



EUR 286-17 / WG82-54
 RTCA Paper No. 001-18/SC222-056

St Denis, 31 January 2018
 Washington, 31 January 2018

**Draft Minutes of
 Working Group of the whole meeting of RTCA SC-222 (Meeting #27) and EUROCAE WORKING
 GROUP 82 (Meeting #29)
 “New Air-Ground Data Link Technologies”
 related to
 SATCOM**

Date	<i>Thursday 2nd November (Joint) and Wednesday 8th November (WG-82 only)</i>
Place	<i>Virtual Plenary Meeting (WEBEX)</i>
Venue	---
Hosted by	RTCA

Participants:

Name	Company	2 Nov	8 Nov
Lorena Albiol	INDRA	X	X
Maqbool Aliani	Ligado	X	
Darrell Angregg	Rockwell Collins	X	
Martin Arndt	Cobham	X	
John Bard	Thales	X	
Christian Bertoldi	Airbus	X	
Kevan Bracken	INMARSAT	X	
Alan Schuster Bruce	INMARSAT		
Sachin Chhibber	Ligado	X	
Joan Manuel Cebrian	INDRA		X
Adrian Cioranu	EUROCAE	X	
Joan Manuel Cebrian	Indra	X	
Richardo De Sousa	NATS UK	X	
Nikos Fistas	EUROCONTROL		X
Johan Gericke	COBHAM SATCOM	X	
Victor Gheorghian	Bombardier	X	
Jose Godoy	ARINC	X	
David Green	Rockwell Collins	X	
Ann Heinke	Overlook	X	
Karan Hofmann	RTCA	X	

Mike Hooper	Iridium	X	
Keith Howland	Thales	X	
James Klopfenstein	Rockwell Collins	X	
Rainer Koll	Stellar Aerospace	X	
Stefano La Barbera	Thales Alenia Space - Italy		X
Chuck LaBerge	LaBerge Engineering	X	
Ana Mirsayar	Thales	X	
Ryan Mustoe	The Boeing Co	X	
Ayaz Nemat	L3	X	
Gurjinder Rakkar	The Boeing Co	X	
Stephane Tamalet	Airbus	X	
Richard Tapp	Honeywell	X	X
George Torgerson	The Boeing Co	X	
Dave Robinson	FAA (SC-222 DFO)	X	
Philippe Sacre	EUROCONTROL	X	
Armin Schlereth	DFS (Chair WG-82)	X	X
Mark Vesely	Bombardier	X	
Steve Van Trees	FAA	X	
Jim Williams	Unmanned Solutions	X	
Stefano La Barbera	Thales Alenia Space - Italy		X
Radek Zaruba	Honeywell	X	

DOCUMENTS

Agenda Item – WG82	Title	File name
2	WG-82 Calling notice	- WG-82 Draft Calling notice Meeting 29 update.doc
3	Minutes of last meetings	222__26_82_Meeting_28_final_minutes.doc
Agenda Item – SC222	Title	File name
1	Agenda(s)	- 222aWP201_222agn27 – Final-revision.pdf
2	Minutes of last meetings	222__26_82_Meeting_28_final_minutes.doc

PRESENTATIONS

Agenda Item – WG82	Title	File name
4a	ICAO COM Panel: SATCOM activities	ICAO CP PT-S update October 2017_v03.pptx
4b	Aero Safety SARCOM Standardization Status Update	SATCOM Standardization Status Update.pptx
5a	SATCOM Class A Time Planning	Class A Iris SE Schedule Inmarsat_0.2.pptx
5b	Satcom Class A: Requirements	Class A Iris SE Requirements Inmarsat v0.2.pptx

5c	Iris Service Evolution – Aircraft Architecture	Class A Iris SE Aircraft architecture Honeywell v6.pptx
5d	Outcomes from Iris SE – Impact of RPAS	Class A Iris SE RPAS Indra.pptx
5e	Outcomes of Iris SE – Future ACD applications	Class A Iris SE ACD Indra.pptx
5f	Rationale of secure channel in SBB safety	Rationale of secure channel in SBB safety.pptx
5g	PJ14 EECNS Solution 14.02.02 – Future Satellite Communications data link	SESAR 2020-Pj14-02-02_presentation_02-11-2017.pdf
6	ToR	WG82 and SC222 ToR Inmarsat v0.3.pptx (SC222/WP-202, Schuster-Bruce)
Agenda Item – SC-222	Title	File name
6	TSO C159 NGSS Equipment Class Harmonization Discussion	TSO-Class armonization _Discussion-Brief3.pptx (SC222/WP-204, Robinson)
6	Discussion of Iridium CERTU	Working Paper on Iridium CERTUS (SC222/WP-203, Hooper)

1 Welcome, Introductions, Administrative Remarks by Special Committee Leadership

The meeting was split into 3 parts. On the 2nd November morning session, it was a EUROCAE WG-82 only meeting. In the afternoon a joint RTCA SC-222 and EUROCAE WG-82 meeting was held (see also separate agenda of this meeting). Due to time constraints on the 2nd November an extension of the EUROCAE WG-82 was held on the 8th November afternoon. All these meetings have been conducted as Internet meetings.

Chuck Laberge and Armin Schlereth welcomed the group. Main point was to clarify on WG-82 side on how to proceed work on SATCOM Performance Class A and on RTCA side to get an update of the situation regarding IRDIUM Next Certus and Ligado activities.

2 APPROVAL OF THE AGENDA

Due to the meeting organization there have been 2 separate agendas. One for the WG-82 only part and one for the joint session of RTCA SC-222 and EUROCAE WG_82.

The final agenda of the EUROCAE WG-82 only meeting looked as follows:

Agenda EUROCAE WG82 only:

- 1. EUROCAE IPR Policy Statement**
- 2. Review of Agenda**
- 3. Minutes of last meeting – (action item status)**
- 4. Brief Status of Related Efforts**
 - a. ICAO activities (DFS)**
 - b. AEEC etc.**
- 5. Status of SATCOM Performance Class A development**
 - a. Schedule for MASPS and MOPS (INMARSAT)**
 - b. SATCOM Class A Requirements (INMARSAT)**
 - c. Aircraft Architecture (Honeywell)**
 - d. RPAS (INDRA)**
 - e. Future ACD applications (INDRA)**
 - f. Rationale for secure channel in SBB safety (AIRBUS)**
 - g. SESAR 2020 PJ 14.02.02 introduction with focus on SATCOM Class A (THALES Alenia Space –I)**
- 6. WG-82 TOR discussion**
- 7. Establish Agenda, date and Place of next meetings**

The final agenda of the joint meeting of RTCA SC-222 and EUROCAE WG-82 looked as follows:

Agenda of joint meeting of RTCA SC-222 and EUROCAE WG-82

Thursday, November 2, 2017

All times are Eastern Standard Time (UTC -5)

09:00 – 11:00 Plenary:

Welcome, Introductions, Administrative Remarks by Special Committee Leadership

- Designated Federal Official (DFO): Mr. David Robinson
- Chair RTCA-SC222: Dr. Chuck LaBerge, LaBerge Engineering
- Chair EUROCAE WG-82: Dr. Armin Schlereth, DFS

1. Agenda Overview
2. Review/Approve prior Plenary Meeting Summary – (action item status)
3. SC-228 IRSA Discussion
4. Iridium Technical Discussion
5. Ligado Effects (Possible ISRA with SC-159)
6. Discussion of additional SatCom Class B Work
7. Detailed Work Plan for SC-222 and WG-82
8. Establish Agenda, Date and Place for next meeting
9. Review of Action Items
10. Adjourn – Plenary meeting

3 Minutes of last meeting

The minutes of the last meeting were approved after taking into account comments from the group. The action item list has been reviewed. The updated action item list is outlined at the end of the present minutes.

4 Brief Status of Related Efforts

ICAO

Armin presented the summary provided by Nikos Fistas, Rapporteur of CP PT-S of ICAO, who could not be present at the first day of the meeting. Actual status shows the following time planning:

Delivery time planning of STACOM SAPRS and Manual:

Delivery Date: Q4 / 2018

Effective: July 2020

Applicability: November 2020

These documents are mainly based on SATCOM Performance Class B. It is intended to provide at least some recommendation regarding SATCOM Performance Class A requirements in the Manual (ICAO Doc 9925)-

RTCA

No input provided at the meeting.

AEEC

No oral contribution has been given at the meeting. A summary of the actual status is provided in the presentation from Rainer Koll of Stellar Solutions entitled "Aero Safety SARCOM Standardization Status Update".

IRIDIUM

Michael Hooper of Iridium briefly introduced SC222/WP-203, containing initial technical details for the safety service operation of Iridium CERTUS. Chuck LaBerge had some questions about details that would be required for the same-air-space interference analysis. Because the

paper was presented for information only, there was no SC-222 action required. Iridium intends to bring draft material to the next meeting.

5 Status of SATCOM Performance Class A development (EUROCAE WG_82 only)

The following presentations have been given during the meeting of EUROCAE WG-82:

- Schedule for MASPS and MOPS - INMARSAT
- SATCOM Class A Requirements - INMARSAT
- Aircraft Architecture - Honeywell
- RPAS - INDRA
- Future ACD applications - INDRA
- Rationale for secure channel in SBB safety - AIRBUS
- SESAR 2020 PJ 14.02.02 introduction with focus on SATCOM Class A - THALES Alenia Space –I

All the material is accessible on the EUROCAE WG-82 workspace.

6 TOR WG-82 and SC-222 update discussion

Armin Schlereth presented the update proposal for the TOR of WG-82 during the WG-82 only session. In that context Dave Robinson (FAA-DFO) pointed out later on during the joint meeting that it would be preferable that WG-82 and RTCA SC-222 being in line regarding the planning for development of SATCOM Performance Class A. This would mean that SATCOM Performance Class A will become also a work item on SC-222 TOR. His concerns are laid out in SC222/WP-204.

Armin Schlereth will update the WG-82 TOR and send it out for final comments by the WG-82 group until 10 November 2017 COB. He will then send it to the EUROCAE Program Manager for further consideration and processing taking into account the final comments received by the group. The idea is to provide the updated TOR to the next TAC meeting in January 2018 for approval.

SC-222 Chairman's note: Subsequent to the meeting, RTCA Staff (Hofmann), the SC-222 Chair (LaBerge), and the SC-222 DFO (Robinson) had some additional discussion to clarify certain aspects of the ToR before they were formally briefed to the PMC. The presentation is provided in SC222/WP207. The approved TOR is available as SC222/WP208.

7 Establish Agenda, Date and Place of next meeting

RTCA SC-222 and EUROCAE WG-82 agreed on the following planning:

- **Next joint meeting of RTCA SC-222 and EUROCAE WG-82:**

6.02. to 7.02.2018 (location INMARSAT in London)

Remark: A final confirmation is required dependent on the material available on SATCOM Performance Class A. In case not enough material is available this meeting will be held as virtual meeting (WEBEX: 1pm to 5pm local time at meeting place).

- **Tentative joint RTCA SC-222 and EUROCAE WG-82 meeting:**

Beginning of June 2087

Remark:

Action items

RTCA-SC222 / EUROCAE WG-82 26th meeting: 5.10.2016 – 6.10.2016

Action#	Content	Responsible	Deadline	Status
A26-02	Further discussion on making Security part of 2017 version of MOPS WG-82/29: Overtaken by events. Part of future work.	Radek / Michael / David	ongoing	Closed
A26-05	Provide half a page material as problem statement related to performance measurement and standardization bodies involved for further discussion within the group. Note: AES versus system considerations. WG-82/29: Specifically related to display of actual achieved performance values on avionics. Closed as outdated.	Ann	ongoing	Closed

RTCA-SC222 / EUROCAE WG-82 27th meeting: 23.01.2017

Action#	Content	Responsible	Deadline	Status
A27-01	Update Draft SATCOM MOPS and deliver it to RTCA/EUROCAE Secretariat for further completion work.	Radek	10.02.2017	Closed

RTCA-SC222 / EUROCAE WG-82 28th meeting: 7.03.2017

Action#	Content	Responsible	Deadline	Status
A28-01	Alan Schuster-Bruce to provide an official statement to WG-82 chair on the time planning for SATCOM Performance Class A and its impact on the ToR of WG-82.	Alan Schuster-Bruce	21.03.2017	Closed
A28-02	Contact EASA regarding the development of ETSO for SATCOM Performance Class B based on INMARSAT SBB WG-82/29: EASA are waiting for an official mandate from EU. Will be pushed through SDM. Make ETSO status part of future agendas of WG-82.	Armin	23.03.2017	Closed

RTCA-SC222 / EUROCAE WG-82 29th meeting: 2.11.2017 and 8.11.2017

Action#	Content	Responsible	Deadline	Status
A29-01	Coordinate TSO/ETSO development activities between SC-222/WG-82	Armin/Chuck	ongoing	Open
A29-02	Send any information related to EASA activities to Alan, Radek, Stephan (AIRBUS) and Armin	David (DFO-FAA)	ongoing	Open
A29-03	Coordinate June 2017 meeting at EASA with Friedhelm Runge (EASA)	Armin	31.01.2018	Open

Open Items

Item #	Description
OI - 2	How to handle SECURITY in an ATN/OSI implementation. Also for ATN/IPS IPsec is not yet part of ARINC 664. WG-82/29: No more activities expected on ATN/OSI security. → Closed