Minutes of Meeting

EUROCAE WG-96 / RTCA SC-236 Joint Meeting #11

Standards for Wireless Avionics Intra-Communication (WAIC) Systems

within 4200 - 4400 MHz

Date	*Tuesday January 15 - Friday October 18, 2019*
Place	*Conference Room Hilton Garden Inn Mobile Downtown Mobile, Alabama*
Venue	
Host	*AIRBUS & AIRBUS Americas Mobile*
Contact Persons EUROCAE RTCA	*Anna Guégan* *< anna.guegan @eurocae.net >* *Phone: +33 1 40 92 79 31* *And* ***Rebecca Morrison*** rmorrison@rtca.org *+1 202-330-0654*

AGENDA

1. Plenary Session Beginning Tuesday January 15, 2019
1. Welcome/Administrative Duties/EUROCAE and RTCA Policy Statements
2. IPR / Membership Call-Out and Introductions
3. Acceptance of Meeting Minutes for the 10th Joint Meeting of SC-236/WG-96 held at Panasonic in Tokyo, Japan, October 2018
4. Review delivery schedule for MASPS and MOPS
5. Review and dispositions against the MASPS
6. Reports of the Sub-Working Groups
7. Status and review of the Draft Paper MASPS (dedicated for ICAO Job Card)
8. Consider a motion to complete Open Consultation/Final Review and Comment on the MASPS and send to EUROCAE Council and RTCA PMC for publication
9. Review of Special Committee Schedule
10. New Business Discussions
11. Review of Action Items
12. Plan for next meeting
13. Adjourn

- **Attachments:**
- Attachment A : Attendance List
- Attachment B : Action List (SC-236, WG-96 WAIC) – status August 2018

  (Used presentations, please refer to RTCA web-folder)

Minutes of Meeting: Tuesday January 15th (start 09:00pm local time)

Agenda Item 1   Welcome

Rebecca Morrison (RTCA) welcomes the group to the Plenary Meeting.
Welcome from RTCA Co-chair WG-236 Steven Rines (SR), Co-Chairmen EUROCAE Robin Davies and the Secretary of the Joint SC/WG Peter Anders (PA).

AIRBUS Americas Mobile organized hosting the meeting venue. Peter, with support of Hotel personnel, provides information on the location, security, webex access, and a social event planned for Wednesday.

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

Agenda Item 2.   IPR / Membership Call-Out and Introductions

Rebecca Morrison (RM) reads the RTCA's "Proprietary Policy" and some general information on RTCA / EUROCAE membership modalities are amended by Anna Guégan.
RM referred to the standard presentation SC236_WG96_EUROCAE_RTCA.pdf – RTCA workspace:

http://workspace.rtca.org/apps/org/workgroup/sc236_standards_for_waic/documents.php?folder_id=5608

This meeting is considered as a plenary meeting. There is an issue concerning any participation of the FAA members of the working group. Due to the ongoing "Government-Shutdown", the FAA members are unable to participate. It is decided to consult FAA later, when they will resume their work.
Brain Verna, usually acting as the FAA representative (Government Authorized Representative) is not available for this plenary, for the reasons mentioned above.

Agenda Item 3.   Acceptance of Meeting Minutes for the 10th Joint Meeting of SC-236/WG-96 held at Panasonic in Tokyo, Japan, October 2018

Acceptance of Meeting Minutes for the 9th Joint Meeting of SC-236/WG-96 held at RTCA in Washington D.C., USA, August 2018. See link:

https://workspace.rtca.org/apps/org/workgroup/sc236_standards_for_waic/documents.php?folder_id=7815

Agenda Item 4. And 5. Review delivery schedule for MASPS and MOPS / Review and dispositions against the MASPS

MASPS Planning:
- The MASPS[1] should be finalized during this week January 14th- 17th 2019.
- All comments from FRAC, collected together by Rebecca, have been pre-reviewed by Uwe (US) and should be resolved by this week.
- The version shall be ready for forwarding to RTCA PCM for Publication;
- However, comments received from FAA, especially comments received just during the latest phase of FRAC shall be reviewed together with the FAA directly (after the meeting, when FAA will resume working).

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[1] DO-XXX Minimum Aviation System Performance Standard (MASPS) for Coexistence of Wireless Avionics Intra-Communication Systems within 4200-4400 MHz

ICAO SARPs / White Paper (also be-called AVSI-Paper):

- There is also a related paper, which is prepared by the members of AVSI, to be used for the ICAO/FSMG meeting the following week (22.-24.Jan). This is important, because both, the MASPS, and the AVSI-Paper will be required for getting accepted the ICAO-Annex 10 SARPs amendment on WAIC.
- The SC-236 members were interested in getting an overview of this AVSI-Paper. Uwe (US), David (DR) and Radek explained the contents and the information, which provides a bit more details on the "test set-up" of the worst case test scenario (refer to Fig.3 of the paper). It was decided to upload this Paper to the RTCA-SC236 website. David (DR) agreed to allow this, because no "Proprietary" information is included there.
- In any case, it highlighted that both documents (MASPS, and the AVSI-Paper) do address only coexistence conditions of WAIC to external RA of other aircraft. The installation of both components within one aircraft and associated conditions for demonstrating non-interference to each other, are not addressed here.
- To complete the information on the ICAO-SARPs amendment status, Radek presented the latest update of the Annex 10 SARPs Text proposal, which shall allow finally the usage of WAIC as an aeronautical communication means. The SARP, if accepted by the ANC, would refer to the MASPS (DO-xxx/ED-260) directly.
- Two additional requirements are addressed within the proposed SARPs:
  - a.) WAIC emission mask(s)
  - b.) Out-of-band interferences.

  <mark>Action item # 37</mark>: How traceability of these higher level SARPs requirements (mentioned above) will became consistent with future MOPS? (SWG#2 was taking this action)

MOPS Planning:

- Steven (SR) provides a proposal about the tasks of the MOPS. The first part of the presentation contains a mapping versus ARP4754A.The second part contains a list of related tasks and a schedule, that he already presented during the last plenary in October 2018.
- SR requests SWG#1 to shift the focus from the MASPS to the requirements (mainly related to radio features and functions) related to the MOPS.

- Radek volunteered to be the editorial owner of the future MOPS document.

Review and dispositions against the MASPS:

Rebecca compiled all received comments into the RTCA Comments-response excel file format. SWG#1 went through all comments in advance of the plenary meeting, made a decision on the response and recorded the response into the excel file. US compiles in parallel the new version of the MASPS based on accepted change proposals.

During the plenary, Uwe takes the lead in the walkthrough the Comments from FRAC, and to incorporate changes, and/or to answer each of the Comments received from the public.

This task went on from Tuesday, 15.January (afternoon) until Wednesday, 16. January, all day. The final document MASPS has been uploaded to the RTCA website, together with the completed list of FRAC, and SC-236 responses.

Agenda Item 6: Reports of the Sub-Working Groups (and working plans for future)

SWG 1 Sanjay (SB) reported that SWG#1 worked exclusively on the received comments by the FRAC on the draft of the MASPS. Uwe, the editorial owner of the MASPS, took the lead to incorporate agreed changes into the document.

Steven (SR) requests to make proposals of future SWG#1 contributions to the MOPS. One entry point may to evaluate the means how the RA and WAIC shall not interfere on the own-aircraft (<mark>see new action #34</mark>).

In accordance with the ToR of SC-236, "interoperability" is one area that needs to be worked-out. However, there is no consensus on the level of details that should be addressed in the future MOPS. On the other

hand, there is a consensus that the MOPS is not the right place for defining interoperability in a detailed form, e.g. an API.

SR refers to a possible "work-share" with SAE/ARINC activities on the same matter (see below SWG2 activities).

SWG 2 Steven (SR) worked on the STPA models and requirements capturing, especially to capture requirements related to Cyber-security. Therefore, SWG2 and SWG3 worked closely together, i.e. by organizing joint webex sessions, where both group members were invited.

SR also explained the future attempt to co-work with SAE/ARINC activities on "interoperability" and its approach to establish an Industry Standard, including an API. A suitable basic could be the ARINC-854 Standard on Messaging process". Even though, it is primarily established for cabin related components, it could be adapted easily as a general-purpose aviation standard. SR will participate the upcoming SAE/ARINC meetings by End of January, and will propose further development of a Standard to be used for WAIC-components-interoperability (SR to establish an APIM as a formal request to SAE/ARINC, under the Cabin System Subcommittee). SR will report by the next plenary, how the APIM proposal has been assimilated by the Subcommittee. (See action 36)

SWG 3: No special report; however, the co-work with SWG2, in order to establish a "matrix" of mapping the individual security requirements within the STPA usage cases were highlighted.

SWG 4: No special report; There is an expectation that SWG#4 work together with SWG#1 on a test-set-up for aircraft internal requirements, especially to demonstrate EMC between RA (own aircraft) and WAIC components. This will become part of chapter 4 of the MOPS (see action #35).

Another item was identified (which may be shared between SWG1 and SWG4) is usage definition/standard of spectrum sharing in the WAIC frequency band 4200 - 4400 MHz, enabling coexistence of different network(s) in close installation distance (one own aircraft, two or more nearby operating, e.g. on ground, gate).

Notices:

The working group took the opportunity to discuss with Kevin (KH/EASA), whether he's considering additional comments on the MASPS draft. Kevin does not have any more comments.

The remaining time of day (Wednesday), members of SWG#1 continued to work on the remaining wording of the MASPS document, in order to present the final results to the whole Plenary on Thursday morning for Agenda Item 8 (see below).

Agenda Item 7.   Status and review of the Draft Paper MASPS (dedicated for ICAO Job Card)

This item was already addressed earlier during the discussion of Agenda item #4 (see there)

Agenda Item 8.   Consider a motion to complete Open Consultation/Final Review and Comment on the MASPS and send to EUROCAE Council and RTCA PMC for publication

The chairmen ask if anybody has objections to complete Open Consultation/Final Review and Comment (FRAC) on the MASPS[2] **and send to EUROCAE Council and RTCA PMC for publication. No dissenting vote has been raised.**

It should be noted that the FAA has sent some additional comments that were addressed during the meeting, but the acceptance of FAA should be discussed later on.
Post-Meeting note: Under the leadership of SWG#1, the FAA were contacted and consulted during February. Finally, an agreed text were elaborated.

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[2] DO-XXX Minimum Aviation System Performance Standard (MASPS) for Coexistence of Wireless Avionics Intra-Communication Systems within 4200-4400 MHz

Agenda Item 9.   Review of Special Committee Schedule

Captured already by agenda item #4 above.

Agenda Item 10 .   New Business Discussions

No points have been raised.

Agenda Item 11.   Review of Action Items

The Plenary Action List has been reviewed:

> #32 and #33: Closed.

> Four new actions have been opened: #34 to #37 see above.

Summary and tracking of Action Items see **Attachment B: Action List** (SC-236-WG-96 WAIC) – status January 2019 (uploaded by Secretary).

Agenda Item 12.   Plan for next meetings

Following next Joint meetings are planned:

- April 9-12, 2019 – Joint meeting / plenary (8th April reserved for SWGs meetings); Cologne, Germany (EASA Headquarter)
- July 2019 – Dates cannot be decided until April if we meet in Chicago.
- October 2019 – Reviewing potential dates in Germany most likely in Hamburg, hosted by Lufthansa-Technik

Meeting hosts should facilitate having rooms for **two break-out sessions** in similar way as during the previous meetings.

Adjourn

Chairmen Steve Rines and Davies thanks participants for fruitful contributions and closes the Meeting.

Complied by Peter Anders   Secretary of Joint SC-236/WG-96
Approved by Robin Davies   *Co*-Chairmen of WG-96 (EUROCAE)
Approved by Steve Rines   *Co*-Chairmen of SC-236 (RTCA)

Appendix – Group Photo

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