



## Liaison Statement

**Title:** LS on Next Generation eCall

**Source:** CEN/TC 278/WG 15 “eSafety”

**To:** ETSI TC MSG, 3GPP TSG SA and 3GPP CT

**Contact person:** Matthias Mörbe [matthias.moerbe@de.bosch.com](mailto:matthias.moerbe@de.bosch.com)  
Convenor CEN TC 278 WG 15

### 1 Introduction

CEN/TC 278/WG 15 has developed multiple standards related to eCall and IMS-eCall (also known as Next Generation eCall or NG eCall). Some of those CEN standards (EN 16062, CEN/TS 17184 and EN 17905) provide High Level Application Protocols (HLAP) for eCall and IMS-eCall. Those standards are based on existing specifications from 3GPP (e.g. 3GPP TS 24.229 and 3GPP TS 23.167) and ETSI (e.g. ETSI TS 124 229 and ETSI TS 123 167) and IETF (e.g. IETF RFC 8147).

On 6 February 2024, a new Delegated EU Regulation for PSAPs was adopted (see this link <https://webgate.ec.europa.eu/regdel/#/delegatedActs/1766>). Currently no regulation number is assigned to it, but it should be published in the Official Journal after the 2(+2)-month scrutiny period. Besides other requirements, it requires PSAPs to support CEN/TS 17184:2022 (and the subsequent version EN 17184) and CEN/TS 17240:2018 (and the subsequent version EN 17240) from 2026 onwards.

On 14 February 2024, a new Delegated EU Regulation for vehicles and in-vehicle eCall systems (IVS) was adopted (see this link <https://webgate.ec.europa.eu/regdel/#/delegatedActs/2159>). Currently no regulation number is assigned to it, but it should be published in the Official Journal after the 2(+2)-month scrutiny period. Besides other requirements, it requires in-vehicle eCall systems to support CEN/TS 17184:2022 and CEN/TS 17240:2018 from 2026 onwards.

CEN/TS 17184 provides High Level Application Protocols (HLAP) for eCall using IMS over packet switched networks. It provides the equivalent of EN 16062 for circuit switched networks and

should be suitable for all/any packet switched networks and wireless access such as LTE, NR and their successors.

The latest revision of CEN/TS 17184:2022 contains HLAP requirements that mostly align with 3GPP and ETSI specifications (e.g. 3GPP TS 23.167, 3GPP TS 24.229, ETSI TS 123 167 and ETSI TS 124 229), but with some differences in IVS behaviour that would result in different NG eCall support by a 3GPP/ETSI compliant IVS versus a CEN compliant IVS.

This LS outlines and comments on these differences.

## **2 Differences between 3GPP/ETSI and CEN HLAP Requirements**

1. CEN has different requirements for a test NG eCall, because it shall include MSD transfer while using IMS over packet switched networks (see CEN/TS 17184:2022 § 7.3.2).

*According to the CEN requirements a test NG eCall shall include the MSD transfer but corresponding 3GPP procedures and signalling are currently not defined.*

Justification for 3GPP alignment with CEN: test eCalls are an important instrument to support the vehicle type-approval tests, where a test lab needs to verify compliance of the IVS with the CEN standards, without interfering with PSAP emergency services. Especially after vehicle crash tests and sled tests, test eCalls to a dedicated PSAP test point are currently used for the CS-based eCall type-approval and MSD verification is part of the defined test procedure (see EU Regulation 2017/79 Annex I and II).

2. CEN has different requirements for transfer of an updated MSD during a PSAP callback while using IMS over packet switched networks (see CEN/TS 17184:2022 § 7.7.3 and 7.11).

*According to the CEN requirements a PSAP shall be able to request MSD updates during a PSAP callback and the IVS shall transfer MSD updates accordingly but corresponding 3GPP procedures and signalling are currently not defined.*

Justification for 3GPP alignment with CEN: without alignment, the NG eCall would not provide an equivalent set of features compared to CS-based eCall where a PSAP can retrieve the MSD for a callback. The alignment would enable a PSAP to retrieve updated MSD when calling back an IVS.

3. CEN has different requirements for an event where the IVS receives a SIP response code of the form 4xx/6xx containing a positive MSD ACK while using IMS over packet switched networks (see CEN/TS 17184:2022 § 7.4.5, 7.6.2 and 7.13.3.3).

*According to the CEN requirements the IVS shall remain registered (if not in limited service state) and shall wait for a potential PSAP callback, while the 3GPP requirements require the IVS to immediately retry the eCall in the CS domain if available or over another PS RAT or PLMN.*

Justification for 3GPP alignment with CEN: alignment would avoid unnecessary additional eCall attempts to PSAPs who may be busy (which may worsen any PSAP congestion situation) and allow a PSAP to call back the IVS when a PSAP operator is available. If the IVS reattempts the eCall in the CS or PS domain, it is not ensured that the new call attempt would be handled by the same PSAP and it is possible that a call back from the original PSAP would then fail due to the IVS being engaged in the eCall reattempt.

4. CEN has different requirements for an event where the IVS receives a SIP 200 OK response containing a negative MSD ACK while using IMS over packet switched networks (see CEN/TS 17184:2022 § 7.6.3).

*According to the CEN requirements the IVS shall continue the NG eCall, but shall not resend the MSD, unless requested by the PSAP, while the 3GPP requirements require the IVS to immediately attempt to send the MSD using the in-band modem.*

Justification for 3GPP alignment with CEN: alignment would avoid inband modem signals to a PSAP that supports NG eCall but not inband eCall, which may disturb voice communication (e.g. see case 5 below). The negative MSD ACK implies that the PSAP is NG eCall capable and could thus request MSD later using SIP rather than inband signalling.

5. CEN has different requirements for support of MSD reception by a PSAP using in-band modem over packet switched networks (see CEN/TS 17184:2022 § 7.8).

*According to the CEN requirements the inband MSD reception over packet switched networks is an optional feature for a PSAP that supports eCall over IMS where the PSAP only instigates the MSD transfer if it supports the inband feature. The 3GPP requirements assume that a PSAP supporting eCall over IMS always supports inband MSD reception over packet switched networks (see 3GPP TS 24.229 § 4.7.6) and allow the IVS to instigate sending of the MSD using the in-band modem.*

Justification for 3GPP alignment with CEN: alignment would modify the assumptions related to mandatory and optional PSAP features in 3GPP TS 24.229 § 4.7.6.

6. CEN has different requirements and procedures for an event where the eCall support flag (ECL) is not set at the moment an eCall is triggered (see CEN/TS 17184:2022 § 7.13.1.2).

*According to the CEN requirements the IVS shall set up an IMS emergency voice call (without MSD transfer and without use of eCall URNs), while the 3GPP requirements require the IVS to include an eCall URN in the SIP INVITE but no MSD and to attempt to transfer the MSD using the in-band modem after the eCall is established.*

Justification for 3GPP alignment with CEN: if the PLMN does not support NG eCall (e.g. does not support NG eCall URNs) or if no PSAP supporting NG eCall is available, the eCall would probably be routed to a PSAP that supports emergency calls but not eCall. An attempt to transfer MSD using the in-band modem would then fail and could disturb the voice path. If a PLMN does support NG eCall and if a PSAP is available that supports the inband version of eCall but not NG eCall, the 3GPP requirement may be more suitable.

7. CEN has different requirements for an event where the eCall support flag (ECL) is set at the moment an eCall is triggered but where the IVS later receives a SIP 200 OK response not containing a positive or negative MSD ACK while using IMS over packet switched networks (see CEN/TS 17184:2022 § 7.6.4).

*According to the CEN requirements the IVS shall continue the NG eCall as a normal IMS emergency voice call, but shall not resend the MSD, while the 3GPP requirements require the IVS to immediately attempt to send the MSD using the in-band modem.*

Justification for 3GPP alignment with CEN: same as Case 6

8. CEN has different requirements for an event where an eCall fails completely while using IMS over packet switched networks (see CEN/TS 17184:2022 § 7.4.8).

*According to the CEN requirements the IVS shall try to reattempt the NG eCall for a period of up to 2 minutes, while the 3GPP requirements require the IVS to immediately retry the eCall in the CS domain if available or over another PS RAT or PLMN.*

Justification for 3GPP alignment with CEN: CEN/TS 17184:2022 does not include support for eCall using the CS domain, which is included instead in CEN EN 17905. When the CS domain is absent (e.g. 2G/3G support has been phased out), the CEN/TS 17184:2022 requirement is similar to 3GPP but additionally ensures that the IVS will keep trying to establish an eCall for up to 2 minutes. When the CS domain is present, CEN/TC 278/WG 15 agrees that the 3GPP requirement is valid. 3GPP alignment with CEN in this case can then just include the 2 minutes retry requirement.

9. CEN has different requirements for an event where an eCall drops after successful call establishment (200 OK) but where there was no positive MSD ACK (either in a 200 OK or inband) while using IMS over packet switched networks (see CEN/TS 17184:2022 § 7.13.4.2).

*According to the CEN requirements the IVS shall try to reattempt the NG eCall for a period of up to 2 minutes, while the 3GPP requirements assume the eCall was successful and do not require the IVS to retry the eCall.*

Justification for 3GPP alignment with CEN: alignment would increase the probability of successful transfer of the MSD. As a PSAP can call back the IVS (if not in limited service state) and request MSD (if there is alignment for case 2), CEN/TC 278/WG 15 agrees that alignment for this case seems less essential.

Based on the justification for each case, CEN/TC 278/WG 15 considers that 3GPP alignment for cases 1 to 5 above is needed and asks 3GPP to provide alignment prior to when the Delegated EU Regulations are expected to become effective (1 January 2026). For cases 6 to 9 above, CEN/TC 278/WG 15 considers that 3GPP alignment would provide improved support for some use cases and asks 3GPP to take this into account when determining whether, when and how to provide alignment.

### **3 Actions**

ETSI TC MSG, 3GPP SA and 3GPP CT are kindly asked to take into consideration the above listed CEN/TC 278/WG 15 comments and request.