



EUR 344-23 / WG82-122
RTCA Paper No. 257-23/SC222-118

Saint-Denis, 4 October 2023
Washington, 4 October 2023

EUROCAE WORKING GROUP 82 (WG-82) (Meeting #63) “New Air-Ground Data Link Technologies” and RTCA SPECIAL COMMITTEE 222 (SC-222) (Meeting #53) Aeronautic Mobile Satellite (Route) Services (AMS(R)S)	
Date	25 July 2023 (10:00 am – 12:00 pm EDT) – (16:00 – 18:00 CEST)
Place	Virtual: WebEx
Hosted by	EUROCAE

Participants:

Name	Organisation
Adam Sarhage	Garmin
Alan schuster-bruce	INMARSAT
Craig Scheffler	WISK AERO
Hiroshi OKOCHI, JRANSA	JRANSA
Karan Hofmann	RTCA
Mark WATSON	EUROCAE
Michael Gertsman	Squarepeg
Michael W Hooper	Iridium
Radek Zaruba	Honeywell
Ravi Jain (FAA/AIR)	FAA
Sam Weich	Ligado

1) Welcome, Introductions, Administrative Remarks by Special Committee Leadership

Mike Hooper (Co-Chair SC-222) welcomed the group and the Chair of WG-82, Radek Zaruba.

Karan Hofmann and Mark Watson informed about the anti-trust policy, IPR policy, and call and participation membership policy for RTCA Special Committees (SC) and EUROCAE Working Groups (WG).

2) Approval of the Agenda

After a round table, Mike Hooper introduced the proposed agenda of the RTCA SC-222 / EUROCAE WG-82 Plenary meeting. The final agenda looks as follows:

AGENDA

25 July 2023 (10:00 am – 12:00 pm EDT) – (16:00 – 18:00 CEST)

Welcome, Introductions, Administrative Remarks by Special Committee Leadership

- **Government Authorized Representative (GAR): Ravi Jain**
- **Co-Chair RTCA SC-222: Michael Hooper, Iridium**
- **Co-Chair RTCA SC-222: Alan Schuster Bruce, Inmarsat**
- **Chair EUROCAE WG-82: Radek Zaruba, Honeywell**

1. **RTCA/EUROCAE Opening Material**
2. **Review Agenda**
3. **Review Minutes from previous meeting and Actions**
4. **Review of DO-262F/ED-243C Change 2 for possible release for Final Review and Comment / Open Consultation (FRAC / OC)**
5. **Approve release of DO-262F Change 2/ED-243C Change 2 for FRAC / OC**
6. **UAV C2 in MOPS and MASPS Follow Up**
7. **Any Other Business**
8. **Review Action**
9. **Set Future Meetings**
10. **Adjourn**

3) Review Minutes and Actions

The minutes of the last meeting were reviewed and approved as accurate and accepted. No actions were closed during this meeting. (See Action items section at the end of this document.)

4) Review of DO-262F/ED-243C Change 2 for possible release for Final Review and Comment / Open Consultation (FRAC / OC)

Mike Hooper presented items that were noted in the DO-262F/ED-243C Change 1 that are not correct:

- Mis referenced table number
- Table title
- Incorrect numbers in Table F-28
- Wrong number “types”
- References to wrong sections

These should be corrected for more accuracy.

Noted that both EUROCAE WG-82 Task Sheet and RTCA SC-222 ToR were approved for this deliverable.

5) Approve release of DO-262F Change 2/ED-243C Change 2 for FRAC / OC

The group discussed Change 2 to correct these items and agreed of the format and content.

The consensus of the group was to release Change 2 for FRAC/OC.

6) UAV C2 in MOPS and MASPS Follow

Radek Zaruba presented conclusions of the ad-hoc meeting held on July 17th to discuss potential scope of C2 related work to be done by WG-82 / SC-222. The conclusion of that meeting was, that the C2 requirements and solutions are

not mature enough to do any work on AMS(R)S MOPS and MASPS at this stage.

7) Review Action

No new actions were recorded during this meeting.

8) Set Future Meetings

Conduct Doodle Pole to set closing FRAC/OC resolution Plenary. Aim for late September / early October.

Agenda will include some WG-82 specific topics.

9) Adjourn

Action items

RTCA SC-222/EUROCAE WG-82 52th meeting: 28.09.2021

Action #	Content	Responsible	Deadline	Status
A52-02	Inmarsat to provide a presentation on the possible interest in covering UAS C2-link at the next meeting.	Alan Schuster Bruce	Next meeting	Closed
A52-03	<p>Guillaume De Bony De Lavergne (Airbus) to prepare a presentation on the possible impact on MASPS and MOPS of the automated data download for TRFD (Timely Recovery of Flight Data).</p> <p>Discussion at Plenary February 2022: AIRBUS will inform about internal discussion on strategy results when available.</p> <p>April Meeting: Unchanged May/June/July/August/September Meetings: Unchanged April 2023: Alan will check with Airbus if anybody will support RTCA / EUROCAE WG.</p>	Alan Schuster- Bruce	Next meeting	Open

RTCA SC-222/EUROCAE WG-82 55th meeting: 8.02 -09.02.2022

Action #	Content	Responsible	Deadline	Status
A55-01	Present material on MOPS core part items to be updated	Honeywell (Radek Zaruba)	At the next meeting in March 2022	Closed
A55-02	Present details about 3 main items on Inmarsat MOPS (slide 4 on Radek's slide presentation); modifications will be captured in spread sheet for the discussion.	Honeywell (Radek Zaruba)	At next meeting in September 2022	Closed

A55-03	To identify which new material could be relevant for MASPS related to L-band Satcom C2 link. September meeting: Keep it open for next meeting. June 2023: Agreed to have a dedicated discussion on C2 strategy within WG-82/SC-222 and potential impact on MOPS, MASPS and ToR.	Alan Schuster Bruce	Next meeting	Open
A55-04	Ravi to send an invite on behalf sc-228 for having a discussion on the ISRA topic	Ravi	End of February	Closed
A55-05	To present material on CERTUS MOPS update	Michael Hooper	At the next Meeting in March 2022	Closed

RTCA SC-222/EUROCAE WG-82 56th meeting: 15.03.2022

Action #	Content	Responsible	Deadline	Status
A56-01	Define UAV service in DO-377 September meeting.: Unchanged. UAV service definition ongoing. Input from SATCOM experts needed.	Alan Schuster- Bruce/Mike Hooper	Next meeting	Open
A56-02	Coordinate with WG-105 on support of work of SC-228 on UAV C2-link in L-band using SATCOM links. April Meeting: First coordinate between Alan, Mike and Armin about what WG-105 is covering. May/June/July/September meetings: Unchanged August meeting: Wait until Alan is back.	Armin S.	asap	Open
A56-03	Check whether AMS(R)-S band can be used for C2-link July/September meetings: Unchanged	Alan Schuster- Bruce	For next meeting	Open
A56-04	Check whether AMS(R)-S band can be used for C2-link July meetings: Unchanged September meeting.: SARPs in final review for C2 link. It clearly defines AMRS frequencies for C2 link. Expect a ICAO paper from Mike to be distributed on this subject.	Mike Hooper	For next meeting	Open

A56-05	Provide chairman report on decision about UAV C2-link issue to PMC → Update of TOR of SC-222	Alan/Mike	End of April 2022	Closed
A56-06	MOPS: Update Generic Section 1 about wording related to ATN	Radek	Meeting 13 th April	Closed
A56-07	MOPS Core Part: Identify useful material to be kept (section 2 onwards). Especially dependencies to Appendices (D; E, F) have to be identified. July meetings: Unchanged September meeting.: New material on Appendices D and F for next meeting planned to be presented (Mike). June 2023: Agreed to close as there is no appetite to update core part in this update cycle.	Alan Schuster-Bruce/Mike Hooper	Next meeting	Closed
A56-08	Prepare presentation on end-to-end architectures for SATCOM (IP, ATN/IPS etc.)	Radek	Meeting 13 th April	Closed
A56-09	Send presentations provided to Armin for the minutes	Alan/Mike	18 th March	Closed
A56-10	Clarify mix up of ATS traffic (CPDLC), payload/mission traffic and C2-link com on the same satcom equipage level. April Meeting: Current TSO distinguishes between APC and ATS. Further to be considered in the committee. July/September meeting: Unchanged until C2-link issue discussed at next meeting.	Al Malaga	Next meeting	Open
A56-11	Clarify with EUROCAE procedure on Change 1 for MOPS April Meeting: EUROCAE Task Sheets to be updated and require TAC approval.	Karan	asap	Closed

RTCA SC-222/EUROCAE WG-82 57th meeting: 13.04.2022

Action #	Content	Responsible	Deadline	Status
A57-01	Anna Guegan to coordinate on Task Sheet update for MOPS Change 1 to prepare for next TAC	Anna Guegan	21.04.2022	Closed
A57-02	Karan to provide updated working schedule to include MOPS change 1.	Karan Hofmann	14.04.2022	Closed

A57-03	Mike Hooper, to send updated MOPS change 1 material to Alan and Armin	Mike Hooper	14.04.2022	Closed
A57-04	<p>Alan and Armin to upload MOPS change 1 material onto RTCA/EUROCAE workspace.</p> <p>May 2022 Meeting: WG-82: A new document item on change 1 can be added when TAC accepted Change 1 activity described in according Task Sheet. Same for RTCA.</p> <p>May 18th meeting: New folder on EUROCAE side will be created and material being uploaded.</p>	Alan Schuster-Bruce/Armin Schlereth	21.04.2022	Closed

RTCA SC-222/EUROCAE WG-82 57th bis meeting: 03.05.2022

Action #	Content	Responsible	Deadline	Status
A57-05	Check ETSI Requirements in Table F-18 on lists of Harmonics, Spurious and Noise Reqs for Tx Power limits	Mike Hooper, Johan Gericke, Richard Tapp	Before May Meeting	Closed
A57-06	Change 1 paper Section 6.1: Check -43 dBc and -60 dBc source	Mike Hooper	Before May Meeting	Closed
A57-07	Upload Change 1 paper onto RTCA workspace. Give it a WP number	Mike Hooper	Before May Meeting	Closed
A57-08	<p>MASPS: Annunciation to pilot for PVC voice failure within 90 seconds → Is it end-to-end or only related to the SATCOM system? Some more discussion needed, whether only SSP part or whole end-to-end link. Desirable to keep it within SATCOM system boundary.</p> <p>Some more guidance in MASPS would be desirable. Text like "SATVOICE being available as the sole voice LRCS" required?</p> <p>August meeting: For further discussion wait until Alan is back.</p> <p>September meeting.: Part of the dual SATCOM discussion.</p> <p>April 2023: Currently there is no requirement in ICAO AMS(R)S SARPS draft for voice availability monitoring. Action closed until / unless such requirement arises.</p>	Alan/Mike	At next Meeting	Closed

RTCA SC-222/EUROCAE WG-82 58th bis meeting: 18.05.2022

Action #	Content	Responsible	Deadline	Status
A58-01	Clarify with ETSI about test parameters for in-band blocking characteristics (ETSI 301 473 - Table 22)	Richard Tapp	Until July Meeting	Closed
A58-02	Radek to make a check on the mathematical correctness of the 25 seconds value as part of the proposed RSP160/20 term. July meeting: Proposal was RSP160/15 among several other options presented to SC-214/WG-78. No final decision at SC-214/WG-78 Plenary in June taken. Will be further discussed in SC-214/WG-78.	Radek Zaruba	Before June Meeting of SC-214/WG-82	Closed

RTCA SC-222/EUROCAE WG-82 69th bis meeting: 14and15.09.2022

Action #	Content	Responsible	Deadline	Status
A60-01	Prepare a presentation on outcome of SESAR Solutions 77/107 work	Radek Zaruba	Next meeting	Close
A60-02	Contact AIRBUS on Table E-5 on valid combinations of ACD services provided by an AES. Clarify whether triple stack will be supported by AIRBUS	Radek/Gary Colledge	OBE	Closed
A60-03	Distribute updated MOPS INMARSAT material April 2023: Updated versions provided in September 2022 and March 2023 through AerOpus.	Radek Zaruba	30.09.2022	Closed
A60-04	Comment on distributed updated MOPS INMARSAT material and send it to SC-222 and WG-82 chairs and secretariat.	all	18.11.2022	Closed
A60-05	Send group discussion results related to TAC DP 181 on common MOPS proposal for final review before sending it to Anna Guegan.	Armin	16.09.2022	Closed
A60-06	Review summary of WGs discussion results on TAC DP 181. (TAC proposal to develop new CMU standards.) April 2023: In September 2022 Armin collected feedback from the group and shared it with the TAC.	all	30.09.2022	Closed

A60-07	Invite EASA TAC member for the next meeting April 2023: There may be a joint meeting organized in the future organized by TAC.	Armin	30.09.2022	Closed
A60-08	Radek to prepare short presentation to explain header compression schemes April 2023: Radek Zaruba presented single slide explaining the different types of header compression in SB-S.	Radek	Next meeting	Closed

RTCA SC-222/EUROCAE WG-82 62nd meeting: 4-April-2023

Action #	Content	Responsible	Deadline	Status
A62-01	Assess impact of the B2 SPR RCP/RSP updates on MASPS and update accordingly.	Alan	EOY 2023	Open
A62-02	Consider removing the "Priority IP" service placeholder from figure E-2 in the MOPS.	Alan	Next meeting	Open
A62-03	Review the MOPS Appendix E changes in the DO-626 working version distributed by Radek.	All	19 th of May 2023	Close

RTCA SC-222/EUROCAE WG-82 working session: 6-June-2023

Action #	Content	Responsible	Deadline	Status
WS-01	Organize dedicated C2 working session to discuss SC-222 / WG-82 strategy towards C2 and potential impact on MOSP, MASPS and ToR. (Propose some dates in July-September timeframe.)	R.Zaruba	End of June	Open
WS-02	Update MOPS appendix E test procedure sections and address any other remaining "To be done" items in the review sheet. Distribute the redlined MOPS and review sheet to the group for review.	R. Zaruba	End of July	Open
WS-03	Organize next working session (September / October timeframe) to review MOPS appendix E IPS test procedure changes. (Candidate for FRAC/OC release.)	R. Zaruba	End of August	Open