Third Party Supported eCall and Future eCall Standards

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The Suite of standards

Pan European eCall

ETSI eCall

Third Party Service eCall

Conformance
The Suite of standards

Pan European eCall

Application

Communications

ETSI eCall

Third Party Service eCall

Application

Conf orm ance

ACTORS: IVS MNO PSAP

End user: Vehicle Occupants
The Suite of standards

Pan European eCall

Application
EN15722  MSD
EN 16072 PE eCall Op Reqts
EN 16062 PE HL App Protocols

Communications
ETSI eCall
ETSI TS 102 936-1
ETSI TS 102 936-2
Release 8 or Later of 3GPP Specs

Third Party Service eCall

Application
EN 16102 TPS eCall

Conformance
CEN TS 16454 eCall End to End Conformance Tests

ACTORS: IVS MNO PSAP

End user: Vehicle Occupants
The Status of standards

Pan European eCall

Application

EN15722 MSD
APPROVED 2010

EN 16072 PE eCall Op Reqs
APPROVED 2011

EN 16062 PE HL App Protocols
APPROVED 2011

Communication

ETSI eCall

ETSI TS 102 936-1
ETSI TS 102 936-2

RELEASE 8 OR LATER OF 3GPP SPECS
APPROVED 2009-2011

Third Party Service eCall

Application

EN 16102 TPS eCall
APPROVED 2011

CEN TS 16454 eCall End to End Conformance Tests In ballot

ACTORS: IVS MNO PSAP

End user: Vehicle Occupants
Third Party Support for eCall

- **EN 16102** Intelligent transport systems — ESafety — Third party services supported eCall - Operating requirements

- Specification for Services are supported between the vehicle and a 'Third Party Service Provider' to transfer an emergency message from a vehicle to a 'Third Party Service Provider' (TPSP) and establish a voice channel.
- TPSP to transfer an emergency message including the data of the 'minimum set of data' (EN 15722) to PSAP and to make best efforts to establish a direct voice contact between vehicle and PSAP.
- Definition of the service(s) provided to the PSAP and the method and form of service delivery.
# Differences between PE and TPS eCall

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<th>PE eCall</th>
<th>TPS eCall</th>
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<td><strong>Similarities</strong></td>
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<td>MSD to PSAP</td>
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<td>Voice connection vehicle-PSAP</td>
<td>Voice connection vehicle-PSAP</td>
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<td><strong>Differences</strong></td>
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<tr>
<td>Uses 112 Emergency call Service (TS12)</td>
<td>Uses proprietary link between vehicle and TPSP</td>
<td>Uses 'Landline' between TPSP and PSAP</td>
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<td>Will work in all EU countries without contracts/subscriptions</td>
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<tr>
<td>Free</td>
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<td></td>
<td>Can filter out false calls</td>
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<td></td>
<td>Can Add additional relevant data eg medical/personal</td>
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<td></td>
<td>Can provide message to PSAP even where MSD and/or connection with vehicle fails before completion</td>
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<tr>
<td>In new models from model year 2015/2016</td>
<td>Can be implemented today in equipped vehicles</td>
<td>Can be implemented today using aftermarket equipment</td>
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TPS eCall

Diagram showing the flow of data and communication between a vehicle, PLMN, TPSP, and PSAP, including incident data, voice calls, and additional data.

Possible voice connection with vehicle occupants.
TPS compared to PE eCall
False Calls

- Because TPS has its service provider as the ‘bridge’ to the PSAP, it can filter out ‘false’ calls
  - E.G. Non emergency calls
  - Accidental calls
  - Falsely generated calls
- Some PSAPs welcome this as it lightens their workload and false calls will be a significant factor
- Other PSAPs do not want TPSPs to be making these decisions
Additional Relevant Data

• The PSAP requires the ‘Minimum Set of Data’
  • In PE eCall this has to be generated by the in-vehicle equipment, and transmitted in the TS12 emergency message over a GSM/3G wireless link which may be weak or overloaded
  • In TPS the TPSP may hold some of this data centrally, reducing the load on its communication with the vehicle
  • The TPSP is also able to add additional data. For example its customer may request that relevant medical data, or mobility information is passed to the PSAP. Viz there is more opportunity to ‘personalise’ the data provided to the PSAP
Can provide emergency message when MSD fails

• While GSM/3G coverage is good across most of Europe, there will be times when an emergency eCall is made, but does not get completed.

• In these situations the TPSP, though not still in contact with the vehicle, has received an alarm from the vehicle, and can forward what information it has to the PSAP, improving the chances of an emergency message getting through
TPS eCall can be supported today in equipped vehicles

- PE eCall will be introduced into new models from model year 2015/2016. Its introduction will take time, so its introduction will be slow as only 5% of the car park is changed each year.

- But many car manufacturers already provide an ‘Emergency Service’ option to their customers, typically for breakdown situations, general service provision, directions, message forwarding and of course emergency calls in the event of an incident.

- Most of these systems can readily be adapted to provide TPS eCall TODAY.
TPS eCall can be supported today in equipped vehicles

- PE eCall will be introduced into new models from model year 2015/2016. Its introduction will take time, so its introduction will be slow as only 5% of the car park is changed each year.

- Rapid evolution of GNSS technology, gyroscopes and accelerometers, make it feasible to provide ‘aftermarket’ equipment that can perform the eCall task, for example as part of satnav equipment. It will be easier to get approval for these systems if they involve a TPSP to filter out false calls, which will be more prevalent in such systems.
HGV eCall
CEN TR 16405: eCall – Additional optional dataset for HGVs

- Approved July 2012. Published.
- Data being Tested in HeERO 1 (Netherlands)
- System and Data to be tested in HeERO2 (Luxembourg)
- All eCall standards may be revised in the light of the results of these trials
• UNECE JWG RID : ADR (Dangerous Goods)
• Expressed interest in HGV eCall
• Firstly as supervisor of common regulatory requirements
• Secondly as a tool for ADR Monitoring
• - - - - explained that as eCall is TS12 call it can only be used following an incident
ISO 15638-10 Telematics Applications for Regulated Commercial Freight Vehicles (TARV) – Emergency Messages Systems/eCall

• Uses compatible methodology to send emergency messages or HGV eCall

• eCall option completely compatible with CEN 16405 – Optional additional dataset for HGV

• Therefore HGV eCall will be able to be sent via Teleservice 12, or via C-ITS communications
ISO 15638-18 Telematics Applications for Regulated Commercial Freight Vehicles (TARV) – 18: ADR

- Provides UNECE with a C-ITS tool for ADR Monitoring
- Data concepts common with HGV eCall
- STATUS: Working Draft
• eCall via LTE
• Russian eCall/Glonass Dataset
• eCall for powered two wheel vehicles
• Personal eCall
The Suite of standards

Questions

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