

DRAFT REPORT

9th meeting of the GRSG informal group on Accident Emergency Call System (AECS)

Venue: Hotel Crowne Plaza, St.Petersburg Airport
Chairman: Mr. Denis Zagarin (RUS) (zagarin@autorc.ru)
Secretariat: Mr. Olivier Fontaine (OICA) (ofontaine@oica.net)
Dates: 7-9 July 2015

1. Welcome and Introduction

2. Approval of the agenda

Document: AECS-09-01 (Chair - Secretariat)

The agenda was approved with no change

3. Revision and approval of the draft minutes of the 8th meeting

Document: AECS-08-10 (Chair - Secretariat) draft report

The minutes were approved with no change.

4. Outcomes of GRSG-108 (4-8 May 2015)

Documents: ECE/TRANS/WP.29/GRSG/87 (UN Secretariat)
GRSG-108-05 (AECS-IG)
GRSG-108-19 (Chair)

The chair informed of the outcomes of GRSG-108:

- A long debate took place on the reference to UN R10 (electromagnetic compatibility – EMC). As an outcome, GRSG recommended that the final decision be done at the AECS informal group level;
- Discussion on a new symbol for the emergency call control and tell-tale and GRSG agreed to resume consideration of this subject at its next session

5. Revision of the main pending items

5.1. Introduction of working document after the 8th meeting

Document: AECS-02-02-Rev.4 (Secretariat)

5.2. Scope of the regulation

J suggested some further changes to the scope, such that the data additional to those convened to PSAP should be excluded from the scope.

Conclusion:

- J proposal agreed.
- The group agreed to freeze the scope of the regulation.

The scope of the regulation was re-considered in view of the deletion of paragraph 16.1.6. (provisions for vehicles meeting the requirements of UN R95 with no side airbag).

The group agreed to amend the scope of the regulation as follows:

“1.3 Vehicles

- in the scope of neither Regulation No. 94 nor Regulation No. 95 and not fitted with an automatic triggering system,
 - **of category N1 in the scope of Regulation No.95 and not equipped with side airbag, or**
 - **of category M1 in the scope of Regulation No.94 and not equipped with frontal airbag**
- shall be excluded from the scope of this regulation.”**

The experts agreed to review the possible exemptions after overnight consideration (there was no subsequent comment).

Conclusion: decision postponed to next meeting

5.3. AECD homologation (Part I)

5.3.1. General requirements

5.3.2. EMC

Documents: AECS-09-03 (J)
AECS-09-06 (NL)

J presented document AECS-09-03

OICA supported the proposal.

NL also supported the proposal, with a different wording. They proposed the wording of UN R46 for CMS (Camera Monitor Systems per document GRSG/2015/02):

“6.2.1.3. The effectiveness of the AECD shall not be adversely affected by magnetic or electrical fields. This shall be demonstrated by compliance with the technical requirements and transitional provisions of Regulation No. 10, 04 series of amendments or any later series of amendments.”

Conclusion: wording above agreed.

NL presented document AECS-09-06.

OICA informed being currently internally inquiring among the EMC experts.

RUS informed that they were keen that the current UN R10 applies in the frame of AECS.

Conclusion: decision postponed to next meeting, awaiting input from Industry

5.3.3. Position determination

Document: AECS-09-07 (GSA)

GSA informed about their proposal submitted at the June preparatory meeting.

The GSA proposal was added to the documents.

The group agreed to further review the wording later in the session (this was not performed, yet the GSA proposed changes are included into the revision 5 of the working document).

CLEPA proposed to delete the PZ-90 coordinate system for the sake of harmonization and because there is no real use in practice. OICA supported the GSA proposal together with the CLEPA deletion of PZ coordinate system

RUS requested to double-check such deletion. The issue is that the content of MSD is not defined, while such requirements in coordinate system would influence the MSD as required in national regulations.

J also requested time for double-checking the proposed requirements.

Conclusion: Need to further review the text, with relevant references to the test methods and annexes.

5.3.4. Mean of access to mobile networks

Conclusion: Wording agreed

5.3.5. AECD information and warning signal

AECS-09-02 (OICA, on behalf of the participants to the preparatory meeting)
OICA presented the outcomes of the pre-meeting.

a. Status information warning

OICA suggested that the 4 information to be provided to the driver should not be of different nature, rather the manufacturer should have the flexibility to show them with the same mean. The concern is to overload the driver with many warning in a stress condition
RUS and TRL presented their proposals for information and warning provisions, per document AECS-09-05:

- Call triggered
- Data transmission in progress
- Data transmission successfully completed
- Voice call in progress
- Call not possible.

OICA

- Acknowledged a new additional proposal and questioned the process of work
- Pointed out that the proposal was sent in a very late notice
- Questioned what the occupant can do with all these indications in a stress situation

The Chair, as a driver, supported OICA.

The European Commission informed that the current draft text in the EU basically requests a simple warning signal.

J supported simple provisions: available, not available, failure.

CLEPA found the proposed provisions overregulating and too accurate

The expert from D, having some experience in passive safety, found also the proposal excessive because the drivers are sometimes even “surprised to see the dashboard destroyed”, because they did not realize the event.

FORD shared their experience of “mobile phone AECD”, where the user was only happy to hear a voice, with no additional task to perform.

OICA suggested to keep a decision for the end of the week.

D was keen to add a new paragraph: “provisions for PTI”

Conclusion about status information warning: The group agreed to resume this discussion at a later stage.

b. Internal malfunction warning

OICA: if the system is available, it shall provide malfunction indication. TRL found it necessary that no applicant can avoid a test from its own initiative, just because the system is not equipped. Yet OICA requested clarification about the optionality of the provisions. OICA suggested to provide further comments and a counter-proposal by end of August. A debate took place on whether the verification must be performed pre- or post-crash. OICA, the Chair and CLEPA wondered the reasoning of a post-crash malfunction verification. RUS was convinced of utility for a UN R94 crash test where there is no network coverage. However such case would be covered by the status signal, which was already adopted by the group, to have to function post-crash.
Conclusion about internal malfunction warning: the group did not reach agreement on this item.

5.3.6. Power supply

Document: AECS-09-11 (OICA)

OICA presented the design principle of a vehicle power supply dimensioning per a document AECS-09-11.

A debate took place on the relevancy of the different tests pre- and post-crash. The chair proposed that the 5-60-5 test be performed after the crash test, and if the latter is not possible, then the manufacturer should demonstrate by some means that the requirement is fulfilled. The Chair proposed a wording covering the above. RUS could support such wording. D questioned the 5-60-5 test procedure. In addition, the expert was of the opinion that the battery should be in the sled when the AECD is tested. J questioned which electricity consuming components should be simulated in the demonstration.

Concerning the number of electricity-consuming devices to be taken into account post-crash, D clarified that most of the hard crashes happen in night-time; noting that the AECD consumes few energy, there is no other solution than making-up a list of consumers. But the experts said that there should not be any pure laboratory test: either a simulation of the reality, or nothing.

The secretary had the concern that a list could only sum up the components that are mandatory or at least regulated and defined under the 58 Agreement. In the case of the wipers for example, there is currently no regulation nor definition, and there is no clue of their consumption under wet/dry conditions.

NL and Qualcomm were of the opinion that a worst case scenario should be simulated. The European Commission did not share the interpretation of simulating a worst case scenario.

Conclusion: The group finally decided to postpone this discussion to Part II of the text.

The group subsequently debated on the proposal to delete the 3rd bullet in paragraphs 7.5. and 17.6.4. (power supply) “average network signal strength” because of the concern of defining the signal strength of each Contracting Party signatory to the regulation. Qualcomm challenged the definition because there is a need to somehow assess the capability of the antenna to receive signal.
D, RUS, J, NL and ROK, and European Commission agreed to delete this provision.

Conclusion: “average network signal strength” deleted from the list of test conditions.

5.3.7. Resistance to impact

CLEPA was keen to add a reference to the functionalities. The preparatory group added the “communication module” to the list.

TRL proposed a new wording. The representative of TRL stressed that in case there is no back-up battery, then the group should discuss the necessity of sled-testing the vehicle’s main battery.

Inclusion of power supply: D and the European Commission were keen to include the power supply into the list of components subject to the sled test on a mandatory basis (paragraph 7.6.1.) as only a correct power supply can guarantee that the ecall can actually be performed. Italy could agree with the inclusion. The European Commission found the power supply essential, with its connectors. CLEPA informed that mandating the presence of the power supply into the upper list would prevent the supplier from applying for approval.

RUS was flexible with the presence of GNSS antenna and receivers in the list of components mandatory to the sled tests: the configuration depends on the functionality of the device with regard to the national regulations. The European Commission suggested to include them into the list. Italy found GNSS antennas and receivers not necessary post-crash. J supported Italy in this. CLEPA found not relevant to design the GNSS devices for AECD, while it will mainly be used for other purposes.

The Chair proposed that the power supply be tested under Part I of the regulation in the case it is part of the AECD, otherwise, tested under Part II. NL pointed out that Part II does not address power supply. The European Commission found this not consistent with their wish that resistance to impact be performed at high deceleration. D repeated that it makes no sense to perform a sled test without battery. RUS supported the Chair’s idea, if the real power supply is used in Part II. The group finally decided not to support the Chair’s proposal.

OICA and CLEPA pointed out the tremendous impact of including the power supply into paragraph 7.6.1. OICA committed to provide position and justifications at the next meeting.

Conclusion:

- Power supply included into paragraph 7.6.1., AECD information signal device in paragraph 7.6.2.
- Interested parties to provide justifications if they want to challenge this decision.
- J committed to provide their position at the next meeting.
- Annex 7 to be re-visited at next session according to the decisions above
- Item to be finalized at next session.

Interpretation of the acceleration corridor in Annex 7: D clarified that as long as the device is tested within the corridor, the test is relevant.

Definition of “communication module”: a debate took place on the possibility to excluding the microphones and loudspeakers from the general definition, and its effect on the rest of the regulation. An exclusion of the microphone and the loudspeakers from the general definition would lead to an exclusion from the crash tests of parts II and III. Conclusion: exclusion of microphone and loudspeakers to be realized in paragraphs 7.6.1. and 26.7.2.1. (vs definition section)

Power-supply: the group agreed to add a general definition of “power-supply” in paragraph 2.5., subject to any revision at the next meeting.

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

5.4.1. Definitions

Deletion of paragraph 13.2. and 13.3.

Addition of definitions 13.10 and 13.11: agreed, subject to possible detrimental effect on the rest of the text.

OICA clarified the proposal per the explanatory paragraph 15.1.

5.4.2. Approval procedures

OICA explained their proposal for a re-arrangement of the approval procedures in paragraph 15.1. RUS, while supporting the general principle of the proposal, questioned the relevancy of the HF audio and suggested a revision of the structure pre- and post-crash.

5.4.3. General requirements

OICA explained on behalf of the pre-meeting attendees that the paragraphs 17.3. and 17.4. are now replaced by a consolidated paragraph 17.3., and hence that the references to paragraphs 17.3. and 17.4. can now be replaced by simple references to paragraph 17.3. Paragraph 16.1.6.: keep trace of the explanatory note: (N1 vehicles that have no automatic triggering mechanism don't have automatic activation of the Ecall, rather a manual one). Vehicle having only a manual triggering system are considered part of the regulation. A debate took place on the possible exemptions from the scope of the regulation (see paragraph 5.2. above).

Conclusion: decision postponed to next meeting

5.4.4. Position determination

The group debated the addition of position determination assessment requirements into Part II of the regulation. It was agreed that position determination be included into Part II of the draft regulation.

5.4.5. AECD Control requirements

The group reviewed document GRSG-108-05. Some debate took place on the comments received at GRSG (illumination of the tell-tale, numbering of the symbol). Another debate took place on the colour coding. NL was of the opinion that the colours should be regulated in the dedicated AECD regulation, in order to provide maximum flexibility for the group to dedicate the proper colour coding for the different conditions to be addressed in the driver warning strategy. OICA pointed out that the tell-tale regulated by UN R121 concerns only the failure tell-tale, and that the other status and conditions can be regulated separately in the AECD regulation. In addition, the manufacturers already developed an adequate HMI for the regions where AECD/AECS is mandatory and would be reluctant that the AECD regulation deviates from those existing regulations.

Conclusion on GRSG-108-05:

- No change to the document
- Secretary to liaise with the UN Secretariat to ensure that the symbol has the proper wording.

5.4.6. Information and warning signal

The group agreed to delete the [] while keeping the text inside (*are applicable if the AECS information and/or warning signal verification is not part of the approval of an AECD in a vehicle per Part I of this regulation and*), as adapted. Some debate took place on the necessary reference to paragraph 17.1.

The group agreed to further review paragraph 16.3.4. at a further meeting in view of new proposal from relevant Contracting Parties.

5.4.7. Triggering signal emission

A debate took place on the proper wording for paragraph 16.4. (former - general requirement about the reaction of AECS in case of reception of the triggering signal). Several delegations had the concern of the lack of accuracy in the wording “serious road accident” as it can be of different interpretation. RUS could accept the new “accurate” wording, but insisted that the reference to general serious road accident be at least in a preamble of the regulation, because there is a need to indicate within the regulation the reasons and purposes of making the regulation. The Chair insisted that only the existing criteria be used in the regulation, for not re-inventing all the basic concepts. The group finally agreed on the new wording for paragraph 16.1.4.

5.4.8. Resistance to vehicle impact

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

The group decided to address voice communication in a separate paragraph as it is covered by a separate series of tests.

Some debate took place about whether the manual control test should be performed in all cases, i.e. pre- and post-crash. OICA was of the opinion that this test should only occur when necessary i.e. pre-crash, while RUS and the European Commission believed that it should be performed anyway. Italy and OICA questioned the situations for a mandatory Ecall manual control. The European Commission informed about their approach, where the manual control is necessary for pre-crash cases (e.g. informing PSAP of an accident of other road-users) and post-crash (e.g. re-call PSAP in case of a problem occurred) situations. D supported this point of view and wondered the burden of testing a manual control post-crash. OICA recalled that the manual control test post-crash is a new item which appeared at this 09 meeting.

Conclusion:

- OICA to provide reasons for challenging post-crash manual control test.

5.4.10. Hands-free audio performance

RUS could not accept a wording not applying an objective measurement method. RUS could however consider accepting a combination of objective and subjective tests. OICA informed having looked at the ITU standard and said that as a standard, it may be used as a guideline for manufacturers design. The expert pointed out that not all provisions are easy to achieve, and that such standard should remain a standard. OICA found the approach a new concept, stressed the status of the standard (pre-published version of the text), and questioned the level of the provisions for a regulatory text. RUS informed that whatever the decision of the group in this regard, the objective testing

would anyway be kept at national level if not performed under UN regulation.
Head Acoustics presented the outlines of the Standard P1140.

Q&A:

- Delay is addressed because need to deal with the difficult conditions of a microphone far away from the voice source.
- Situation pre- and post-crash are different: ideally, the post-crash scenario should be addressed more in detailed because of the particular environment
- Background noise scenario: why addressing “driving conditions”? J wondered the necessity of this case while in an emergency the vehicle is assumed to be stationary.
- OICA found the provisions of the standards not necessary in the regulation.

The Chair showed the alternative faced by the group: either introducing voice quality requirements into the regulation, or make it regulated nationally. The Chair found that adopting the ITU standard P1140 is already a compromise from RUS because the RUS national requirements are anyway more severe.

RUS proposed as a further compromise to make the provisions “if fitted” or “at the request of the manufacturer”.

J supported some quality for voice communication, yet wondered to what level of severity the requirements should be. The delegate asked OICA to explain which part of the P1140 are too stringent. OICA listed the points of concern. J requested time for considering the content of the standard.

D pointed out that the proposal will imply a huge amount of tests. The expert proposed to establish a simple test assessing a unique level of severity which would provide a pass/fail criterion.

OICA explained the meaning of “sufficient” in their proposal, by referring to Annex 9 and its annexes.

The European Commission explained their approach: the test should not be an intelligibility test because there are too many different situations, groups of population, etc. hence the test should stay at the level of a simple functionality test (functioning of the microphone, the loudspeakers, etc.).

OICA pointed out that all the chain of the communication should be assessed, some harmonization in the levels of quality among the Contracting Parties should be ensured. In addition, the expert questioned whether there is any indication that the voluntarily equipped vehicles lack quality in their current voice communication level.

Conclusion:

1. Need for additional time
2. OICA to provide the list of the too severe requirements in the P1140
3. RUS to formulate “if fitted” proposal
4. Aim is to try achieving some compromise

5.4.11. Power supply

The European Commission found a key criterion that the power source must survive the accident:

- test call test post-crash, directly after the crash test.
- visual inspection of on board equipment (in case of a dummy battery)

OICA summarized the proposal as below:

- in case of a back-up battery: assessment to be conducted under Part I
- in case of main power supply, all Contracting Parties agree on some necessary test 5-60-5 delay.

In addition, the manufacturers cannot let the vehicles 1,5 hour in the crash test facilities. This can be demonstrated by real test or by simulation [that 50% of total component

consumption]

OICA pointed out that it is possible that the experts cannot approach the vehicle during the 60 minutes after the crash. Hence OICA suggested that the 5-60-5 test be performed pre-crash, and a simple visual inspection post-crash.

Conclusion: OICA to internally review the text currently proposed.

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

5.5.1. General requirements

5.5.2. AECS control requirements

5.5.3. AECS information and warning signal

5.5.4. Position determination

5.5.5. Triggering signal emission

5.5.6. Resistance to vehicle impact

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

5.5.8. Hands-free audio performance

5.5.9. Power supply

5.6 Reference to other UN Regulations (Regulations № 10, 121 etc.)

6. Other business

The Chair made a warm lecture about the tribute he owe to Mr. Jongenelen, and thanked him a lot on behalf of the group.

Mr. Jongenelen thanked the group and informed having enjoyed working in this field for the last 25 years. He additionally requested to welcome his successor Mr. Tim Guiting.

7. Schedule for further IG meetings

Chair suggested to request an extension of the mandate by one year, i.e. until GRSG-111 of (October 2016). Both RUS and the European Commission supported such extension. The European Commission announced that they would anyway proceed with their national rulemaking. J and NL supported this extension as well.

Conclusion: request for an mandate extension adopted.

10 th meeting	22-24 September 2015	Brussels (ERTICO)
11 th meeting	24-26 November 2015	Invitation by ROK
