

DRAFT REPORT

10th meeting of the GRSG informal group on Accident Emergency Call System (AECS)

Venue: ERTICO
326 Avenue Louise. Blue Tower. Brussels 1050
BELGIUM

Chairman: Mr. Denis Zagarin (RUS) (zagarin@autorc.ru)
Secretariat: Mr. Olivier Fontaine (OICA) (ofontaine@oica.net)

Dates: Tuesday 22 September 2015 - Thursday 24 September 2015

1. Welcome and Introduction

2. Approval of the agenda

Document: AECS-10-01 (Chair - Secretariat)

Addition of comments from:

- CLEPA (AECS-10-02),
- RUS (AECS-10-05),
- OICA (AECS-10-03 and AECS-10-04),
- Qualcomm (AECS-10-05 and AECS-10-07) and
- NL (AECS-10-08).

3. Revision and approval of the draft minutes of the 9th meeting

Document: AECS-09-10 (Chair - Secretariat) draft report

The report was adopted with no change.

4. Revision of the main pending items

4.1. AECD homologation (Part I)

4.1.1. Scope of the regulation

CLEPA presented (document AECS-10-02) their proposal for amendment to paragraph 3.1. (deletion of the generating part of the AECD definition). RUS challenged the proposal as design restrictive, because some designs could include the generation of the triggering signal, not relying on the airbag.

Conclusion: item to be reviewed internally by CLEPA. Not adopted for the time being.

Paragraph 3.5.: NL proposed that the Annex 4 (information document), item 8, be changed accordingly, such that the changes to the device are subject to an extension of the approval. After debates, the group achieved consensus on the proper wording.

Conclusion: wording adopted.

4.1.2. EMC

4.1.3. Position determination

CLEPA presented doc AECS-10-02

Paragraph 7.2.1.: OICA questioned whether the protocols are common. RUS clarified that such protocols are quite common and make no problem to the suppliers. OICA questioned the privacy of the data. CLEPA supported the comment and question from OICA, and suggested that this be investigated within the EU. Yet the discussions on that item are not closed at EU. There is indeed a conflict within EU between the necessity of protecting privacy and the requirement of that paragraph. However the European Commission informed being unable to change the wording of the delegated act.

Paragraph 7.2.2.: meaning of “individual”. RUS clarified that the GNSS receiver should be capable of treating the signals of each GNSS separately, e.g. when the 2 others are unavailable.

Concerning a possible contradiction between paragraphs 7.2.2. and 7.2.3., the experts pointed out that paragraph 7.2.3. request processing of the “combined” (vs. individual) signals.

Conclusion: wording remains unchanged.

Paragraph 7.2.4.: CLEPA informed that current trend is that the chipset only in WGS-84. RUS agreed with the deletion of PZ-90

Conclusion: PZ-90 deleted.

Paragraph 7.2.5.: CLEPA found the wording not reflecting the target. GSA and RUS on the contrary found the wording correct. The experts convened to hold bilateral discussions and come back to this item later. CLEPA subsequently presented their agreement made with GSA and RUS for ranges of values. Table 5 in Annex 8 to be aligned. J and Qualcomm (Mr. Blair – CSR) to confirm their position at next meeting.

Conclusion:

- J and Qualcomm (Mr. Blair – CSR) to confirm their position at next meeting.
- Table 5 in Annex 8 to be aligned

Paragraph 7.2.7.: the group was informed about the proposal from Mr. Weber to increase the time of solution availability. RUS clarified that either the input/output levels are decreased, or the time is increased. RUS informed about the GSA/CLEPA/RUS agreement. CLEPA committed to internally check the proposed value. J requested proper justifications. GSA informed that the proposed values are cross-checked with the chipset manufacturers. J committed to internally check the proposed value and to raise the appropriate comments at the next meeting.

Some expert had concern that, as the signals are of a very low value, some amplification is necessary. If the antenna is not part of the test, then we may lose visibility of the amplifier effect.

Conclusion:

- J to confirm their position at next meeting.
- Table 5 in Annex 8 to be aligned
- Effect of antenna to be raised at a next meeting if deemed necessary.

4.1.4. AECD information and warning signal

Paragraph 7.4.1.:

CLEPA suggested alignment on the RUS regulations. RUS found the current text of the draft UN regulation more flexible as it leaves the option of performing the test either on the vehicle or on the device itself. OICA found no problem with the current wording. CLEPA agreed not to change the text.

Paragraph 7.4.1.: OICA recalled that at last meeting, RUS requested that some status be signalled to the driver (document AECS-09-05). From the comments from OICA, RUS could agree to merge the 1st two and the last two. A debate took place as to whether an intermediate case of a damage of the micro or the loudspeaker should be present in the list. J was of the opinion that in case of accident, the messages must be very simple, suggested 2 cases: successful transmission and call not possible. RUS recalled that a telephone transmission can take up to 20 s, hence there is a need to indicate something to the driver during that time lap. NL questioned the need for the driver to know that data transmission is or is not completed, in progress, etc. The experts found out some circumstances where such information is important to the driver. OICA flagged that the group agreed at the beginning about the frame of the regulation, and the group should stick to it. In addition, the regulation is supposed to establish the minimum that all must comply with. J was keen that at least “transmission failed” be displayed. RUS supported that point of view, as it may happen that the antenna broke, or some other event occurred.

The Secretary proposed 3 ways out of the situation:

1. Finding in the 58 Agreement some spirit or guidelines
2. Keep the 2 “must” requirements proposed on the screen, then committing to undertake a revision of the provisions at the occasion of an 01 series of amendments.
3. Conducting a survey on what is the current situation in the field, in order to know exactly what is convenient to the situation.

RUS proposed to add a 3rd info (transmission success) in [].

FORD informed that their customers appreciate very simple information. The system proposed by that manufacturer evolved toward simplification. Flashing when in process, steady when connection completed. The manufacturers informed about how difficult it is to share information on future systems, still in development.

A debate took place on a 3rd information: transmission success. Ford indicates transmission succeeded, Toyota does not indicate transmission succeeded. RUS accepted to limit the info to the 2 status, as a matter of compromise, and voiced the possibility that RUS would make a proposal for a 3rd info at a later stage.

The Secretary then proposed the following wording:

- “7.4.1 **The following** information shall be provided regarding the status of the emergency call transaction when the AECD is automatically or manually activated:
- **system is processing (ecall is triggered, connection is being set up or data transmission is in progress)**
 - **transmission failed (connection failed or data transmission failed)**

RUS pointed out that, as there would be only 2 status indications, there is no clarity about what to display when the data transmission was successful but the voice call is still in progress. RUS suggested to display the 2 status in this case. J pointed out the purpose of the information, provide a hint to the driver that he can stay in the vehicle rather than searching rescue out of the vehicle. Hence the Secretary proposal can be supported by J. OICA and NL supported the proposal as well.

Conclusion:

- INFO 1: system is processing
- INFO 2: transmission failed
- The following wording should be confirmed and finalized at the next meeting:

- “7.4.1 **The following** information shall be provided regarding the status of the emergency call transaction when the AECD is automatically or manually activated:
- **system is processing (ecall is triggered, connection is being set up, data transmission is in progress or completed, or voice call is in progress)**
 - **transmission failed (connection failed or data transmission failed).”**

Paragraph 7.4.2.1.:

CLEPA presented their need for clarification. OICA proposed to list 4 items (see document AECS-10-04) that should be at least covered. OICA found opportune to list them as proposed by OICA rather than demonstrating the impossibility to comply to some requirements. OICA explained that:

- The functions that are monitored and how they are monitored are very individual from one OEM to another OEM or supplier and depending on the AECS architecture.
- It is not possible to establish a list as proposed by EU without being design restrictive
- In OICA’s view AECS is not a primary safety system and therefore the malfunction requirements should not be restrictive and should be left up to the Manufacturer's policy.

CLEPA, NL, ROK, supported the proposal. NL added that they could support the European Commission proposed list.

The European Commission could not support the proposal as the delegated act lists (see page 39) the self-test function items to be verified, and the test procedures to verify them. The list of the delegated act is the result of the survey performed by TRL. RUS found the list incomplete. Back-up power supply, antenna etc are missing from the OICA list. Italy

could support the OICA proposal. J could accept the OICA proposal subject to the addition of the GNSS antenna.

OICA proposal was based on an approach such that the minimum requirements are listed, then the OEMs can add further features. On the contrary, the TRL approach is design restrictive.

A debate took place on the best approach. OICA requested a better definition of “Where technically feasible, the self-test function shall monitor at least the technical items listed in Table 1.” The delegated act currently proposes one test method for all the items selected to be verified, while OICA proposes other methods of testing, i.e. simulation or in-depth investigation.

Conclusion: Two proposals are in balance: OICA (per AECS-10-04) vs. European Commission draft delegated Act.

4.1.5. Power supply (paragraphs 7.5. and 17.6.)

CLEPA requested that only the case of the presence of a back-up battery would lead to a test. OICA fully supported the CLEPA position. OICA presented their position about the power supply.

NL found essential to verify post-crash power supply because ecall is nonsense if there is no energy post-crash. NL could not support the OICA approach. The European Commission supported NL, could not accept the OICA proposal and considered the 5-60-5 test acceptable, in spite of its absence from the draft delegated act. RUS found the OICA position not logical, as there is no post-crash test of the power supply at all (not in case of sled test, not in case of after UN R94/95). J took note of the OICA position but could not support it.

OICA explained the problem of dimensioning an ecall power supply capable of complying with the current 5-60-5 requirement, and that it would make it unreasonable. RUS acknowledged the criticism and said that the proposal is a performance requirement, and that it would not be forbidden to disconnect some energy users post-crash, for solving the problem of power supply dimension. Italy supported the OICA position. The chair questioned whether there is a real need for this 5-60-5 test.

OICA clarified that there is no need to test what is related to voice communication after the sled test (Part 1) because it is unlikely that anyone is able to speak after a crash. The group started elaborating compromise solutions based on the OICA document. There was a debate on whether the main battery should be added in the sled test. Before crash tests, consideration of other electricity users: J and NL were keen that the hazard warning lamps be taken into account because lots of OEMs offer auto activation of them and lots of drivers turn on the hazard warning lamps in order to avoid secondary accidents in actual accident situations. RUS proposed that the manufacturer demonstrate that in any case the 5-60-5 sequence can be fulfilled.

Background of 5-60-5 sequence: suggested by RUS, yet there is no any indication that that sequence is used and needed by the PSAP. RUS recalled that this was agreed because the 60min time is more or less custom (see document AECS-09-10, paragraph 5.4.11.). OICA pointed out that this sequence is currently not backed up by any data.

Conclusion:

- Compromise on the principle is accepted
- All to review the wording
- All to review the practical sequence and test procedures for next meeting.
- Long term action: re-visit data and background for the 5-60-5 sequence, for possible improvement at the occasion of a new version of the regulation.
- Secretary to reflect the table in the draft text.
- OICA to produce consistent text relating to power supply (main, back-up, sled test, resistance to impact, etc.)

4.1.6. Resistance to impact

CLEPA presented their comments. Regarding the connectors, the suppliers cannot anticipate the types of connectors at the time of AECD approval. The European Commission suggested that some wires and connectors are tested.

OICA shared the concern of CLEPA, as the manufacturers do not want to repeat the sled test for each vehicle model/type. NL, supported by J, pointed out the need to address the case of “main” power supply under Part II of the text, and to accordingly amend the communication forms.

The group subsequently addressed this item. OICA presented their proposal (document AECS-10-03) of an additional criterion, a maximum energy dissipation. OICA informed of the following:

- UTAC supports both the principle and the values
- Two UK test facilities as well
- OICA approached the European Commission on this proposal, which tasked TRL to approach LAB for checking the relevancy of the basic data and conclusions.

RDW (NL) supported both the principle and the values, subject to verification of the tolerance of -2 km/h. RUS committed to internally check the OICA proposal.

4.2. Vehicle homologation with regard to AECD installation (Part II)

4.2.1. General requirements

4.2.2. Information and warning signal

The group agreed to align the relevant paragraphs in Annex 9 and Part I of the draft text.

4.2.3. Functionality (emission of emergency call, HMI functionality and MSD)

OICA presented the context of the annexes 9 and 10. RUS questioned the necessity of Annex 10 except for the vehicles already approved to UN R94/95. The chair recalled that the functional check principle was challenged by the Technical Services at last meeting. J found the approach necessary for testing in absence of an actual network. However, if the device does not support the network of the country where the test is conducted, or when the facilities do not give access to the existing network, then the network can be simulated.

Annex 10

1st functional test: Verification of functional state of the in-vehicle system by using HMI (visual control of tell-tale). OICA flagged that all comments would be welcome at the next meeting, taken into account that the proposal is on the table for several meetings and that no comment were received to date. RUS pointed out that the criterion is the possibility for the Technical Services to accurately measure the items to check.

Preliminary Conclusion:

- OICA to provide a list of the items that the HMI system of the vehicle is capable of diagnosing.
- All contracting parties to prepare their positions for next meeting.
- Item to be reviewed at next meeting, subject to any contrary opinion of the European Commission (note of the Secretariat: the expert from the European Commission did not attend the last day of the meeting)

2nd functional check (Verification of functional state of the in-vehicle system by internal memory checking):

RUS found the same arguments apply as for HMI as there is no possibility to measure the proposed items. RUS actually challenged the principle of functional check. OICA found this memory check similar to the HMI check. The group agreed to skip the revision of this test.

Conclusion: revision of this functional check skipped.

3rd functional check (Verification of functional state of the in-vehicle system by separated functional test):

J explained that such functional check is necessary to them. Qualcomm made a presentation (document AECS-09-04) with the conclusion that the regulation should not forget to address the gain of the antenna, for ensuring that the communication can exist even when there is low network coverage. Qualcomm presented a second presentation (AECS-10-06).

4th functional check

RUS could accept this test, with more details i.e. the mobile network antenna feed and attachment check was considered not sufficient. A new procedure should be developed for assessing the antenna robustness.

Preliminary conclusion: J and RUS committed to work together on the development of new more elaborated test.

General debate on the principle of a functional check.

OICA recalled that the origin of the functional check is the frequencies: as they are not internationally regulated, and out of the scope of this regulation, it is impossible to test the AECS in real world, hence the idea of the functional check, until the MSD is emitted, with no check of what happens to the message once it is sent. RUS found always possible to simulate a network. OICA recalled that the cost/benefits rate should be kept in mind when elaborating a regulation, hence it may be less resource demanding

to perform a functional check than a simulation.

RUS was pessimistic on the ability of the group to find a functional check providing the same level of safety and accuracy as a real test (with e.g. network simulation). OICA pointed out that there is room for progress in the revision of the functional check and was optimistic that the group could reach compromises on certain points. RUS subsequently stated that only the 4th functional test can be accepted, subject to improvement for the network antenna. The three others would be too time and resources consuming, and RUS preferred to delete them from Annex 10. J committed to prepare for next meeting an explanatory document for justifying the three others, in particular since the procedure would be at the choice of the applicant. OICA supported Japan.

General Conclusion on the principle of functional check:

- Item to be re-visited at next meeting
- OICA committed to internally check their position and attachment to the principle.
- OICA and J to jointly produce an explanatory document justifying the necessity of the functional checks according to Annexes 9 and 10.
- Awaiting of EU position (note of the Secretariat: the expert from the European Commission did not attend the last day of the meeting).
- All parties to prepare solid position with regard to functional check for next meeting.

4.2.4. Hands-free audio performance

RUS pointed out that the RUS proposal of last meeting (document AECS-XXX) was not present in the working document. The expert from RUS summarized their proposal as follows: Pre-crash: instrumental test, post-crash: subjective test (as proposed by OICA).

OICA had no final position, but could accept the idea under certain conditions:

- Some items from the standards should be relaxed or deleted.
- Should such tests be adopted in the regulation, then all parties should commit to accept them as an alternative to their national requirements.

OICA committed to provide ITU with the relevant information on the items they expect to be deleted/relaxed.

Conclusion:

- RUS proposal adopted in principle
- OICA to produce appropriate reaction and proposal for next meeting.

4.2.5. Power supply

RUS pointed out that the difference is only on the way to check the status of the battery if the vehicle is subject to the UN R94/95 tests.

Conclusion: Secretary to prepare a text translating the decisions made per the Excel file transmitted by OICA and amended under Part I discussions.

4.3. Vehicle homologation with regard to AECS (Part III)

5. Other items

5.1. Next steps

The chair confirm the target of trying to complete the work for the May 2016 GRSG session, with a possible extension until October 2016. A request for prolongation of the mandate will be addressed to GRSG at its 109th session in October 2016.

AECS-12: 9-11 February 2016 (RUS – Moscow – NAMI headquarters)

AECS-13: 12-14 April 2016 (OICA – Paris)

GRSG-110: 26-29 April 2016 (Geneva).

5.2. Switch-off button

NL presented document AECS-10-08, proposing to add provisions with regard to the possibility to voluntarily switch off the AECS. The expert informed that there is currently no decision in this regard.

OICA recall that the debates within the EU raised the following justifications for a switch off button:

- Adding the button permits to respect the wish of the user for privacy, for avoiding the traceability of their movements.
- In addition, lots of people already currently decide to switch off the system, i.e. there is a need for this possibility

OICA pointed out in addition that at least for reparation purposes, it may be necessary to have the possibility to switch off the AECS. In addition the decision will have influence traceability of the vehicles in all regions.

J found this an important debate. As AECS is a safety item, it is important to discuss the matter in depth. The expert had as 1st a negative impression on a switch-off button.

The Secretary found a switch-off button logical following the other safety regulations, i.e. active and passive regulations (ABS/ESC/AEBS, safety belt/airbag). He found logical to follow the same logic along the sequence of an accident.

The NL pointed out that the vehicle may fail PTI if the AECS is not switched out. The expert found necessary that the group make a sound and justified position.

The group found 3 possibilities as a preliminary approach:

- Mandate a switch-off button
- Permit a switch-off button
- Not mention any switch-off button.

GSA informed that the preamble of the EU regulation on eCall refers to the working document on data protection and privacy implication in the eCall initiative.

RUS said it is not mentioned in the ecall domestic regulation, yet it is assumed that there is no method to switch off the ecall.

Conclusion:

- Item to be re-discuss at next meeting
- Decision to be clear and justified.

- Chair to raise the issue at GRSG-109, requesting guidance and proposing that this issue may be better discussed at a level higher than a technical group as the AECS informal group.

5.3. Consistency in the text

GSA informed having found some necessary adjustments in the draft text.

- Definition of GNSS receiver: need to align Annex 8 and definition under Parts I/II, and need to add time as a criterion for vehicle time information.
- Deletion of SBAS definition from the Annex 8.
- “unique device identifier”: to be deleted
- Re-editing paragraph 2.1.3. of Annex 8.
- Paragraph 2.1.5., deleted, and addition of relevant wording in sections related to the application.

5.4. Post-crash manual triggering

OICA informed having not changed their position, i.e. the triggering can be repeated by manual action post-crash for testing purposes, but there is no case or justification for mandating a possibility of manual triggering after crash, as there is anyway an automatic triggering system.

RUS was of the opinion of it mandatory, as a back-up of the automatic trigger, for the possible case of a second call, if e.g. the rescue must further look for the vehicle etc.

NL supported OICA that there is no need for a manual trigger post-crash.

OICA questioned the new topic of “secondary call” mentioned by RUS, i.e. this is a new concept raised for the 1st time in the work of the group.

RUS pointed out that a post-crash manual activation is mandatory in EU. In addition, the discussion under Annex 10 can make the manual triggering inexistent in the regulation, hence it should be covered elsewhere.

OICA informed having made the same comment at EU level, and suggested that a decision be taken in presence of the European Commission (Note of the Secretariat: the European Commission rep was absent from the meeting when this item was discussed). It is expected and hoped that the European Commission will be able to provide input on this item at the next meeting.

J found it important and not too burdensome to add that requirement in the regulation. OICA clarified that the test is not that short and simple, in particular in the context of UN R94/95. In addition, there is no evidence of any benefit in real cases.

NL questioned the energy feeding of the manual control. However, in the case of the presence of a back-up battery, it is reasonable to assume that the manual control is covered by the back-up battery should the main power supply be disconnected.

J then suggested to limit the check to a simple manual check. The expert informed that J statistics show 20% of airbag having failed to inflate.

OICA further voiced that a secondary call could interfere with the on-going automatic call.

This in addition would demand more energy, which should be further reflected in the test procedure for power supply.

Conclusion:

- RUS regulations contain pre-crash provisions for manual trigger,
- EU regulations contain pre and post-crash provisions for manual trigger
- Item to be finalized at next meeting.

6. Schedule for further IG meetings

11 th meeting	24-26 November 2015	Invitation by ROK
--------------------------	---------------------	-------------------
