

DRAFT REPORT

3rd meeting of the GRSG informal group on Accident Emergency Call System (AECS)

Venue: Moscow, Kuznetsky most bld. 21/5

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

Dates: Wednesday 26 February 2014 until Friday 28 February 2014

1. Welcome and Introduction

The Chair recalled the invitation to the gala evening on the “ice-breaker”.

2. Approval of the agenda

Document: AECS-03-02 (Chair - Secretariat)

The agenda was adopted, with no change.

3. Revision and approval of the draft minutes of the 1st meeting

Document: AECS-02-03-Rev.1 (Chair)

The minutes were approved with a minor change and the Secretary produced a revision 2 of the report.

4. Outcomes of GRSG-AECS-02 (5-6 December 2013)

Document: AECS-02-02-r1e (Secretariat)

5. Revision of the main pending items

Documents: AECS-03-05 (Japan)
AECS-03-08 (D Technical Services)
AECS-03-09 (CETECOM)
AECS-03-08 (CETECOM)
AECS-03-11 (OICA)

Japan presented the Helpnet system by tabling the document AECS-03-05.

The German Technical Services presented their position with regard to the AECS regulation by tabling document AECS-03-08.

CETECOM presented the possibility to have a worldwide communication standard via a so-called “quad-band antenna”, by tabling document AECS-03-09, as a possible solution for solving the problem of non-compatible mobile phone networks within a unique regulation.

Mr. Goldbach found the presentation interesting as a 1st base for addressing worldwide communication standard, with the possibility to optimize locally (e.g. EU or Japan). J was not convinced that a worldwide system is necessary. D cited the example of the iPhone, having 2 modules. The Secretary was not convinced neither, as the effort would be developed primarily for fulfilling the spirit of the 58 Agreement, whilst w/o providing the necessary quality in all Contracting Parties.

CETECOM also presented a possible test method for antenna by tabling document AECS-03-08. The experts recalled that there are already appendices for the assessment of the mobile phone and GPS antennas.

Debate about quad band technology

J pointed out that the technology evolves rapidly and that the quad band could work today but not be adapted to future technology.

OICA stressed that the problem is not solvable because the mobile network providers are free and not regulated. The proposed solution would permit to profit of at least minimum requirements. RUS suggested that each Contracting Party states what is its preferred communication frequencies and specifications. The expert took the example of the km/h vs. mph (UN R39 – speedometer) where there is no barrier to mutual recognition. He recalled that at the 2nd meeting the group agreed to fill in a table showing the existing necessary national networks. OICA pointed out that km/h vs. mph is not relevant as km/h are always mandatory. NL suggested installing options in the regulation.

A debate took place on the best way to proceed.

The Secretary summarized that there are mainly the following solutions:

- Not regulating in UN (regulated nationally)
- Regulating with minimum performance requirements / Quad band as a base level requirement (minimum list of frequency)
- Possible other solution?

The secretary proposed to establish a task force with dedicated experts. The European Commission proposed to explore both solutions. OICA pointed out that the governments should be deeply involved in the decision. RUS stressed that there is a need that Contracting Parties indicate what they want, and the experts recalled that RUS clearly indicated their wish in the proposal (same frequencies as in EU)

Some experts volunteered to propose a solution during the break.

The debate continued on the possible frequencies. As RUS already made their national requirements, it was considered necessary that the frequencies are regulated nationally, hence not mentioned in the UN regulatory text. NL suggested that it is clearly indicated in the scope of the regulation. Nevertheless, the test method could be described in the regulation. The applicant would then have to propose the frequencies under which he wants the vehicle/AECD to be approved. The proposed solution was compared to the mobile telephone situation, where a telephone could be incapable of functioning in territories where the frequencies are not available.

Conclusion:

- The group recognizes that a UN regulation could not cover all the mobile phone networks existing worldwide.
- Frequency requirements to be out of the AECS regulation, i.e. e-call devices shall fulfil the national requirements for what concerns the frequencies.
- Secretary to propose a text covering the above conclusion, for next meeting (AECS-04)

Approval scheme - Presentation from OICA (AECS-03-11)

A debate took place on whether the UN R94/95 are relevant for simulating real crashes. OICA challenged these regulations for assessing the resistance performances of the separate component. RUS was keen that this be assessed at the time of the UN R94/95 tests, in order to ensure that the

AECD e.g. withstand the deformation of the attachments. Yet D insisted that a separate sled test could better cover severe requirements by mandating a pulse always over that experienced in a real crash (the expert took the example of a Daimler S-Class vs. Smart, which both fulfil the requirements of UN R94, yet face different levels of deceleration and deformation). OICA recalled that the crash test is performed only once and covers all configurations, whilst the AECD could vary (different antennas, positions, microphone, etc.). TRL pointed out that UN R94/95 check worst cases only, and proposed that a kind of simple test, like simple ignition key on, be performed.

Conclusion:

- Request for new AECS type approval: succeed functionality in the environment of UN R94/95.
- Verification (in minimum) of
 - generation of Trigger Signal during the UN R94/R95 impacts,
 - audio capabilities and MSD transmission during crash test procedure.
- Possibility of performing this via other measures will be discussed further at next meeting

5.1. Regulatory items

Document: AECS-03-04 (Secretary)

5.1.1. Scope

The group started discussing the 3rd part of the scope (approval of a vehicle with an integrated AECS). RUS was concerned that the facilities would not fit this scope. RUS did not see the need for a 3rd part as the components would have to fulfil the same tests and performances as for the two 1st parts. OICA explained that the Part 3 is necessary because this makes the vehicle manufacturer responsible for the whole approval. In addition, as presented in OICA presentation AECS-03-11, only the vehicles included in the scopes of UN R94/95 would have automatic AECS, the others would have a manual AECS activation. The expert from OICA questioned whether this would not be better addressed within the text of the regulation instead of in the scope.

Concerning the last sentence: “Other vehicles may be approved at the request of the vehicle manufacturer”, RUS recalled that this could not be accepted because of this would force a Contracting Party to accept a Type Approval for a vehicle out of scope of the regulation. The group questioned whether the UN regulation scope should or not address the manual AECS activation. The European Commission recalled that the EU regulation addresses M1 and N1 equipped with AECS automatic and manual activation.

D volunteered to elaborate a proposal during the meeting.

Proposal from Germany:

Regulation No. 94

1. SCOPE

This Regulation applies to vehicles of category M1 (1) of a total permissible mass not exceeding 2.5 tonnes; other vehicles may be approved at the request of the manufacturer.

Regulation No. 95

1. Scope

This Regulation applies to the lateral collision behaviour of the structure of the

passenger compartment of M1 and N1 categories of vehicles where the R point of the lowest seat is not more than 700 mm from ground level when the vehicle is in the condition corresponding to the reference mass defined in paragraph 2.10. of this Regulation

Proposal for a text for the scope of the new AECS regulation

This Regulation applies vehicles of category M1 of a total permissible mass not exceeding 2.5 tonnes where the R point of the lowest seat is not more than 700 mm from ground level when the vehicle is in the condition corresponding to the reference mass defined in paragraph [2.10.] of this Regulation.

The European Commission pointed out that this proposal is in conflict with the EU directive, which includes manual activation. On the other hand, having a wide scope would provoke product liability concerns as the scope would include vehicles not addressed by UN R94 (N1). The European Commission committed to internally consult for solving this issue.

RUS proposed to test N1<700 mm vehicles only on side impact with a simulation for frontal impact (triggering signal only).

Conclusion:

- Informal group to address the issue of wide scope at the next meeting
- European Commission to provide input on their internal discussions, and a possible solution.

5.1.2. Communication with mobile phone networks

This point was addressed under item 5 and the group agreed to not include this in the scope of the regulation.

5.1.3. Data transmission mechanism

The experts started by exploring paragraph 2.11. RUS found the definition too much related to the EU architecture. As this definition was related to the definition of PSAP, the group addressed this paragraph (2.12.). OICA pointed out that the RUS proposal is not aligned on the EU definition, and does not permit the private service to be independent from the authorities. The expert agreed to well discriminate the TPS (third party service) and PSAP.

J recalled that HELPNET is a private company; hence the proposed wording should be re-considered.

J pointed out that there is currently no PSAP definition in J (helpnet call center). Hence J could not agree with the proposed definition.

Conclusion on PSAP definition: alignment on the CEN standard.

CLEPA proposed to add a definition of TPS (3rd party services), aligned on the CEN-16102: "... physical location where an agency ...".

RUS doubted about the necessity to include such definition as it is out of the scope of the informal group work.

The group was informed that the EP agreed on 27 February to accept TPS, hence leading to the need to manage how to avoid sending twice the data. This would be based on a kind of switching system based on the user wish, hence the need to regulate this in the AECS UN regulation. It was stressed that such definition would be necessary to cover the case of Helpnet, where a TPS is already in place.

Conclusion: CLEPA committed to produce a proposal for TPS in cooperation with Japan.

5.1.4. MSD

Necessity of including VIN

NL recalled that VIN provides information on the vehicle (e.g. electric vs. combustion engine, registration number). This could be beneficial in case of multiple accidents. Yet in EU only one part of VIN is regulated. J pointed out VIN is different country by country, as in e.g. Japan, it is the “vehicle frame number”. J confirmed the possibility for optional data in the VIN. Some debate took place on the “M” in the optional part of the MSD. RUS confirmed this as “optional”. Some data are not included in the CEN 15722.

Data transmission mechanism

RUS pointed out that the Technical Service must verify that the data has been transmitted. Yet the content depends on the country to a certain extent, hence the regulation should define the data necessary with regard to the objective, and the process of transmission.

OICA questioned whether the regulation should address the IT details for data transmission (EU: in-band modem and SMS).

J supported that the details of data transmission mechanism be out of the regulation (see J presentation AECS-03-05).

NL informed that some indications are present in the CEN standard.

D found it necessary that the content and process be sufficiently described to permit mutual recognition.

RUS said that the solution would be easy if limited to RUS and EU, yet to a wider extent, the solution would be more difficult, hence the expert proposed to limit the regulation to a list of data, and let the transmission process and protocols to the national legislation.

The group referred to Table 4 of AECS-03-04. Japan informed that in-band modem cannot fit the J system. In addition, the solution would have an influence on the PSAP.

The group agreed that all that is related to transmission should be addressed outside of the regulation, except what is common to all Contracting Parties.

A debate took place on the best way to proceed: different regulations, different parts of the regulation, etc.

The Secretary proposed to introduce different classes of approvals.

RUS found this a good idea with some modification, e.g. the description of type of vehicle and device. For the device, there would be a description of the electronics. For a device, Part I. some components could influence the type of vehicle (antenna, loudspeaker, etc.). RUS found it necessary to discuss the logic in depth.

D proposed to have different regulations, i.e. devices intended for J, or EU. Then each Contracting Party would be free to sign one or the other regulation. Another approach would be to have different series of amendments of the regulation, to be signed by different Contracting Parties. D proposed to raise the issue at WP29.

Conclusion:

- UN regulation to limit the MSD to the mandatory part of CEN 15722 for the time being
- Informal group to review this in accordance with the evolution of the MSD content in EU.
- Mechanism of data transmission: Chair to raise the identified issue at WP29 and the different possible solutions, for guidance

5.2. Technical items

Document: AECS-03-04 (Secretary)

5.2.1. EMC, climate resistance and mechanical resistance

EMC

The question was raised as to whether simply referring to UN R10, or including all necessary requirements. NL raised the concern of after-market components.

A debate took place on the reference to UN R10. RUS pointed out that in their proposal only some of the requirements from UN R10 are present. The RUS proposal was only to point out which parts of UN R10 are relevant to E-call. The problem of redundant tests was also mentioned, should the tests be prescribed in both UN R10 and the AECS regulation.

RUS said that some tests are added in UN R116 in top of a reference to UJN R10, because of their absence from UN R10. RUS committed to scrutiny the reason of this addition.

Conclusion:

- Reference to UN R10, plus additional relevant tests if necessary
- RUS to produce a proposal for the relevant additional tests and their justifications for AECS-04

Climate resistance

RUS presented their proposal as a copy/paste of paragraph 6.4. of UN R116.

The Secretary found these proposals “over-regulation”.

OICA informed that the manufacturers adapt the resistance to climate to the climate of the territory where the vehicle is intended to be operated. RUS was surprised that this would be “region dependent”. Yet e.g. the airbags can have different thresholds according to the region of the world. J supported OICA that the RUS proposal is over-regulating, it is a kind of design issue, under the responsibility of the manufacturer. OICA recalled that UN R116 is the only regulation having such provisions. In addition, the expert questioned whether there is real concern with components such as loudspeakers, etc.

The Chair was of the opinion that this climate resistance should be under the responsibility of the manufacturer. The Chair proposed to put the item between [] and to request RUS to provide proper justifications.

Yet the question of product liability was raised. The Chair shared his experience, with climate experience, coming from eastern of Russia where temperature was -15°, and that all features of the vehicle are changed in these conditions. He informed that there is a special GOST addressing these extreme conditions.

The Secretary was of the opinion that the market already covers this problem of climate, when the manufacturers establish the specifications for the suppliers. RUS found it necessary to minimize the risks. OICA could support having a debate on the temperatures, but rejected the introduction of IP40 and IP42.

J repeated their opinion that this proposal is over-regulation.

RUS feared that deleting these requirements would lead to double testing.

Conclusion:

- Provisions in []
- RUS to provide further justifications.

Mechanical resistance

RUS presented the proposed requirements. The requirements are explicitly described rather than a simple reference. Detailed test methods for simulation of mechanical aggression are described in the relevant annex. They are inspired from UN R97 and UN R116.

OICA requested clarification about “attachment to the engine”. The correct reference would then be “engine compartment”. OICA claimed that all manufacturers have their own mechanical resistance specifications, and the proposed tests are 30/40 years old, and have been abandoned by the manufacturers since then. The proposed requirements could in fact be detrimental to safety for certain configurations.

RUS was keen to get evidence that the device functions correctly under all conditions. Yet OICA pointed out that the manufacturer best knows the mechanical environment for each type of vehicle and that he adapts the specifications to the design of the vehicle. The proposal could not capture all the configurations.

RUS said that this argument would then be valid for the UN R94/R95 environment. The representative of the RUS manufacturers said that the question could then be summarized as to whether the importers really want to introduce their products into the RUS market.

RUS clarified that ISO16750 is reflected in the GOST standard and that the manufacturers can use the GOST or the ISO standard. OICA recalled that the informal group is in the context of the 58 Agreement as a universal regulation. As an example, the expert questioned whether the range of vibration frequencies really reflects what exists in the vehicles.

CLEPA acknowledged the legitimate wish of RUS to impose their own requirements in the UN regulation, but said that some compromise would be necessary. Yet they questioned the necessity of imposing the mechanical requirements as for the R94/95 environment. In addition, the question of PTI and auto diagnostic was raised. The expert from Volvo committed to provide the reference of the ISO standard. RUS clarified that the proposal aims to ensure that the device functions correctly before the 1st PTI inspection and between each inspection and that should be done by auto-diagnostic. OICA questioned the logic as this could be done for all functions, e.g. GNSS connection etc. As an example the airbag auto diagnostic does not inflate the airbag, hence would not be complete because it is not possible. Same should apply to AECD.

The Chair voiced the opinion that only the minimum set of requirements should be present in the regulation, with the right for RUS to keep their own domestic requirements. By the time the regulation will be established, RUS legislation may change, and in the meantime it will be necessary to trust the manufacturer. The Chair suggested to put the requirement in []. It was clarified that the vibration test does not aim the durability.

RUS said that they are precedent in other “electronic” regulations (R116 and R97). RUS was ready to assess the common practice of electronic regulations and make a decision in the light of these practices. The Chair recalled that ESP and ABS are electronic systems, subject to hard environment and have no such requirements. OICA pointed out the airbag as a safety related electronic item subject to self-check, and that there is no such provision in there.

OICA pointed out paragraph 6.3.2., which would then be in addition to the UN R17 shock. RUS said that UN R17 intends to simulate a light crash while paragraph 6.3.2. simulates a short shock. OICA was keen that the tests should be merged. RUS was ready to avoid double testing. In addition, OICA questioned whether the pulse of UN R17 is relevant for AECS, as it is focused on the seat resistance. TRL pointed out that UN R16 can provide a more severe environment. D recalled that UN R17 Annex 9 aims luggage, not fixed to the body, while the AECD is attached to the body, i.e. the consequence are different.

Conclusion:

- Proposed provisions in []
- Interest experts to provide examples
- Majority of the group opposed to the proposed provisions.
- Informal group to review the relevancy of annexes to UN R17 for AECD.

5.2.2. AECS triggering conditions (UN R94/R95 environment)

RUS recalled that the only existing tests are UN R94/95. Yet the expert pointed out that the trigger should happen only if there is a risk of injury for the occupant. It was pointed out that the UN R94/95 approval on the contrary guarantees that there is no risk of injury in the R94/95 environment, and that the manufacturer cannot state that there is a risk in the context of AECS when there is no risk in the UN R94/95 context.

Note of the Secretariat: this statement appears to be erroneous, since the UN R94/95 are based on AIS 3, i.e. “serious injury” e.g. HIC 1000.

Conclusion:

- Use of UN R94/95 environment for triggering check

5.2.3. Pass/fail criteria assessing post-crash functioning

Not discussed

5.2.4. Navigation module requirements: experts’ opinion about the application of item 6.5 (reception and processing of standard precision navigation signals), Annex 9 of draft regulation (AECS-02-02-r1e)

RUS explained that the GNSS connexion should be considered a part of the AECS, hence be subject to verifications.

OICA pointed out that some other means of positioning system could reach same accuracy, and suggested that only the accuracy requirements are kept (map matching, vehicle speed, etc.) the current text does not permit this. The expert pointed out that GNSS is currently not the primarily method for the manufacturer to reach the requested accuracy. CLEPA supported having a minimum accuracy, yet linking it to GNSS is an issue. CLEPA was keen to have the freedom to the technology to match the requirements. The European Commission was keen that the accuracy be up to 10 m, and RUS supported the fact that 50m is quite easy to achieve. J informed that there are a lot of tunnels where accuracy can be difficult to reach, and supported CLEPA and OICA on the freedom to technology.

The Secretary recalled that a UN regulation usually has general requirements, and the test method is described such that the manufacturer can provide evidence that the general requirements are met in the context of the test conditions. OICA in addition challenged the proposed frequency of 1s for the rate of observation as it is related to the design of the vehicle, and would influence lots of other systems in the vehicle design. RUS was ready to delete this requirement. The European Commission was of the opinion that a reference to the GNSS was a kind of extra requirement to insure good positioning. CLEPA raised the problem of the price. RUS pointed out that the problem is particular here and that references to GNSS are necessary. OICA questioned whether Galileo is considered as a GNSS as it not yet global or really existing (currently very restricted access to Galileo). In addition, the regulation should not be misused to promote any technology.

J recalled that one GNSS is well sufficient.

The Secretary proposed that the technology is not mentioned in the general requirements, but made necessary in the test method description.

In addition the experts questioned the value of 250 km/h. RUS on this point said that the accuracy decreases with the speed and that the aim is to get evidence that AECS functions when

moving. RUS recalled that the test methods are anyway technology dependent hence the need to mention the existing systems.

The European Commission informed that some performance requirements are being developed in the EU, and was keen that all AECS are Galileo compatible, and that the wording explicitly include a reference to Galileo.

The Chair suggested following the proposal from the Secretary, i.e. general requirements with no technology, and approval tests imposing GNSS.

Conclusion:

- Secretary to draft proposal along the line of the proposal
- Item to be reviewed at the next meeting

5.2.5. Connection to telephone network

See item 5 above

5.2.6. Accuracy of GNSS

6. Discussion of the draft regulatory text

Document: AECS-02-02-Rev.1 (Secretariat)

7. List of action items for next meeting

Document: AECS-03-14 (Chair and Secretariat)

AECS-03-14 summarizes the main outcomes of the 3rd meeting on the informal group, together with the requests for guidance to the parent group GRSG.

8. Any other business

9. Schedule for further IG meetings

AECS-04	28-30 April 2014	OICA
GRSG-106	5-9 May 2014	Geneva
