airbus	X
<b>KH</b>	Karan Hofmann	RTCA	X
<b>KL</b>	Kristof Lamont	EuroControl	x

	Laurent Leonardon	Collins Aerospace	X
	Mark Perini	Honeywell International	x
<b>MG</b>	Manon Gaudet	IATA	x
	Mariusz Pyzynski	IATA	X
	Mark Kelley	AVISTA	X
	Martin Call	Boeing	X
<b>MW</b>	Matthieu Willm	Dassault Aviation	x
<b>MT</b>	Mitch Trope	Garmin	X
	Mohammed Waheed	Aviage Systems	X
<b>PW</b>	Phillip Watson	Panasonic Avionics	x
	Poliana de Moraes	Embrear	x
	Rosemberg Silva	ANAC Brazil	X
	Sam Masri	Honeywell	X
<b>SN</b>	Siobvan Nyikos	Boeing	x
<b>SS</b>	Stefan Schwindt	GE Aviation	x
<b>TK</b>	Ted Kalthoff	NIAR	X
	Ted Patmore	Delta Airlines	X
<b>VK</b>	Varun Khanna	FAA	X

## Introductions

- Dave Pierce (DP) welcomed participants and introduced agenda. He asked participants to bring up any additional topics as necessary.
- Cyrille Rosay (CR) stated the EASA Opinion on Part IS (Information Security) has just been published, (Link was shared in the chat: "<https://www.easa.europa.eu/document-library/opinions/opinion-032021>")
- DP made a motion to accept the previous meeting minutes as posted on RTCA and Eurocae website. Minutes were approved by unanimous consent.
- Karan and Anna presented the RTCA and EUROCAE anti-trust, IPR, GDPR, participation and membership policies.
- DP facilitated participants introductions

## Subgroup Reports

### Subgroup Report SG2 K Lamont on ED-205A/DO-393

- Kristof Lamont (KL) presented the progress in SG2. Good progress has been made.
- Chapter 2 is now fully reviewed, and chapters 1 and 3 review will continue through June
- Next version is planned to have a scoring recommendation for Likelihood to ensure a level playing field
- Searching for volunteers to further finetune Appendix B. ATM/ANS organizations are encouraged to review and comment.
- OC/FRAC planned for end of June but might slip to end of summer
- A lot of discussion yesterday was around the maturity model.
- Any questions or comments?
  - None were raised
- DP followed with a comment that the group has a plan for getting into FRAC.

### Subgroup Report SG4 S Schwindt on ED-201A/DO-391

- Stefan Schwindt (SS) gave an overview of the progress on ED201A, one issue is that only small handful of groups responded, a lot of comments from the editors and were mainly aircraft centric
- The one NC has been resolved
- High comments have been resolved. Need an agreement on the resolutions with the commenters. The rest of the medium comments are largely a repeat of the H comments or changes that do not require a change of intent
- Editorial team to establish concrete comments, and then coordinate a follow-on meeting to discuss and approve the changes
- There is a final chance for input from aerodromes and ATM/ANS for scope, aerodromes and MRO for assurance. Searching for volunteers to contribute to aerodromes and ATM/ANS for chapter 3 scope, aerodromes, and MRO for assurance. ATM/ANS organizations are encouraged to help.
- Clive Goodchild (CG) mentioned he had raised MRO with ADS, Ted Kalthoff (TK) has also raised issue, else those sections on MRO and aerodromes will be removed
- Chapter 3 scope and examples will be updated to reflect any feedback which participants provide. One final week is available to provide an input.
- Haven't discussed all the Medium documents but it is proposed to resolve that at editorial and then provide feedback to commenters
- CG raised the issue on target dates for actions performed by the subgroup:
  - The subgroup wants to have resolutions for all comments by 2<sup>nd</sup> July
  - Matthieu Willm (MW) was asked to coordinate response for material originally provided by Dassault Aviation
  - Once received start building/update
  - Then schedule meeting
  - Agreed to include the new appendix as a compliance matrix

- It is recommended to publish after comments are disposed
- CR raised the question on any delays on publication
- Plan for a consensus vote in September and would go to PMC in December. Karan Hofmann (KH) will need 6 weeks before PMC
- Anna Guégan (AG) added that planned publication date for EUROCAE is Dec 2021
- SS and DP explained the consensus and voting process for publication
- KH added that this concurrence or non-concur needs to be a company position

### Subgroup Report SG3 A Combes on ISEM ED-204A

- Alain Combes (AC) provided an update on the ISEM document progress, including updates regarding scoring and non-scoring methodologies. Version seven of the document was produced in two steps. During the review this week, the vulnerability scoring methodologies were reviewed. The subgroup also had a discussion around the normative and information parts of the document. There are 7 outstanding comments, of which there are two NC and 1 H still to resolve.
- Remaining topics to be addressed include normative/informative parts. An added appendix may be an option. This will need to be discussed with the chapter leads.
- Chapter 5 requires an update with the latest information and to potentially include Appendices for the methodologies as an option.
- For record keeping, the five-year retention time is needed to improve event record keeping material
- There needs to be a clean-up and check of general consistency in the document
- SS raised the comment that the published record keeping text does give us the flexibility we want for record keeping, and that performance objectives should be provided.
- ISEM is currently schedule for FRAC/OC is September 2021
- Would like V8 to be ready 2 weeks before September plenary, with an OC decision in September
- Still on plan as per the TOR
- AC and DP thanked the participants for their contributions
- CR asked that the slides be included in in the pack
- Matthieu Willm (MW) asked whether V7 will continue to be available for review until the end of July, confirmed
- MW still needs access to the SG 3 area

### Interactions with other working groups

- SC-236/WG-96
  - DP gave an update and agreement is in place on the way forward
  - Anna Guégan (AG) added that the situation is that there is a leadership issue and has not been approved by the TAC. Eurocae and RTCA have the same issue.
- AIA
  - Siobvan Nyikos (SN) explained AIA and ALPA are working on joint paper addressing human factors and will be broken down into short term and long-term recommendations. A mature draft is expected mid-July, and a new comment period will then commence. Still expecting to publish Q3 2021.
  - CR indicated that manufacturer aspects to this topic are interesting to EASA
- SAE G-32
  - SS explained that there is no major update from status at last plenary, still working the comments on the ballot. First draft expected Q1/2022 and may overlap what RTCA/EUROCAE has produced,
  - Varun Khanna (VK) mentioned that there is an SAE committee that maybe redefining the ACD. VK will forward to SS an email enquiry regarding this. G-32 wants to provide guidance suitable for aviation, It may be worth reading G-32 for additional information
- SAE E-36

- SS presented a report on the SAE E-36 group. The group is working on AIR7368 best practices around cyber security for propulsion. The document will provide airworthiness security process overview, assurance for propulsion, and maintenance, Has best practices and resources. Target for ballot is 2022
  - DP would this be correct to say it is an application of DO-356 in the propulsion context,
  - SS Yes to provide more specific guidance in propulsion terms, who also use different standards. VK expressed concerns about having a multitude of definitions.
  - SS – should this be joint with EUROCAE?
  - CR is there an equivalent of the SAL?
  - SS They should be the same, unless it does not work in propulsion, e.g aircraft and system as they don't have those levels
  - Ted Patmore (TP) – will this have any impact on software loading standards?
  - SS would expect to be referencing as a best practice ARINC 645/842 etc. It will not drive new ARINC standards
  - TP process changed that will need to be managed
- SAE G-34/WG114
    - CG explained - The groups are tackling artificial Intelligence with a safety focus, and primarily Machine Learning (ML). There is no major update and we a tracking this to see if the process they use shows a gap in the current ED/DO standards
    - The subgroups are starting to work text, and are grappling with issues such as the perimeter of the ML item. There are three groups looking at assurance
    - There are some useful webex held, forthcoming one around EASA ML guidance
    - The challenge will be around the introduction of machine learning items, that can still learn in operation
    - CR mentioned there is a working group active and the roadmap
      - <https://www.easa.europa.eu/newsroom-and-events/news/easa-publishes-second-joint-report-learning-assurance-neural-networks>
    - VK added that nondeterministic (AI) type of security measures are a concern and we should be alert for them. We need to be sure that nothing is introduced in the system that we have not tested for. Clive added that the focus of the group is safety and not cyber security.
- ECSCG
    - CR gave an update on the ECSCG. There has been a coordination meeting held between WG-105, ECSCG, EASCG, EUSCG
    - Meeting to be held every three months
    - A main output of last meeting involved a gap analysis to prioritise what standards are required. Supply chain is one of the high priority areas
    - SS mentioned that the rolling development plan will be updated at next week's meeting

### **Calls for expression of interest**

- We will need a new WG-72 Secretary and ED13 Editor September onwards. CG gave an update of the roles and workload. KH mentioned that as ER13 is now a joint document, RTCA can also provide editor
- If people require further information, contact CR/CG with a view to have positions resolved at September meeting

### **ER-13A Approval for publication**

- AG and KH have put in the right format
- For RTCA, the document will be approved by PMC and will get a reference number, and will be available free on the public site
- AG The differences were some spelling and to include it is now a shared document and shared the document for the group to see.
- DP asked if there is any dissent to republish the document. No dissent was noted. Document agreed to be re-approved for publication

- ED-013A RTCA will use RTCA Paper No. 120-21/PMC-2151

### **Update on the aviation cybersecurity environment – C. Rosay / V. Khanna**

- EASA
  - CR gave update of the regulation situation, The opinion is now published
    - <https://www.easa.europa.eu/document-library/opinions/opinion-032021>
  - In May 2021 the means of compliance was published for VTOL
    - <https://www.easa.europa.eu/document-library/product-certification-consultations/special-condition-vtol>.
    - Special condition was used for GA (23.115)
  - Global AMC-20-42 also references ED/DO documents.
- FAA
  - VK explained that the rule wording has been submitted, and the new rule is expected the middle of next year. Along with it there will be an AC that invokes all the RTCA documents. Unmanned cargo planes are being proposed and for these, cyber security will need to be addressed, (large cargo 757 size)
  - Additional work being done on best practices and dissemination
  - UAM is also being looked at

### **New Business**

- **Date of next meeting**
  - September 13 to 17- likely to be a hybrid/virtual meeting– Washington for RTCA, and Europe for EUROCAE, to be reviewed and fixed by end of the month.
    - Venue in Europe – Cologne
    - Venue in USA - DC
  - December 6<sup>th</sup> to the 10<sup>th</sup> EUROCAE
    - 205A should have completed FRAC
    - 206 may also be in the same position
- AOB
  - Meetings for next year, dependent on completing the current documents and possible new areas – cargo/supply chain
  - KH and AG thanks to the group, which was echoed by VK

Meeting closed 18:06 European time/ 12:06 EDT.