



EUR 205-19/WG96-57  
RTCA Paper No. 194-19/SC236-031

06 August 2019

**Minutes of Meeting**  
**EUROCAE WG-96 / RTCA SC-236 Joint Meeting #14**  
**Standards for Wireless Avionics Intra-Communication (WAIC) Systems**  
**within 4200 - 4400 MHz**

<b>Plenary Session</b>	<b>Thursday June 27, 2019</b>
<b>Working Sessions</b>	<b>Tuesday June 25, 2019 – Friday June 28, 2019</b>
<b>Place</b>	<b>1150 18th St NW Suite 910 Washington, DC 20036, USA</b>
<b>Venue</b>	<b>RTCA</b>
<b>Host</b>	<b>RTCA</b>
<b>Contact Persons</b> <b>EUROCAE</b> <b>RTCA</b>	<b>Anna Guégan</b> <i>anna.guegan@eurocae.net</i> <i>Phone: +33 1 40 92 79 31</i> <i>And</i> <b>Rebecca Morrison</b> <i>rmorrison@rtca.org</i> <i>Phone: +1 202-330-0654</i>

**AGENDA**

Plenary Session Beginning Thursday June 27, 2019

1. Welcome/Administrative Duties/EUROCAE and RTCA Policy Statements
2. IPR / Membership Call-Out and Introductions
3. Review and Approval of the Minutes from the 12th Joint Meeting (Cologne, April 2019) and 13th Joint Meeting (Virtual, May 2019)
4. Review of the TOR dates and Work Plan
5. Review of the MOPS Content and Assignments
6. Reports from the Sub-working groups
7. New Business
8. Review Plan for Next Meeting
9. Review Action Items
10. Adjourn

(Plenary business is scheduled to complete by 5pm on Thursday June 28, 2019.  
Friday is available for additional sub-working group business as needed)

- **Attachments:**
  - Attachment A : Attendance List
  - Attachment B : Action List (SC-236, WG-96 WAIC) – status June 2019 2019
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## **Minutes of Meeting: Start on Thursday June 27<sup>th</sup> (13:01 local time)**

### **Agenda Item 1. Welcome, Administrative Duties and Introductions**

Steve Rines (RTCA Co-Chair) welcomes the group to the Plenary Meeting.

Steve Rines asks the participants to introduce themselves. Individual introductions follow.

Robin Davies (EUROCAE Co-Chair) and Anna Guégan are not attending the meeting.

Peter Anders (the outgoing Secretary) and Rebecca Morrison (RTCA) are attending remotely via WebEx.

The complete list of attendees (direct and via WebEx) is contained in Attachment A.

### **Agenda Item 2. EUROCAE and RTCA Policy Statements, IPR / Membership Call-Out**

Rebecca Morrison reads the RTCA Antitrust Policy, and the RTCA Proprietary Policy.

Rebecca Morrison reads (on behalf of Anna Guégan) the EUROCAE IPR Policy.

Rebecca Morrison reads RTCA Committee Participation Membership Policy and asks to confirm whether there are any members of the public present at the meeting. Steve Rines confirms there are no public members attending the meeting.

Rebecca Morrison reads (on behalf of Anna Guégan) the EUROCAE Participation Policy.

This meeting is considered as a plenary meeting. Brian Verna, acting as the FAA representative (Government Authorized Representative), participates in this plenary.

### **Agenda Item 3. Review and Approval of the Minutes from the 12th Joint Meeting (Cologne, April 2019) and 13th Joint Meeting (Virtual, May 2019)**

Steve Rines reviews the minutes of the 12th Joint Meeting of SC-236/WG-96 that was held in Cologne, Germany, hosted by EASA. See the link:

[https://workspace.rtca.org/apps/org/workgroup/sc236\\_standards\\_for\\_waic/documents.php?folder\\_id=8285](https://workspace.rtca.org/apps/org/workgroup/sc236_standards_for_waic/documents.php?folder_id=8285)

Steve Rines reviews the minutes of the 13th Joint Meeting of SC-236/WG-96 that was held virtually via WebEx. This document was prepared jointly by the outgoing Secretary Peter Anders and the new Secretary Radek Zakrzewski. See the link:

[https://workspace.rtca.org/apps/org/workgroup/sc236\\_standards\\_for\\_waic/documents.php?folder\\_id=8513](https://workspace.rtca.org/apps/org/workgroup/sc236_standards_for_waic/documents.php?folder_id=8513)

Steve Rines asks whether there are any comments to these minutes. There are no comments from any attendees.

Steve Rines calls a vote to accept these minutes. Minutes of the 12<sup>th</sup> and 13<sup>th</sup> Joint Meeting are accepted unanimously.

### **Agenda Item 4. Review of the TOR dates and Work Plan**

Steve Rines reviews the Terms of Reference (TOR) of the Joint Committee. Completion of MASPS was late relative to TOR plan – does it mean TOR needs to be modified? Rebecca Morrison explains a single cycle delay of MASPS does not necessitate changing TOR.

According to TOR, completion of MOPS is due in October 2021. Rebeca explains that a fully completed and approved text of MOPS needs to get to her by October 31 2021. RTCA FRAC and EUROCAE OC needs to be completed by then.

Sanjay Bajekal observes that MOPS will be much more involved than MASPS and its completion may be more time consuming. More time may be needed to complete FRAC and OC reviews, and preparation of the document may take longer. Does it mean the timeline needs to be changed?

Steve Rines says the committee should not be moving the schedule. The current plan is to have the text of the document completed in May 2021, and then go to FRAC/OC. This remains the committee's target timeline. There is no need for any TOR adjustments.

**Agenda Item 5. Review of the MOPS Content and Assignments and  
Agenda Item 6. Reports from the Sub-working groups**

Steve Rines asks Sub-working Groups for a status report from their working sessions on 25-27 June (Tuesday, Wednesday and Thursday morning).

SW1 Status and Work Assignments:

Sanjay Bajekal summarizes the status of Sub-working Group 1 (SW1) and its work plan. SW1 has prepared a matrix listing content that was not addressed in MASPS but is required for MOPS. Specific items have been assigned to individual members of SW1, to be completed by the next plenary.

Steve Rines asks whether SW1 has committed to a timeline to complete its work. Sanjay Bajekal says that the goal is to complete all SW1 work by the next plenary.

SMIM (Secure Media Independent Messaging) interface has not been yet addressed by SW1. An additional security requirement needs to be considered. SW1 will add this to its work package. Sanjay Bajekal has this as an action item, to address before the next plenary.

Detailed discussion follows on security requirements relative to SW1 charter:

Steve Rines says he is not sure if security involves transport layer security. WAIC has to offer security equivalent to a wire. Sanjay Bajekal replies it is not clear what that precise meaning of such equivalence is.

Dave Redman suggests the scope of discourse should be constrained to issues specific to the wireless medium.

Steve Rines says it is difficult to prescribe security solutions without understanding the intended function, which depends on applications to be served by WAIC. We can give only give general guidance.

Brian Verna says the committee needs to understand other existing sources of cybersecurity guidance. Sanjay Bajekal says this needs to be discussed by the whole committee, not just SW1. Steve Rines agrees that the committee needs to reconcile how security will be addressed – whether this will be done in software, hardware or by other means. This will determine whether this is indeed a task for SW1.

SW2/3/4 Status and Work Assignments:

Steve Rines summarizes status of Sub-working groups 2, 3, and 4 (SW2, SW3 and SW4). The three groups worked jointly over two days, discussing the scope of MOPS.

STPA analysis by SW2 is now completed.

There was a two-day debate about a secure mechanism for establishing an initial connection, and for data loading and configuration. The main issue is how to establish an initial link and initial trust. Initial shared certificates may be vulnerable to intrusion. Using Trusted Execution Environments may solve this issue, but SC-236 will not be mandating this approach. After initial exchange of certification, security becomes a system problem. SW2/3/4 has decided that this can be solved by the system integrator. Also, they reviewed which aspects of MOPS can be delegated to the ARINC SMIM committee.

Rebecca Morrison notes that MOPS must be referring only to already published documents. This may affect the plan to delegate work to the ARINC Secure Media Independent Messaging (SMIM) committee. Steve Rines replies that the ARINC SMIM standard is scheduled for completion by Q1 2021. This should be done by the time MOPS needs to be completed. The ARINC committee has committed to this timeline. This will allow MOPS to refer to SMIM. Therefore the plan to rely on the SMIM committee should not affect SC-236/WG-96 deliverables.

Discussion on the security issues resumes:

Steve Rines says that security cannot be specified without knowing the intended function.

Brian Verna asks whether a Trusted Execution Environment needs to be required by a TSO or has to be dealt with by an applicant. An industry standard such as SMIM may be beneficial.

Sanjay Bajekal notes that SMIM compliance may impact cost a lot of potential complexity. Steve Rines replies that SMIM compliance will not be mandatory. A subnetwork does not have to follow SMIM, but connecting to a larger network may require SMIM compliance.

Brian Verna suggests there may be two classes of TSO for WAIC: one for simple (“dumb”) sensors, and one for SMIM-compliant devices. Sanjay Bajekal agrees that having two security classes may address the problem.

#### Plan and schedule for MOPS Completion

Steve Rines says that drafting MOPS has to be completed by May 2021. Newest schedule is posted on the workspace.

Most of security issues have now been delegated to the ARINC SMIM committee, which takes over a large portion of work originally planned for this committee.

Steve Rines observes there is no environment specification available for WAIC that can be used when drafting MOPS. Rebecca Morrison says that DO-160 can be referenced as needed. WAIC MOPS may define special procedures only when driven by specific needs for this specific technology.

Steve Rines says environmental conditions for WAIC may be limited to transceiver RF performance. Installation considerations are allocated to SW1, as they relate mostly to spectrum allocation and management.

Peter Anders says that Section 3 of MOPS is not typically used for TSOs. This is informational material for manufacturers. Rebecca Morrison says there should be no additional “shalls” in Section 3.

Radek Zakrzewski asks if coexistence of WAIC with Radio Altimeters (RAs) on board same aircraft needs to be addressed in MASPS. Current MASPS does not address same-aircraft coexistence; it is focused solely on coexistence with other aircraft. Does it mean MASPS has to be updated? Howard Tetrault agrees this is not an equipment-level issue and cannot be solved in equipment level MOPS.

Jeff Cyr says MOPS typically include system-level guidance that is less prescriptive than equipment-level requirements. Steve Rines agrees. Same-aircraft coexistence with RAs can be addressed in Section 3. Rebecca Morrison explains that FAA can use section 3 to draft ACs; they can be based either on MOPS or on MASPS.

Brian Verna suggests to address the RA coexistence issue in MOPS, instead of updating MASPS. Rebecca Morrison agrees. This will prevent us from having to rely on two different releases of MASPS.

The entire committee agrees. MASPS will not re-opened. Same-aircraft RA coexistence issue will be addressed in MOPS.

Brian Verna confirms that FAA agrees with the plenary decisions.

#### **Agenda Item 7. New Business**

Steve Rines asks whether there is any new business to discuss. There are no suggestions from the floor.

### **Agenda Item 8 Review Plan for Next Meeting**

The October 2019 meeting is now firmly planned to be held in Hamburg, hosted by Lufthansa. Detailed agenda and meeting information will be distributed soon.

For the Q1 2020 meeting, Dave Redman offers AVSI as a host. Possible locations include College Station, TX or Corpus Christi, TX. The exact date depends on a possible conflict with ICAO FSMP-WG planned for January/February 2020, which may have to be attended to finalize SARPs.

Dave Redman will send out a Doodle to check data and location preferences for Q1 2020.

For the Q2 2020 meeting Sanjay Bajekal suggests New England – Connecticut.

### **Agenda Item 9 Review Action Items**

Each Sub-working Group generated its own new Action Items during their working sessions. Those action items will not be rolled into the committee's Action Item List.

Two new Action Items are recorded: Dave Redman to poll for best dates for Plenary #16 in Texas; and Sub-working Group Chairs to estimate completion times for their writing assignments.

The updated Action Item List is included as an attachment to these Minutes of Meeting.

### **Agenda Item 10 Adjourn (14:49 local time)**

Chairman Steve Rines thanks participants for fruitful contributions and asks if the committee is in favor to adjourn. All are in favor. The Plenary Meeting is adjourned.

***Compiled by Radek Zakrzewski***

***Approved by Robin Davies***

***Approved by Steve Rines***

Secretary of Joint SC-236/WG-96

Co-Chairmen of WG-96 (EUROCAE)

Co-Chairmen of SC-236 (RTCA)