



RTCA Paper No. 107-21/SC222-093
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Washington, 5 May 2021
St Denis, 5 May 2021

**Minutes of EUROCAE
WORKING GROUP 82 (WG-82) (Meeting #47) and RTCA SPECIAL COMMITTEE 222
(SC-222) (Meeting #42)
“New Air-Ground Data Link Technologies”
related to SATCOM**

Date	30th March and 13th, 15th April 2021
Place	Virtual Meeting
Venue	RTCA – Webex
Hosted by	RTCA

Participants:

NAME	COMPANY	30th	13th	15th
Adam Sarhage	GARMIN	X	X	X
Ajay Parikh	LIGADO	X	X	X
Alan Schuster Bruce	INMARSAT	X	X	X
Alden Fuchs	IRIDIUM			X
Anna Guegan	EUROCAE	X	X	X
Antonio Correias	Skymantics	X		
Armin Schlereth	DFS	X	X	X
Ayaz NEMAT	THALES		X	
Ben Huang	IRIDIUM		X	X
Brandon Hinton	FAA	X	X	X
Chuck LaBerge	LaBerge Engineering	X	X	X
Cindy Freud	MITRE	X		
Darrell Andregg	Collins Aerospace	X	X	X
Gonzalo Prieto	ESSP		X	
Hans TRAUTENBERG	EASA		X	
Hiroshi OKOCHI JRANSA	JRANSA	X	X	X
Jeff Bull	IRIDIUM		X	X
Jeff Knickelbein	COBHAM	X		
Jila Rainer Koll	Stellar Solutions	X	X	
Joe Darden	IRIDIUM		X	
Johan Gericke	COBHAM	X	X	X

Karan Hofmann	RTCA	X	X	X
Keith Howland	THALES	X	X	X
Luke Sienkiewicz	IRIDIUM	X	X	X
Mark Insley	LATITUDE-TECH	X	X	X
Martina Angelone	ESA	X	X	
Michael Hooper	IRIDUM	X	X	X
Nazih Khaouly	FAA	X		
Nkululeko Thembinkosi Ntombela	ATNS	X		
Ravi Jain	FAA	X	X	X
Richard Tapp	HONEYWELL	X	X	X
Santanu Dutta	Ligado	X	X	X
Shawn Mason	Collins Aerospace		X	

DOCUMENTS

Agenda Item	Title	File name
1	Calling Notice and Agenda	SC-222 (42) and WG-82 (47) Calling Notice Meeting.pdf
2	Meeting Minutes of last Meeting	222_41_WG-82_Meeting_46_Final minutes
3	Iridium MASPS	DO-343D_ED-242C MSAPS FRAC OC.pdf
4	EXCEL Frac MASPS Comments Sheet <i>Remark: Status at the end of the meeting</i>	Certus MASP Working Comments sheet 030821.exe
5	Iridium MOPS	DO-262F_ED243C MOPS FRAC OC.pdf
6	EXCEL Frac MOPS Comments Sheet <i>Remark: Status at the end of the meeting</i>	210308_FRAC_IridiumCompile_Bulk_Comments DO-262F_ED-243C.exe

Documents related to IRIDIUM are available on the RTCA SC-222 AerOpus.

PRESENTATIONS

Agenda Item	Title	File name

There were no presentations given at the meeting.

Welcome, Introductions, Administrative Remarks by Special Committee Leadership

Chuck LaBerge (chair SC-222) welcomed the group. He led through the whole remaining meeting.

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

1. APPROVAL OF THE AGENDA

After a round table, Chuck LaBerge introduced the proposed agenda of the RTCA SC-222/ EUROCAE WG-82 Plenary meeting. The scope of 30th of April is to perform a sanity check on the MASPS material. The final agreed agenda looks as follows:

AGENDA

30 March 2021 (9:00 am – 5:00 pm EDT) – (15:00 – 23:00 CEST)

Welcome, Introductions, Administrative Remarks by Special Committee Leadership

- Government Authorized Representative (GAR): Steve Van Trees
- Chair RTCA SC-222: Dr. Chuck LaBerge, LaBerge Engineering
- Chair EUROCAE WG-82: Dr. Armin Schlereth, DFS

1. Review Agenda
2. Review Minutes and Actions
3. Review of activities in related groups (ICAO, ARINC, etc.)
4. Review/Resolution of SATCOM MASPS DO-343D/ED-242C Iridium-specific Final Review and Comment / Open Consultation (FRAC / OC) Comments
5. Decision to approve release and presentation of DO-343D/ED-242C TO PMC and Council

13 and 15 April 2021 (9:00 am – 5:00 pm EDT) – (15:00 – 23:00 CEST)

6. Review/Resolution of SATCOM MOPS DO-262F/ED-243C Iridium-specific FRAC / OC Comments
7. Decision to approve release and presentation of DO-262F/ED-243C to PMC and Council
8. Other Discussion as needed
9. Agreement on Actions
10. Agreement on Meeting Schedule
11. Adjourn

2. Review Minutes and Actions

The minutes of the last meeting have been reviewed and approved. The action item list has been reviewed focusing on the open actions and their status has been updated. The updated action item list is outlined at the end of the present minutes.

3. Review of activities in related groups (ICAO, ARINC, etc.)

There were not presentations or input provided at the meeting.

4. Review/Resolution of SATCOM MASPS DO-343D/ED-242C Iridium-specific Final Review and Comment / Open Consultation (FRAC / OC) Comments

The group went through all the comments on the MASPS including Attachment 1 of the Inmarsat document and the Iridium specific Material in Attachment 2.

The MASPS are considered approved for submission for PMC and Council.

5. Decision to approve release and presentation of DO-343D/ED-242C TO PMC and Council

With the completion of all comment inputs, the group decided to release DO-343D/ED-242C to PMC and Council.

6. Review/Resolution of SATCOM MOPS DO-262F/ED-243C Iridium-specific FRAC / OC Comments

Luke Sienkiewicz updated the group on the GPS GLONAS discussions held within SC 159. Conclusion is that there is no impact on the MASPS schedule.

More details on SC-159 GPS GLONASS are expected for the 13th of April. Current delays in the GPS and GLONASS work will require an additional review on 14th of May (submission deadline go PMC 17th of May). No impact foreseen on MOPS schedule and topics.

ACTION Luke: to check with SC-159 to check whether the joint meeting with SC-222 foreseen for Friday 14th May can be brought forward by a few days to avoid bank holidays in Europe.

Note: follow up to 30 March Meeting: Luke, Chuck, and Karan met with SC-159 representatives (Chris Hegarty, George Ligler, and Sai Kalyanaraman). They agreed to provide the inputs to SC-222/WG-82 by COB 11 May.

7. Decision to approve release and presentation of DO-262F/ED-243C to PMC and Council

Decision deferred to special Plenary set for 12 May after receiving inputs from SC-159.

8. Other discussions as needed

No other items have been discussed at the meeting.

9. Agreement on actions

Chuck and Armin went through the action items of the meeting. The final version is attached to the minutes.

10. Agreement on Meeting Schedule

The Plenary agreed on the following time planning:

26.04.2021: NLT Delivery of final MASPS document to RTCA/EUROCAE secretariats

11.05.2021: SC-159 GPS & GLONASS Feedback

12.05.2021 PLENARY SC-222/WG-82 for Final FRC/OC resolution on MOPS

14.05.2021 Delivery of final MOPS document to RTCA/EUROCAE secretariats

17.05.2021: Delivery of MOPS to PMC/Council

17.06.2021: PMC meeting

11. Establish Agenda, Date and Place for next meeting

RTCA SC-222 and EUROCAE WG-82 have agreed on the following next meeting:

WEBEX's:

12.05.2021 WG-82/SC-222: Plenary WEBEX from 3pm to 11pm CET (WEBEX will be organized by RTCA)

Physical Meetings:

- **No physical meeting(s) are planned.**

12. Adjourn – Plenary meeting

Chuck and Armin thanked the group for the lively discussion.

Action items

RTCA-SC222 / EUROCAE WG-82 30th meeting: 6.02.2018 and 7.02.2018

Action#	Content	Responsible	Deadline	Status
A30-09	<p>Review of SC-228 slides and material (ITU M.2127) to provide feedback on the following items:</p> <ol style="list-style-type: none"> 1) Support of 2000 UA 2) 10 – 100 kbps per UA (Peak!) 3) Voice latency of 390 millisecond maximum 4) Use of protected spectrum (L-Band) <p>Discussion at WG-82#31: Chuck LaBerge will provide a response on it asap.</p> <p>Discussion at WG-82/#32: Values might change in the MASPS for UAS. MASPS are available end of the year. So no activities required by WG-82/SC-222 until availability of MASPS.</p> <p>Discussion at WG-82/#33: MASPS on C2 link support by SATCOM expected Q1/2019.</p> <p>Discussion at WG-82/#34: Status unchanged.</p> <p>Discussion at Plenary June 2019: Status unchanged.</p> <p>Discussion at Plenary July 2019: Current priority on MASPS and MOPS actual documents. Status unchanged.</p> <p>Status Plenary Sept 2019: Status unchanged. Current publication schedule has higher approval.</p> <p>Status Plenary Nov 2019/Jan 2020: Status unchanged. Current publication schedule has higher approval</p> <p>Discussion at Plenary June 2020: Status unchanged.</p> <p>Discussion at Plenary Nov 2020: Early 2021 SC-228 finishing RPAS MASPS. Restart coordination then.</p> <p>Discussion at Plenary Jan 2021: Early 2021 SC-228 finishing RPAS MASPS. Restart coordination then.</p> <p>Discussion at Plenary Feb 2021: Early 2021 SC-228 finishing RPAS MASPS. Restart coordination then.</p> <p>Discussion at Plenary March 2021: Report expected to be available in May 2021.</p>	Chuck LaBerge	asap	Open

RTCA-SC222 / EUROCAE WG-82 31st meeting: 26.06.2018 and 28.06.2018

Action#	Content	Responsible	Deadline	Status
A31-03	<p>Contact EUROCAE WG-105 (RPAS) to ask for requirements on SATCOM Performance Class A</p> <p>Discussion at WG-82/#34: Still open. Armin Schlereth to take care of it soon.</p> <p>Discussion at WG-82/#35: Still open.</p> <p>Discussion at Plenary June 2019: Status unchanged.</p> <p>Discussion at Plenary July 2019: Current priority on MASPS and MOPS actual documents. Status unchanged.</p> <p>Status Plenary Sept 2019: Status unchanged.</p> <p>Status Plenary Sept 2019/Jan 2020: Status unchanged. Current publication schedule has higher approval.</p> <p>Discussion at Plenary June 2020: Status unchanged.</p> <p>Discussion at Plenary Nov 2020: Early 2021 SC-228 finishing RPAS MASPS. Restart coordination then.</p> <p>Discussion at Plenary Feb 2021: Early 2021 SC-228 finishing RPAS MASPS. Restart coordination then.</p> <p>Discussion at Plenary March 2021: Report expected to be available in May 2021.</p>	Armin Schlereth	asap	Open

RTCA SC-222/EUROCAE WG-82 Plenary meeting: 10.11. and 12.11.2020

Action#	Content	Responsible	Deadline	Status
A42-02	Clarify on trade mark usage on MASPS/MOPS cover page with Karan.	Chuck	12.11.2020	Closed
A42-06	Manufacturer to test 150ms Voice Latency requirement during FRAC. Present results at FRAC resolution meeting	Darrell	FRAC/OC resolution meeting	Closed

RTCA SC-222/EUROCAE WG-82 Plenary meeting: 13.01. and 14.01.2021

Action#	Content	Responsible	Deadline	Status
A45-01	Clarify open items (e.g. Table 8-F) on MOPS between Luke and Armin offline.	Luke/Armin	22.01.2021	Closed

A45-02	Chuck to facilitate comments on WP317B if any with SC-159. In case not possible within FRAC/OC deadline on 1 st February e-mail exchange until 8 th February proposed. Plenary Feb 2021: Part of the discussion according the updated agenda.	Chuck	22.01.2021	Closed
A45-03	Anna Guegan to contact WG-62 on the GLONASS interference issue outlined in WP317B (refer to action item A45-02) Covered in Plenary Feb 2021.	Anna	22.01.2021	Closed

RTCA SC-222/EUROCAE WG-82 Plenary and WGW meeting: 09.02. , 11.02., 18.02. and 23.02.2021

Action#	Content	Responsible	Deadline	Status
A46-01	Setup a subgroup to deal with the open items on GPS vs. IRIDIUM Certus interference scenarios. <i>Remark: It is planned that the subgroup provides draft material solving the open items identified until 19th March 2021 in preparation of the SC-159 Plenary on 26th March 2021.</i>	Luke	18.02.2021	Closed
A46-02	Setup a subgroup to deal with the open items on GLONASS vs. IRIDIUM Certus interference scenarios. <i>Remark: It is planned that the subgroup provides draft material solving the open items identified until 19th March 2021 in preparation of the SC-159 Plenary on 26th March 2021.</i>	Luke	18.02.2021	Closed
A46-03	Chuck to provide text for the minutes to explain conclusion on cooperation between SC-159 and SC-222 on GPS and GLONASS issues. <i>Remark: Text is outlined in the minutes above written in italics.</i>	Chuck	18.02.2021	Closed
A46-04	F.2.4.3.1.2.2.3 Rejection of Signals outside NGSS Rx band: Propose new text to reduce amount of test time. Currently it would consume about one day of test effort. April 2021 Plenary: presentation with text proposal from Adam discussed.	Adam Sarhage	12.04.2021	Closed
A46-05	F.1.3.5.5/F.1.3.5.6 Text and Table F-5 about "half" data rate. Propose new text and coordinate with Alan and Armin via e-mail.	Luke	08.03.2021	Closed
A46-06	F.2.2.3.1.3.2.7: Explain what KPI's are meant. Luke to propose new text.	Luke	08.03.2021	Closed

A46-07	Iridium & manufacturers to address Alan Schuster-Bruce comment on F2.2.3.1.3.1.13 and Hans T. verbal concerns and suggest wording that accounts for assurance of OOB emission in GNSS bands during environmental tests. April 2021 Plenary: Hans Trautenberg withdraws his comment.	Luke	08.03.2021	Closed
A46-08	EFCL to e-mail result of this meetings action to SC-222/WG-82 members for concurrence. E-mail send by 10.03.2021.	Chuck	10.03.2021	Closed

RTCA SC-222/EUROCAE WG-82 Plenary and WGW meeting: 30.03.2021

Action#	Content	Responsible	Deadline	Status
A47-01	Check with SC-159 whether the joint meeting with SC-222 meeting foreseen for Friday 14 th of May can be brought forward by a few days to avoid bank holidays and allow for the participation of the SC-222/WG-82 members.	Luke	14.04.2021	Closed