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| ToR TTF T017 (Ref. Body MSG) |
| Version: 0.3 |
| Author: Bostjan Pintar– Date: 2021-06-03 |
| Last updated by: ETSI Secretariat – Date: 2021-11-09 |
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Terms of Reference –Testing Task Force Proposal

TTF T017 (Ref. Body MSG)

Enhancement of NG eCall – Interoperability Tests

Summary information

|  |  |  |
| --- | --- | --- |
| Approval status | Approved by Ref. Body (doc ref: MSG(21)063013r1) | **YES** |
| Reference Body | Ref. Body MSG |
| ETSI Funding | **Maximum budget : 20 500 EUR** |
| Minimum of 4 ETSI Members Support | **YES** |
| Time scale | **From** | 2022-02-01 |
| **To** | 2023-03-31 |
| Work Items  | Next generation eCall High Level Application Protocol (HLAP) Interoperability Testing  |
| TTF Roadmap reference | TTF 2022 Roadmap |

Part I –TTF Technical Proposal

# Rationale & Objectives

## Rationale

ETSI has organized the first NG eCall interoperability event. This remote event was hosted by SINTESIO, from 2 to 6 November 2020 in Kranj, Slovenia (see <https://www.etsi.org/events/1645-ng-ecall-plugtests-2020> ). More than 20 vendors were present during the plugtest preparation phase but later on 6 vendors attended remote interoperability event.

The aim of the event was to trial independently and jointly IVS and PSAP devices based on Next Generation eCall over MNO network. Due to the pandemic situation simplified network without LTE was used to check interoperoperability between IVSs and PSAPs.

Due to the lessons learned and mainly because of the new release of the ETSI, 3GPP and CEN standards the existing interoperability test specification need to be enhanced. This document therefore proposes the creation of a new TTF in order to adapt and provide the necessary interoperability test specification.

## Objectives of the work to be executed

The objective of this project is the enhancement of interoperability tests under ETSI TS 103 683 to cover latest ETSI/3GPP base specifications ETSI TS 123 167, ETSI TS 124 229. Specification ETSI TS 103 479 “Core elements for network independent access to emergency services” need to be checked and configurations related to 4G/5G should be presented in test specification. Furthermore set of CEN TS 17249-1 to -6 related to different vehicle types of NG eCall should be taken in consideration during the enhancement of interoperability test specification. The planned revision of CEN/TS 17184:2018 and CEN/TS 17240 should be considered as well as CEN EN 15722:2020 (which contains a new MSD version number).

##

## Previous funded activities in the same domain

STF568

Production of TS 103 683 for NG eCall Interoperability test specification

Resource: 35 500€

##

## Consequences if not agreed

The enhancement of test specifications as described in the present document is key to the testing and potential certification activities that should assure the interoperability of NG eCall equipment. Such devices are required to have high levels of interoperability if safety on road is to be kept at the highest level. The non-availability of such standards may cause problems of interoperability.

# ETSI Members Support

|  |  |  |
| --- | --- | --- |
| **#** | **ETSI Member** | **Supporting delegate** |
| 1 | Anritsu | Francois Ortolan |
| 2 | Catapult | Ashweeni Beeharee |
| 3 | Cetecom | Thomas Reschka |
| 4 | Dekra | Fernando Cerván |
| 5 | Fscom | Francois Fischer |
| 6 | Iskratel | Ana Robnik |
| 7 | Keysight | Bill McKinley |
| 8 | LGAI Technological Center SA | Davide Brandano |
| 9 | Rohde-Schwarz | Peter Sterly |
| 10 | Sintesio | Roman Kuznar |
| 11 | Spirent | Alain Vouffo |

# Deliverables

## Base documents

|  |  |  |
| --- | --- | --- |
| **Document** | **Title** | **Status** |
| RFC8147 | Next-Generation Pan-European eCall | Published |
| ETSI TS 123 167V15.7.0 (2020-07)  | IP Multimedia Subsystem (IMS) emergency sessions | Published |
| ETSI TS 124 229V15.13.0 (2021-04) | IP Multimedia Subsystem (IMS) emergency sessionsIP multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3 | Published |
| ETSI TS 103 479V1.1.1 (2019-12) | Emergency Communications (EMTEL); Core elements for network independent access to emergency services | Published |
| CEN EN 16062:2021 | Intelligent transport systems - ESafety - eCall high level application requirements (HLAP) using GSM/UMTS circuit switched networksNOTE: (CEN EN 16062:2015 published in 2015) | New release in preparation |
| CEN EN 16072:2021 | Intelligent transport systems - ESafety - Pan-European eCall operating requirementsNOTE: (CEN EN 16072:2015 published in 2015) | New release in preparation |
| CEN TS 17249-1:2019 | Intelligent transport systems – eSafety – Part1: Extending eCall to other categories of vehicle | Published |
| CEN TS 17249-2:2019 | Intelligent transport systems – eSafety – Part2: eCall for HGVs and other commercial vehicles | Published |
| CEN TS 17249-3:2019 | Intelligent transport systems – eSafety – Part3: eCall for Coaches and busses | Published |
| CEN TS 17249-4:2019 | Intelligent transport systems – eSafety – Part4: eCall for UNECE Category T, R, S agricultural/forestry vehicles | Published |
| CEN TS 17249-5:2019 | Intelligent transport systems – eSafety – Part5: eCall for UNECE Category L1 and L3 powered two-wheeled vehicles | Published |
| CEN TS 17249-6:2019 | Intelligent transport systems – eSafety – Part6: eCall for UNECE Category L2, L4, L5, L6 and L7 tricycles and quadricycles | Published |
| CEN TS 17184:2021  | Intelligent transport systems - eSafety - eCall High level application Protocols (HLAP) using IMS packet switched networksNOTE: (CEN TS 17184:2018 published in 2018) | New release in preparation |
| CEN TS 17240:2021 | Intelligent transport systems - ESafety - ECall end to end conformance testing for IMS packet switched based systemsNOTE: (CEN TS 17240:2018 published in 2018) | New release in preparation |
| CEN EN 15722:2020 | Intelligent transport systems - ESafety - ECall minimum set of data | Published |

## New deliverables

|  |  |  |  |
| --- | --- | --- | --- |
| **Deliv.** | **Work Item code****Standard number** | **Working title** | **Expected date for publication** |
| D1 | ETSI TS 103 683 V2.1.1 | Next generation eCall High Level Application Protocol (HLAP) Interoperability Testing  | 03-2023 |
|  |  |  |  |
|  |  |  |  |

# Maximum budget

## Task summary/Manpower Budget

Provide the budget per task that should be allocated for this TTF considering the provision of the expertise for the qualification required

The estimate of the manpower must include the cost for travels which are necessary to attend the working session.

|  |  |
| --- | --- |
| **Task short description** | Budget (EUR) |
|
| Project Management | 3000 |
| TD Enhancement | 12000 |
| Validation | 3000 |
|  |  |
| **TOTAL** | 18000 |

## Travel budget

Travel of the TTF Leader is required to present TTF work at TC MSG meetings. The planned budget is 2 500 EUR.

## Other budget line

N/A

Part II – Details on TTF Technical Proposal

# Tasks, Technical Bodies and other stakeholders

## Organization of the work

ETSI CTI will plan the work of the TTF members, ensuring that the timescales of the TTF deliverables are met.

Organising TTF meetings to discuss the drafts, recording any major issues and resolutions of the TTF, identifying and progressing the actions of TTF members

Report to TC MSG Working Groups as appropriate on the work of the TTF.

Represent, or arrange for other TTF members to represent the TTF at other external meetings as appropriate.

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## Other interested ETSI Technical Bodies

N/A

## Other stakeholders

N/A

Part III: Execution of Work

# Work plan, time scale and resources

## Task description

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| --- | --- |
| **Task 1** | **Project Management** |
| **Objectives** | Plan the work of the TTF members, ensuring that the timescales of the TTF deliverables are met |
| **Input** | N/A |
| **Output** | Reports to TC MSG Working Group as appropriate on the work of the TTF |
| **Interactions** | * Discussion with TTF members
* Discussion with industry stakeholders
 |
| **Resources required** | See Budget Development of Test Descriptions Table 4.1) |

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| **Task 2** | **TD Enhancement** |
| **Objectives** | * Enhancement of existing NG eCall interoperability test specification with:
	+ New configuration due to ETSI TS 103 479 (a list of all required equipment for testing and possibly also including a (reference to) an illustration of a test architecture or test configuration)
	+ New Pre-Test Conditions will be added (a list of test specific pre-conditions that need to be met by the SUT including information about equipment configuration, i.e. precise description of the initial state of the SUT required to start executing the test sequence)
	+ Test Sequence will be added for newly defined test descriptions (an ordered list of equipment operation and observations. In case of a conformance test description the test sequence contains also the conformance checks as part of the observations)

The test descriptions shall be developed according to new requirements due to input base specifications. |
| **Input** | * ETSI TS 123 167
* ETSI TS 124 229
* ETSI TS 103 479
* CEN TS 17249-1:2019
* CEN TS 17249-2:2019
* CEN TS 17249-3:2019
* CEN TS 17249-4:2019
* CEN TS 17249-5:2019
* CEN TS 17249-6:2019
 |
| **Output** | Stable draft ETSI TS 103 683 V2.1.1 containing test descriptions and configurations |
| **Interactions** | Regular interaction between the experts and the TC MSG |
| **Resources required** | See Budget Development of Test Descriptions Table 4.1) |

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| **Task 3** | **Validation** |
| **Objectives** | Implement comments received during the preparation conf calls and from the eCall interoperability event |
| **Input** | Document containing comments raised during the preparation conf calls and from the NG eCall interoperability event |
| **Output** | Stable draft ETSI TS 103 683 V2.1.1  |
| **Interactions** | Bug fixing of stable draft according to the input document. |
| **Resources required** | See Budget Development of Test Descriptions Table 4.1) |

## Milestones

**Milestone A – Early draft of test descriptions**

|  |  |  |
| --- | --- | --- |
| **Milestone** | **Description** | **Cut-Off Date** |
|  | Early draft of test descriptions available. Progress report#1 approved (TC MSG) | 2022-06-17 |
| *Reference Body Deliverable* | Early Draft ETSI TS 103 683 V2.1.1 accepted by Reference Body |
| *ETSI Deliverable* | Progress report reporting on Task2 approved by TC MSG |

**Milestone B – Stable draft of test descriptions**

|  |  |  |
| --- | --- | --- |
| **Milestone** | **Description** | **Cut-Off Date** |
|  | Stable draft of test descriptions available. Progress report#2 approved (TC MSG) | 2022-10-10 |
| *Reference Body Deliverable* | Stable Draft ETSI TS 103 683 V2.1.1 approved by Reference Body |
| *ETSI Deliverable* | Progress report reporting on Task2 approved by TC MSG |

**Milestone C – Final draft of test descriptions**

|  |  |  |
| --- | --- | --- |
| **Milestone** | **Description** | **Cut-Off Date** |
|  | Final draft of test descriptions available. Final report approved (TC MSG) | 2023-02-28 |
| *Reference Body Deliverable* | Final Draft ETSI TS 103 683 V2.1.1 approved by Reference Body |
| *ETSI Deliverable* | Final draft and final report reporting on Task3 approved by TC MSG |

**Milestone D – Deliverable publication, TTF Closed**

|  |  |  |
| --- | --- | --- |
| **Milestone** | **Description** | **Cut-Off Date** |
|  | Publication of ETSI TS 103 683 V2.1.1 | 2023-03-31 |
| *Reference Body Deliverable* |  |
| *ETSI Deliverable* | Deliverable published,TTF Closed. |

## Task summary

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| --- | --- | --- | --- |
| **Code** | **Task / Milestone**  | Target Date | Estimated Cost (EUR) |
| From | To |
|  | Start of work |  |  |  |
| T1 | Project Management | 2022-02 | 2023-03 | 3000 |
| T2 | TD Enhancement | 2022-02 | 2023-03 | 12000 |
| M A | Early draft ETSI TS 103 683 V2.1.1 and Progress Report#1 approved by Reference Body MSG |  | 2022-06-17 |  |
| T3 | Validation | 2022-10 | 2023-03 | 3000 |
| M B | Stable draft ETSI TS 103 683 V2.1.1 and Progress Report#2 approved by Reference Body MSG |  | 2022-10-10 |  |
| M C | Final Draft ETSI TS 103 683 V2.1.1 and Final Report approved by Reference Body MSG  |  | 2023-02-28 |  |
| M D | Deliverable published, TTF Closed |  | 2023-03-31 |  |
|  | **18000** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Year** | **2022** |  | **2023** |
| **Task/ Mil.** | **J** | **F** | **M** | **A** | **M** | **J** | **J** | **A** | **S** | **O** | **N** | **D** |  | **J** | **F** | **M** | **A** | **M** | **J** | **J** | **A** | **S** | **O** | **N** | **D** |
| T1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| T2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MA |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| T3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MB |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MC |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |  |
| MD |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |
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# Expertise required

## Team structure

Two participants to ensure the following mix of competences:

|  |  |
| --- | --- |
| **Priority** | **Qualifications and competences** |
| High | expert knowledge of documentation listed under clause 3.1 |
| High | expert knowledge of SIP protocols |
| High | expert knowledge of analysing of protocols and writing of test descriptions |
| High | expert knowledge in interoperability testing |
| High | expert knowledge of NG eCall technologies and implementations. |

Part IV: TTF performance evaluation criteria

# Performance Indicators

**Contribution from ETSI Members to TTF work**

* *Contributions/comments received from the TC MSG*

**Contribution from the TTF to ETSI work**

* *Usage of deliverable in the Plugtests™ events.*

**Quality of deliverables**

* *Approval of deliverables according to schedule.*
* *Respect of time scale, with reference to start/end dates in the approved ToR.*
* *Comments from Quality review by TC MSG.*
* *Comments from Quality review by ETSI Secretariat.*

|  |
| --- |
| ***Select relevant Performance indicators applicable for these ToR (X)*** |
| **Contribution from ETSI Members to TTF work** |
| *Direct financial contribution (co-funding)* |  |
| *Support to the TTF work (e.g., provision of test–beds, organization of workshops, events)* |  |
| *Steering Group meetings (number of meetings / participants / duration)* |  |
| *Number of delegates directly involved in the review of the deliverables* |  |
| *Contributions/comments received from the Reference Bodies* |  |
| *Contributions/comments received from other Reference Bodies* |  |
|  |  |
| **Contribution from the TTF to ETSI work** |
| *Contributions to Reference Body meetings (number of documents / meetings / participants)* |  |
| *Contributions to other Reference Bodies* |  |
| *Presentations in workshops, conferences, stakeholder meetings* |  |
|  |  |
| **Liaison with other stakeholders** |
| *Stakeholder participation in the project (category, business area)* |  |
| *Cooperation with other standardization bodies* |  |
| *Potential interest of new members to join ETSI* |  |
| *Liaison to identify requirements and raise awareness on ETSI deliverables*  |  |
| *Comments received on drafts (e.g. on WEB site, mailing lists, etc.)* |  |
|  |  |
| **Quality of deliverables** |
| *Approval of deliverables according to schedule* |  |
| *Respect of time scale, with reference to start/end dates in the approved ToR* |  |
| *Comments from Quality review by Reference Body* |  |
| *Comments from Quality review by ETSI Secretariat* |  |
|  |  |

# Document history

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Date** | **Author** | **Status** | **Comments** |
| 0.1 | 2021-06-15 | Bostjan Pintar |  | First draft |
| 0.2 | 2021-08-16 |  |  | Updates due to ETSI MSG RC approval |
| 0.3 | 2021-11-09 | ETSI Secretariat | Board#134 approved | Updates before CL publication |