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| ETSI_logo_Office_Colour_Small | ToR STF CX (TC MSG) |
| Version: 0.8 |
| Author: S. Müller – Date:21 Sep 2018  |
| Last updated by: Youssouf Sakho– Date:01 April 2019 |
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Terms of Reference – Specialist Task Force

STF CX (TC MSG)

NGN eCall – Interoperability Tests

Summary information

|  |  |
| --- | --- |
| Approval status | Approved by TC MSGApproved by Board#121 (30 January 2019) |
| Funding | **Maximum budget: 35 500 € ETSI FWP** |
| Time scale | April 2019 to February 2020 |
| Work Items  | DTS/MSG-001128 |
| Board priority  | Standards enablers/facilitators (e.g. conformance test/interoperability/methodology) Recommendations: CTI supervision |

Part I – Reason for proposing the STF

# Rationale

ETSI, in collaboration with ERTICO, has organized the latest in a series of interoperability events for eCall. This event was hosted by SINTESIO, from 9 to 13 October 2017 in Kranj, Slovenia (see <https://www.etsi.org/events/1205-6th-ecall-testfest>). More than 30 vendors attended the interoperability event which manifests the high interest of industry in eCall tests. This interoperability event marked the completion of the classical GSM based eCall testing according to the Ecs target for market introduction by 2018.

Following the evolution of NGN eCall standards, new interoperability tests are needed in order to support the industry in their deployment of next generation technology to enable eCall over LTE.

# Objective

Maintaining support of eCall test activities, the objective of this project is the production of interoperability tests to cover RFC8147, ETSI TS 123 167, ETSI TS 124 229, CEN EN 16062 and CEN EN 16072.

A stable draft must be available in due time for the upcoming NGN eCall interoperability event scheduled for November 2019.

# Relation with ETSI strategy and priorities

This action supports the ETSI Long Term Strategy item(s) to:

* create high quality standards for global use and with low time-to-market.
* establish leadership in key areas impacting members’ future activities

This action has a priority category of:

* Standards enablers/facilitators (conformance testing, interoperability, methodology)

# Context of the proposal

## ETSI Members support

|  |  |  |
| --- | --- | --- |
| **ETSI Member** | **Supporting delegate** | **Motivation** |
| Anritsu | Francois Ortolan | To develop extended eCall interoperability test specifications including the NGN eCall HLAP procedures |
| Catapult | Ashweeni Beeharee | To develop extended eCall interoperability test specifications including the NGN eCall HLAP procedures |
| Cetecom | Thomas Reschka | To develop extended eCall interoperability test specifications including the NGN eCall HLAP procedures |
| Dekra | Fernando Cerván | To develop extended eCall interoperability test specifications including the NGN eCall HLAP procedures |
| Fscom | Francois Fischer | To develop extended eCall interoperability test specifications including the NGN eCall HLAP procedures |
| Iskratel | Ana Robnik | To develop extended eCall interoperability test specifications including the NGN eCall HLAP procedures |
| Keysight | Bill McKinley | To develop extended eCall interoperability test specifications including the NGN eCall HLAP procedures |
| LGAI Technological Center SA | Davide Brandano | To develop extended eCall interoperability test specifications including the NGN eCall HLAP procedures |
| Rohde-Schwarz | Peter Sterly | To develop extended eCall interoperability test specifications including the NGN eCall HLAP procedures |
| Sintesio | Roman Kuznar | To develop extended eCall interoperability test specifications including the NGN eCall HLAP procedures |
| Spirent | Alain Vouffo | To develop extended eCall interoperability test specifications including the NGN eCall HLAP procedures |

## Market impact

Interoperability is a key factor that enables the use of new technologies and provides all benefits attached to them, such as competitiveness, innovation and reliability.

ITS and eCall technologies are becoming more and more complex, collaborative and interdependent. Furthermore, ITS and eCall systems are often specified by multiple standards from different standardization development organisations (SDOs). These factors potentially lead to non-interoperable implementations. The development of products that rely on non-interoperable solutions, can eventually result in fragmented markets, all of which can impact trustworthiness.

The project contributes to the effort of testing and validation of eCall systems with the goal to bring the eCall systems to a stage where end users trust the services provided.

## Tasks for which the STF support is necessary

Experience with the development of other standards has shown that involvement of expertise on conformance and interoperability testing of protocols requires highly specialised knowledge in testing methodology. The generation of this kind of specification requires significant, concentrated effort that can be done in this case by expertise provided on a funded basis. Hence the involvement of testing expertise is needed in order to assure the timely completion and high quality of the Test Specifications. The providers will use dedicated software tools available at ETSI. Test adapter development and test suite validation are tasks which cannot be provided by a TB on a voluntary basis.

## Related voluntary activities in the TB

Delegates within TC MSG will review the deliverables.

## Previous funded activities in the same domain

N/A

## Consequences if not agreed

The production of test specifications as described in the present document is key to the testing and potential certification activities that should assure the interoperability of 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.

Part II – Execution of the work

# Technical Bodies and other stakeholders

## Reference TB

The leading TB is TC MSG.

## Other interested ETSI Technical Bodies

N/A

## Other stakeholders

N/A

# Base documents and deliverables

## Base documents

|  |  |  |  |
| --- | --- | --- | --- |
| **Document** | **Title** | **Current Status** | **Expected date for stable document** |
| RFC8147 | Next-Generation Pan-European eCall | Published |  |
| ETSI TS 123 167V14.6.0 (2018-09)  | IP Multimedia Subsystem (IMS) emergency sessions | Published |  |
| ETSI TS 124 229V14.8.0 (2018-06) | IP Multimedia Subsystem (IMS) emergency sessionsIP multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3 | Published |  |
| CEN EN 16062 | Intelligent transport systems – Esafety – eCall high level application requirements (HLAP) using GSM/UMTS circuit switched networks | Published |  |
| CEN EN 16072 | Intelligent transport systems – Esafety – Pan-European eCall operating requirements | Published |  |
| ETSI TS 103 428V1.1.1 (2016-06) | eCall HLAP Interoperability Testing  | Published |  |
|

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| --- | --- |
|  | ETSI TS 134 229-1 |

 | Universal Mobile Telecommunications System (UMTS); LTE; Internet Protocol (IP) multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); User Equipment (UE) conformance specification; Part 1: Protocol conformance specification (3GPP TS 34.229-1 version 14.5.0 Release 14) | Published |  |
| ETSI TS 136 523-1 | LTE; Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Packet Core (EPC); User Equipment (UE) conformance specification; Part 1: Protocol conformance specification (3GPP TS 36.523-1 version 15.4.0 Release 15)  | TB Approved |  |
| CEN TS 17184:2018 | Intelligent transport systems. eSafety. eCall High level application Protocols (HLAP) using IMS packet switched networks  | To be acquired by ETSI Secretariat |  |
| CEN TS 17240:2018 | Intelligent transport systems. ESafety. ECall end to end conformance testing for IMS packet switched based systems | Available |  |

## Deliverables

|  |  |  |
| --- | --- | --- |
| **Deliv.** | **Work Item code****Standard number** | **Working title****Scope** |
| D1 | DTS/MSG-001128 | Working title: MSG; Testing; Ecall HLAP Interoperability Testing; Test descriptions NGN eCall HLAP |

## Deliverables schedule:

DTS/MSG-001128 Test descriptions

* Start of work 08-Apr-2019
* Early draft 23-Apr-2019
* Stable draft Oct-2019
* WG+TB approval Jan-2020
* Publication Feb-2020

# Work plan, time scale and resources

## Organization of the work

As defined in the following sub clauses.

## Task description

Task 0 – STF Management

Objectives

* Communication between STF and industry stakeholders during the scoping phase and the validation phase
* Review of deliverables
* Creation and presentation of STF reports
* Scheduling of work sessions

Input

* N/A

Output

* Reports

Interactions

* Discussion with STF members
* Discussion with industry stakeholders

Resources required

* 3 000 EUR

Task 1 – Test Skeletons

Objectives

* Definition of ~ 30 Test Skeletons
* Each Test Skeleton containing
	+ Identifier (a unique test description ID)
	+ Objective (a concise summary of the test which should reflect the purpose of the test and enable readers to easily distinguish this test from any other test in the document)
	+ References (a list of references to the base specification section(s) which are either used in the test or define the functionality being tested)
	+ Applicability (a list of features and capabilities which are required to be supported by the SUT in order to execute this test)

Input

* ETSI TS 123 167
* ETSI TS 124 229
* RFC8147
* EN 16062
* EN 16072
* ETSI TS 103 428

Output

* Early draft DTS/MSG-001128 containing ToC and Test Skeletons

Interactions

* Peer-review

Resources required

* 9 000 EUR

Task 2 – Test Descriptions

Objectives

* Completion of the Test Skeletons by adding
	+ Configuration (a list of all required equipment for testing and possibly also including a (reference to) an illustration of a test architecture or test configuration)
	+ Pre-Test Conditions (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 (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 the currently published eCall Test Descriptions, see <https://www.etsi.org/deliver/etsi_ts/103400_103499/103428/01.01.01_60/ts_103428v010101p.pdf>

Input

* ETSI TS 123 167
* ETSI TS 124 229
* RFC8147
* EN 16062
* EN 16072
* ETSI TS 103 428

Output

* Stable draft DTS/MSG-001128 containing test descriptions

Interactions

* Peer-review

Resources required

* 18 000 EUR

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 eCall interoperability event

Output

* Final draft DTS/MSG-001128 for TB Approval

Interactions

* Bug fixing of stable draft according to the input document.

Resources required

* 3 000 EUR

## Milestones

Milestone 1 – Early draft available

Early draft including the result of Task 1 (Test Objectives) available for review.

Milestone 2 – Stable draft and Progress Report approved by TC MSG

Stable draft including the result of Task 2 (Test Descriptions) available for review. Progress Report to be approved by MSG inJune 2019.

Milestone 3 – Deliverable, Final darft and STF Final Report approved by TC MSG

Final draft including the result of Task 3 (Validation) available for review. Final draft and Final report to be approved by MSG in Jan 2020.

Milestone 4 – Deliverables published, STF closed

## Task summary

|  |  |  |
| --- | --- | --- |
| **NEs** | **Task / Milestone / Deliverable** | Target date |
|  |
| EUR |
| M0 | Start of work | 08 Apr 2019 |  |
| T0 | STF Management | 08 Apr 19 – 29 Feb 20 | 3 000 |
| T1 | Test Skeletons | Apr 2019 | 9 000 |
| M1 | Early draft with tests skeleton availableProgress report to be approved by TC MSG by RC | 23 Apr 2019 |  |
| T2 | Test Descriptions | May – Aug 2019 | 18 000 |
| M2 | Stable draft availbleProgress Report to be approved TC MSG | Oct 2019 |  |
| T3 | Validation | Oct – Dec 2019 | 3 000 |
| M3 | Deliverable, Final draft DTS/MSG-001128 and STF Final Report to be approved by TC MSG | 11 Jan 2020 |  |
| M4 | Deliverables published, STF closed | Feb 2020 |  |
| **Total** | **33 000** |

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| **Task Milest.** | **Description** | **A** | **M** | **J** | **J** | **A** | **S** | **O** | **N** | **D** | **J** | **F** |
| T0 | STF Management |  |  |  |  |  |  |  |  |  |  |  |
| T1 | Test Skeletons |  |  |  |  |  |  |  |  |  |  |  |
| M1 | Early draft available | M1 |  |  |  |  |  |  |  |  |  |  |
| T2 | Test Descriptions |  |  |  |  |  |  |  |  |  |  |  |
| M2 | Stable draft available |  |  |  |  |  |  | M2 |  |  |  |  |
| T3 | Validation |  |  |  |  |  |  |  |  |  |  |  |
| M3 | Deliverable, Final draft DTS/MSG-001128 and STF Final Report approved by TC MSG |  |  |  |  |  |  |  |  |  | M3 |  |
| M4 | Deliverables published, STF closed |  |  |  |  |  |  |  |  |  |  | M4 |

## Working methods and travel cost

Travel of the STF Leader is required to present the three milestone M1, M2 and M3 at TC MSG meetings. The planned budget is 2 500 EUR.

# Expertise required

## Team structure

Up to 3 participants to ensure the following mix of competences:

* expert knowledge of documentation listed under clause 6.1
* expert knowledge of SIP protocols
* expert knowledge of analysing of protocols and writing of test descriptions
* expert knowledge in interoperability testing
* expert knowledge of NGN eCall technologies and implementations.

Part III: Financial conditions

# Maximum budget

## Manpower cost

33 000 EUR

## Travel cost

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

## Other Costs

N/A

Part IV: STF performance evaluation criteria

# Key Performance Indicators

Contribution from the STF to ETSI work

* Contributions to TC/WG meetings (number of documents / meetings / participants)
* Usage of deliverable in the interoperability event

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 TB
* Comments from Quality review by ETSI Secretariat

Time recording

For reporting purposes, the STF experts shall fill in the time sheet provided by ETSI with the days spent for the performance of the services.

In the course of the activity, the STF Leader will collect the relevant information, as necessary to measure the performance indicators. The result will be presented in the Final Report.

# Document history

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Date** | **Author** | **Status** | **Comments** |
| 0.1 | 21-Sep-2018 | ETSI CTI |  | First Draft |
| 0.2 | 22-Oct-2018 | ETSI CTI |  | Feedback from peer review |
| 0.3 | 5-11-2018 | ETSI CTI |  | Member support added |
| 0.4 | 9-11-2018 | ERSI CTI |  | Review Marcello Pagnozzi |
| 0.5 | 21-Dec-2018 | ETSI |  | Consistency check |
| 0.6 | 19-Feb-2019 | ETSI | Board Approved | Updates before CL Publication |
| 0.7 | 20-Feb-2019 | ETSI |  | Update of outdated event weblink and update of milestones timeline |
| 0.8 | 01 April 2019 | ETSI |  | Added documents to the Base Documents list |