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# Technical regulation in the scope of ERA-GLONASS emergency response system deployment

**Victor Gladkikh,**
**Deputy head of complex on technical regulation, Phd**
**Artem Klimovskiy,**
**Technical analyst**

**Seminar on ERA GLONASS**
**Accident Emergency Call System (AECS)**
**Moscow**
**February 25th 2014**

# Technical regulation and Standardization action plan in the scope of ERA-GLONASS project

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| Field of activity | Target | Planned actions |
|---|---|---|
| **Technical regulation** | To amend the Technical Regulation on wheeled vehicles safety with requirements on IVS obligatory installation and main IVS requirements (ERA-GLONASS terminal) | 1. Technical Regulation of Customs Union **(TR CU 018/2011)** - **DONE**<br><br>2. Draft Technical Regulation of Russian Federation (approved by Government Resolution № 720 on September 10th 2009) |
| **Standardization** | 1. To ensure ERA-GLONASS system usage<br>2. To ensure execution of Technical Regulation on wheeled vehicles safety (Russian TR, TR CU)<br>3. To guarantee functional compatibility of Russian ERA-GLONASS and EU eCall systems | National standards development in the scope of ERA-GLONASS system deployment - **DONE** |

# Technical regulation of Customs Union on wheeled vehicles safety (TR CU 018/2011)

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## Objects of technical regulation (ERA GLONASS onboard terminals):

**in-vehicle emergency call device (IVeCD) –**

intended to determine the coordinates, speed and direction of the vehicle by means of signals of at least two global navigation satellite systems, to transfer the data on the vehicle when in road and other accidents **in manual mode*)** and to provide two-way voice communication with emergency services using mobile telephone networks (vehicles of categories M1 & N1 **not relevant to** R94&R95, M2, M3, N2 & N3).

**in-vehicle emergency call system (IVeCS) –**

a system which has a IVeCD functionality, intended to transfer the data on the vehicle when in road and other accidents **in automatic mode** (vehicles of categories M1 & N1 **relevant to** R94&R95).

M2, M3,

N2, N3

M1, N1

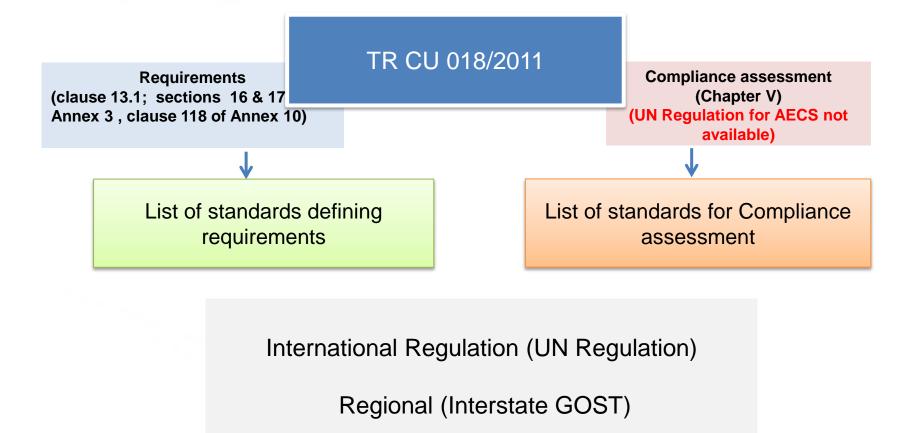*) In **automatic** mode for **IVeCD** - from Jan 1st 2017 when rollover.

# Agreed IVS introduction schedule

| in-vehicle emergency call device (IVeCD) | in-vehicle emergency call system (IVeCS) |
|---|---|
| **01 Jan 2015 –** assessment of compliance in the form of vehicle type approval at first time (vehicles of categories M1 & N1 not relevant to R94&R95; M2, M3, N2 & N3) | **01 Jan 2015 –** assessment of compliance in the form of vehicle type approval at first time (vehicles of categories M1 & N1 relevant to R94&R95) |
| **01 Jan 2016 –** categories of vehicles that will be put in circulation in the territory of the of Customs Union:<br> - vehicles of categories M2 & M3 (intended for commercial passenger transportation or transportation of children);<br> - vehicles of categories N2 & N3 (intended for dangerous cargo transportation) | |
| **01 Jan 2017 – all vehicles** that will be put in circulation in the territory of the of Customs Union (vehicles of categories M1 & N1 not relevant to R94&R95; M2, M3, N2 & N3) | **01 Jan 2017 – all vehicles** that will be put in circulation in the territory of the of Customs Union (vehicles of categories M1 & N1 relevant to R94&R95) |

**TR CU 018/2011**

**Requirements**
**(clause 13.1; sections 16 & 17**
**Annex 3 , clause 118 of Annex 10)**

**Compliance assessment**
**(Chapter V)**
**(UN Regulation for AECS not**
**available)**

List of standards defining requirements

List of standards for Compliance assessment

International Regulation (UN Regulation)

Regional (Interstate GOST)

National (GOST R)

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| Purposes of development | 1. To ensure ERA-GLONASS system usage<br>2. To ensure execution of Technical Regulation on wheeled vehicles safety (Russian TR, TR CU)<br>3. To guarantee functional compatibility of ERA-GLONASS and eCall systems | | |
|---|---|---|---|
| **Set of standards** | **All-system (3)** | **Standards of technical requirements (2)** | **Standards for compliance testing (6)** |
| **Objects of standardization** | • **Terms and definitions** (Draft GOST R)<br><br>• **General provisions** (Draft GOST R)<br><br>• **GOST R 54721-2011** "General base service description" & Amendment №1 GOST R 54721 | • **GOST R 54620-2011** "In-Vehicle Emergency Call System. General technical requirements" & Amendment № 1 GOST R 54620<br><br>• **GOST R 54619-2011** "Protocol of data transmission from in-vehicle emergency call system to emergency response system infrastructure" & Amendment № 1 GOST R 54619 | • **Road accident emergency response system. Test methods:**<br>- **GOST R 54618-2011** "Compliance test methods of in-vehicle emergency call system for electromagnetic compatibility, environmental and mechanical resistance requirements" **(& Amd.1);**<br>- **GOST R 55530-2013** "Functional test methods of In-Vehicle emergency call system and data transfer protocols";<br>- **GOST R 55531-2013** "Test methods of in-vehicle emergency call system conformity to the requirements for quality speakerphone in a vehicle cabin";<br>- **GOST R 55532-2013** "Test methods of in-vehicle emergency call system crash detection feature;<br>- **GOST R 55533-2013** "Test methods for wireless communication module of in-vehicle emergency call system;<br>- **GOST R 55534-2013** "Test methods for navigation module of in-vehicle emergency call system" |

Standards in GREEN are approved,
Standards in RED are finalized and
forwarded for approval to ROSSTANDADRT

## Harmonization with international standards

**ISO/IEC standards:**

- **ISO 2575:2010/ Amd.1:2011** Road vehicles -- Symbols for controls, indicators and tell-tales. Amendment 1
- **ISO 24978:2009** Intelligent transport systems -- ITS Safety and emergency messages using any available wireless media -- Data registry procedures
- **Etc.**

**CEN standards:**

- **EN 15722** Road transport and traffic telematics — eSafety — eCall minimumset of data (MSD)
- **EN 16072** Intelligent transport systems — eSafety – Pan European eCall – Operating requirements
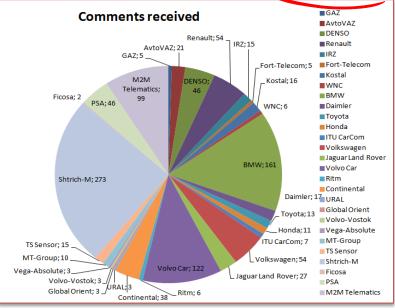- **Etc.**

**ETSI/3GPP/ITU standards:**

- **ETSI TS 124 008 (3GPP TS 24.008)** Technical Specification Group Core Network and Terminals-- Mobile radio interface Layer 3 specification-- Core network protocols; Stage 3,Release 8.
- **ETSI TS 126 267 (3GPP TS 26.267)** Technical Specification Group Services and System Aspects-- eCall Data Transfer-- In-band modem solution-- General description, Release 8
- **ITU-TP.1100/1110** Narrow/Wideband-band hands-free communication in motor vehicles
- **Etc.**

# National standard on IVS requirements approved in Dec 2011 Development and approval (2/2)

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| TS (NIS standard): IVS requirements | |
|---|---|
| Requirements review started | July 2010 |
| Requirements review duration | 13 months |
| Number of companies received requirements | 370 |
| Number of companies submitted comments | 33 |
| Total number of comments received | 1081 |

| National standards drafts: IVS requirements | |
|---|---|
| Standards drafts review started | Aug 2011 |
| Standards drafts review duration | 3 months |
| Number of companies notified about standards drafts review | 345 |
| Number of companies submitted comments | 12 |
| Total number of comments received | 285 |



**Comments received**

GAZ; 5, AvtoVAZ; 21, Renault; 54, IRZ; 15, Fort-Telecom; 5, Kostal; 16, WNC; 6, DENSO; 46, M2M Telematics; 99, Ficosa; 2, PSA; 46, Shtrich-M; 273, BMW; 161, Daimler; 17, Toyota; 13, Honda; 11, ITU CarCom; 7, Volkswagen; 54, Jaguar Land Rover; 27, Volvo Car; 122, Ritm; 6, Continental; 38, URAL; 3, Global Orient; 3, Volvo-Vostok; 3, Vega-Absolute; 3, MT-Group; 10, TS Sensor; 15

Legend: GAZ, AvtoVAZ, DENSO, Renault, IRZ, Fort-Telecom, Kostal, WNC, BMW, Daimler, Toyota, Honda, ITU CarCom, Volkswagen, Jaguar Land Rover, Volvo Car, Ritm, Continental, URAL, Global Orient, Volvo-Vostok, Vega-Absolute, MT-Group, TS Sensor, Shtrich-M, Ficosa, PSA, M2M Telematics

**Confirmed IVS requirements review was organized effectively**
- OEM associations – 22 members in total
- more than 5 Tier 1 suppliers

35 OEM's confirmed they do understand IVS requirements

More than 5 Tier 1 suppliers and more than 5 Russian companies confirmed aftermarket / retrofit IVS mass production can start in Q1 2013

Standard is approved, published and available at Federal information fund of technical regulations and standards (FGUP STANDARTINFORM)

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# National standards on test methods approved in Aug 2013

## Development and approval (1/2)

| National standards drafts: review data | |
|---|---|
| Standards drafts review started | June 2012 |
| Standards drafts review duration | September 2012 |
| Standards drafts review duration | 3 months |
| Public review notification on Rosstandart website | http://www.gost.ru/wps/portal/pages.Notif.StandartAbout |
| National standards drafts on TC 363 «Radionavigation» website | http://www.internavigation.ru/page.phtml?p=8 |
| Total number of companies notified about standards drafts review | **560** |
| Including: | |
| Member companies TC 363 | 35 |
| Car manufacturers | 170 |
| Navigation & communication related companies (Russian & foreign) | 255 |
| Aftermarket vehicle components manufacturers | 100 |

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| National standard* | Number of comments received** |
|---|---|
| **GOST R 55530-2013** GNSS. Road accident emergency response system. Functional test methods of In-Vehicle emergency call system and data transfer protocols; | 32 |
| **GOST R 55531-2013** GNSS. Road accident emergency response system. Test methods of in-vehicle emergency call system conformity to the requirements for quality speakerphone in a vehicle cabin; | 15 |
| **GOST R 55532-2013** GNSS. Road accident emergency response system. Test methods of in-vehicle emergency call system crash detection feature; | 25 |
| **GOST R 55533-2013** GNSS. Road accident emergency response system. Test methods for wireless communication module of in-vehicle emergency call system; | 36 |
| **GOST R 55534-2013** GNSS. Road accident emergency response system. Test methods for navigation module of in-vehicle emergency call system. | 7 |
| **Results of public review:**<br>Accepted – 75% of all comments received<br>Rejected with justification – 20% of all comments received<br>Comments provided – 5 % of all comments received | |

*) Standards are approved, published and available at Federal information fund of technical regulations and standards (FGUP STANDARTINFORM)
**) A consolidated comment table was received from ACEA

| National standards drafts  (Amd.1 GOST R 54XXX-2011) : review data | |
|---|---|
|  | GLONASSUNION |
| Standards drafts review started | July 2013 |
| Standards drafts review duration | August 2013 |
| Standards drafts review duration | 1 month |
| Public review notification on Rosstandart website | http://www.gost.ru/wps/portal/pages.Notif.StandartAbout |
| National standards drafts on TC 363 «Radionavigation» website | http://www.internavigation.ru/page.phtml?p=8 |
| Total number of companies notified about standards drafts review | over 150 |
| Including: | |
| Member companies TC 363 | 35 |
| Car manufacturers | 45 |
| Navigation & communication related companies (Russian & foreign) | 70 |
| Aftermarket vehicle components manufacturers | 10 |

| National standard | Number of comments received |
|---|---|
| **Amd.1 GOST R 54618-2011** GNSS. Road accident emergency response system. Compliance test methods of in-vehicle emergency call system for electromagnetic compatibility, environmental and mechanical resistance requirements; | over 356 |
| **Amd.1 GOST R 54619-2011** GNSS. Accident emergency response system. Road 0accident emergency response system. Protocols of data transmission from in-vehicle emergency call system to emergency response system infrastructure; | over 80 |
| **Amd.1 GOST R 54620-2011** GNSS. Road accident emergency response system. In-vehicle emergency call system. General technical requirements. | 10 |
| **Results of public review:** <br> Accepted – 60% of all comments received <br> Rejected with justification – 30% of all comments received <br> Comments provided – 10% of all comments received | |

Standards are forwarded to national standardization organization (ROSSTANDART) for approval and publication

# UN Regulation development on Accident Emergency Call System

**World Forum for Harmonization of Vehicle Regulations on its 159th session (WP 29),** March 2013 – Russian Federation (Ministry of industry and trade of Russian Federation) announced its intention to propose a new UN Regulation on emergency call systems;

**World Forum for Harmonization of Vehicle Regulations on its 160th session (WP 29),** June 2013 – an informal working group (IWG) was created under The Working Party on General Safety (GRSG) for developing the new UN Regulation on emergency call systems. IWG on emergency call system starts working on this subject under the chairmanship of the Russian Federation. (ECE/TRANS/WP.29/1104, Paragraphs 74-76);

**1st meeting of the GRSG IWG on Accident Emergency Call System (AECS)** (in the scope of **105** GRSG session WP 29, 08 -10 October 2013, Geneva) - UN Regulation draft discussion developed by Russian Federation (AECS-01-05e);

**2nd meeting of the GRSG IWG on AECS** (05 - 06 December 2013, Paris) – UN Regulation draft discussion developed by OICA (AECS-02-02e);

**3rd meeting of the GRSG IWG on AECS** (25 - 28 February 2014, Moscow):
- **-** Seminar on ERA-GLONASS emergency call systems;
- - UN Regulation draft discussion developed by OICA with propositions of Russian Federations;

**4th meeting of the GRSG IWG on AECS** - 28 - 30 April 2014, Paris (OICA).

**Thank you!**