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| --- |
| ToR TTF T028 (Ref. Body TCCE) |
| Version:0.8 |
| Author: Saurav Arora – Date: 2022-04-06 |
| Last updated by: ETSI Secretariat – Date: 2023-01-13 |
| page 1 of 20 |

Terms of Reference –Testing Task Force Proposal

TTF T028 (Ref. Body TC TCCE)

Conformance Test Specifications for the Mission Critical Application Server

Summary information

|  |  |  |  |
| --- | --- | --- | --- |
| Approval status | Approved by TC TCCE (doc ref: TCCE(22)000035) | | **YES** |
| Reference Body | Ref. Body TC TCCE | | |
| ETSI Funding | **Maximum budget : 163 000 EUR** | | |
| Minimum of 4 ETSI Members Support | **YES** | | |
| Time scale | **From** | 2023-02-20 | |
| **To** | 2025-03-28 | |
| Work Items | *Work Item Working titles only* | | |
| TTF Roadmap reference | TTF Roadmap 2023 | | |

Part I –TTF Technical Proposal

# Rationale & Objectives

## Rationale

Critical communication community have a strong requirement for conformance testing and certification. The multi-vendor market gives benefits both to the users in terms of compatible equipment, competitive pricing, and faster market take-up. To meet these objectives for critical communications equipment – various testing initiatives like ETSI Plugtests, conformance testing, field testing and certification testing are needed.

Conformance testing involves connecting a device to a test system and operating a set of stringently defined tests. This ensures that a (single) product implements the requirements laid down in a standard correctly. The Mission Critical User Equipment (UE) conformance test cases are specified by 3GPP TSG RAN Working Group 5 (RAN5) and implemented in TTCN-3 language. However, development of Mission Critical Application Server conformance test cases is halted.

The Mission Critical Users are interested in being able to conformance test the Mission critical server side as well, as it enables to confirm the correct inter-working between the Mission critical client application and the Mission critical application server.

## Objectives of the work to be executed

The objective of this TTF is to develop the conformance test cases for mission critical application server based on 3GPP RAN5 working group methodology. MCX Reference points in ETSI TS 136 579-1 and test models in ETSI TS 136 579-5 will be used for the development of server side conformance test cases.

In detail, the following server side test cases will be developed to test the server side conformance of mission critical services based on 3GPP Release 15:

1. Server side of the MCPTT server-to-client test cases
   * Configuration
   * Pre-arranged Group Call
   * Chat Group Calls
   * Conference Event Package
   * Remote Change of Selected Group
   * Private Calls
   * Location
   * MBMS
2. Server side of the MCPTT server-to-server test cases including MCX server-side interworking with non-3GPP systems
   * Both sides of group calling in trusted and untrusted mode
     + Pre-arranged Group Call
     + Chat Group Calls
   * Inter MCS systems Server-Server interfaces (MCX-1, CSC-16, CSC-17)
   * IWF (IWF-1, IWF-2, IWF-3 considering the different functional connectivity models)
3. Server side of the MCData server-to-client test cases
   * Configuration
   * Short Data Service
   * File Distribution
   * Enhanced Status
4. Server side of the MCData server-to-server test cases including MCX server-side interworking with non-3GPP systems
   * Short Data Service
   * File Distribution
   * Enhanced Status
5. Server side of the MCVideo server-to-client test cases
   * Configuration
   * Pre-arranged Group Call
   * Chat Group Calls
   * Conference Event Package
   * Remote Change of Selected Group
   * Private Calls
   * Location
   * MBMS
   * Emergency Alert
   * Video Pull
   * Video Push
   * Capability information sharing
   * Ambient viewing call
   * Use of MBMS transmission
6. Server side of the MCVideo server-to-server test cases
   * Pre-arranged Group Call
   * Chat Group Calls

## Previous funded activities in the same domain

NA

## Consequences if not agreed

The ability to demonstrate that Mission Critical services application server conform to the standard will be of critical importance to all potential users, especially public safety authorities. Thorough conformance testing will increase the level of confidence that equipment from various suppliers is conformed to the standards and will interoperate. This in turn will reduce implementation and rollout times and costs. Not providing timely test specifications, would ultimately delay the deployment of Mission Critical services. Further consequences are a delay in deploying Mission Critical services equipment paired with a loss of confidence in Mission critical services as there is a risk that early implementations of Mission Critical services are not standard conform or interoperable as expected and serious rework may be needed to solve that. There is a high risk that proprietary implementations have to be or will be rolled-out in case no conformance tests are available.

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# ETSI Members Support

|  |  |  |
| --- | --- | --- |
| **#** | **ETSI Member** | **Supporting delegate** |
| 1 | Airbus | Jukka Vialen |
| 2 | BDBOS | Juergen Rurainsky |
| 3 | ASTRID | Jo Dewaele |
| 4 | The National Police of the Netherlands | Kees Verweij |
| 5 | Nemergent Solutions | Andoni Diaz de Cerio |
| 6 | University of Basque Country | Fidel Liberal |
| 7 | Motorola Solutions | Harish Negalaguli |
| 8 | Softil | Anatoli Levine |
| 9 | Ministere De L'Interieur | Renaud Mellies |
| 10 | Erillisverkot | Ahava Janne |
| 11 | UK Home Office | Lasantha De Alwis |
| 12 | Huawei | SHEN Minjun |
| 13 | The Norwegian Directorate For Civil Protection (DSB) | Michel Duits |

# Deliverables

## Base documents

|  |  |  |
| --- | --- | --- |
| **Document** | **Title** | **Status** |
| ETSI TS 123 280 | Common functional architecture to support mission critical services; Stage 2 | published |
| ETSI TS 123 281 | Functional architecture and information flows to support Mission Critical Video (MCVideo); Stage 2 | published |
| ETSI TS 123 282 | Functional architecture and information flows to support Mission Critical Data (MCData); Stage 2 | published |
| ETSI TS 123 283 | Mission Critical Communication Interworking with Land Mobile Radio Systems | published |
| ETSI TS 123 379 | Functional architecture and information flows to support Mission Critical Push To Talk (MCPTT); Stage 2 | published |
| ETSI TS 124 281 | Mission Critical Video (MCVideo) signalling control; Protocol specification | published |
| ETSI TS 124 282 | Mission Critical Data (MCData) signalling control; Protocol specification | published |
| ETSI TS 124 379 | Mission Critical Push To Talk (MCPTT) call control; Protocol specification | published |
| ETSI TS 124 380 | Mission Critical Push To Talk (MCPTT) floor control; Protocol specification | published |
| ETSI TS 124 481 | Mission Critical Services (MCS) group management; Protocol specification | published |
| ETSI TS 124 482 | Mission Critical Services (MCS) identity management; Protocol specification | published |
| ETSI TS 124 484 | Mission Critical Services (MCS) configuration management; Protocol specification | published |
| ETSI TS 124 581 | Mission Critical Video (MCVideo) media plane control; Protocol specification | published |
| ETSI TS 124 582 | Mission Critical Data (MCData) media plane control; Protocol specification | published |
| ETSI TS 129 379 | Mission Critical Push To Talk (MCPTT) call control interworking with Land Mobile Radio (LMR) systems; Stage-3 | published |
| ETSI TS 129 582 | Mission Critical Data (MCData) interworking with Land Mobile Radio (LMR) systems; Stage 3 | published |
| ETSI TS 133 180 | Security of the mission critical service | published |
| ETSI TS 100 392-19-1 | Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 19: Interworking between TETRA and Broadband systems Sub-part 1: Critical Communications Architecture for Interworking between TETRA and Broadband applications Interworking between TETRA and Broadband applications | Draft to be published by Sep 22 |
| ETSI TS 100 392-19-2 | Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 19: Interworking between TETRA and Broadband systems; Sub-part 2: Format for the transport of TETRA speech over mission critical broadband systems | published |
| ETSI TR 103 565-1 | TETRA and Critical Communications Evolution (TCCE); Interworking between TETRA and 3GPP mission critical services Part 1: General considerations for interworking | published |
| ETSI TR 103 565-2 | TETRA and Critical Communications Evolution (TCCE); Interworking between TETRA and 3GPP mission critical services; Part 2: Security of interworking between TETRA and Broadband applications | published |
| ETSI TS 136 508 | LTE; Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Packet Core (EPC); Common test environments for User Equipment (UE) conformance testing | published |
| ETSI TS 136 579-1 | LTE; Mission Critical (MC) services over LTE; Part 1: Common test environment | published |
| ETSI TS 136 579-2 | LTE; Mission Critical (MC) services over LTE; Part 2: Mission Critical Push To Talk (MCPTT) User Equipment (UE) Protocol conformance specification | published |
| ETSI TS 136 579-3 | LTE; Mission Critical (MC) services over LTE; Part 3: Mission Critical Push To Talk (MCPTT) Server Application conformance specification | published |
| ETSI TS 136 579-4 | LTE; Mission Critical (MC) services over LTE; Part 4: Test Applicability and Implementation Conformance Statement (ICS) proforma specification | published |
| ETSI TS 136 579-5 | LTE; Mission Critical (MC) services over LTE; Part 5: Abstract test suite (ATS) | published |
| ETSI TS 136 579-6 | LTE; Mission Critical (MC) services over LTE; Part 6: Mission Critical Video (MCVideo) User Equipment (UE) Protocol conformance specification | published |
| ETSI TS 136 579-7 | LTE; Mission Critical (MC) services over LTE; Part 7: Mission Critical Data (MCData) User Equipment (UE) Protocol conformance specification | published |

## New deliverable

|  |  |  |  |
| --- | --- | --- | --- |
| **Deliv.** | **Work Item code**  **Standard number** | **Working title** | **Expected date for publication** |
| D1 | DTS/TCCE-00253 | Mission Critical (MC) services; Mission Critical Push To Talk (MCPTT) Application Server (AS) Protocol conformance specification for server-to-client interface | 28-03-2025 |
| D2 | DTS/TCCE-00254 | Mission Critical (MC) services; Mission Critical Push To Talk (MCPTT) Application Server (AS) Protocol conformance specification for server-to-client interface; Test Applicability and Implementation Conformance Statement (ICS) proforma specification | 28-03-2025 |
| D3 | DTS/TCCE-00255 | Mission Critical (MC) services; Mission Critical Push To Talk (MCPTT) Application Server (AS) Protocol conformance specification for server-to-server interface including InterWorking Function (IWF) to non-3GPP systems | 28-03-2025 |
| D4 | DTS/TCCE-00256 | Mission Critical (MC) services; Mission Critical Push To Talk (MCPTT) Application Server (AS) Protocol conformance specification for server-to-server interface including InterWorking Function (IWF) to non-3GPP systems; Test Applicability and Implementation Conformance Statement (ICS) proforma specification | 28-03-2025 |
| D5 | DTS/TCCE-00257 | Mission Critical (MC) services; Mission Critical Data (MCData) Application Server (AS) Protocol conformance specification for server-to-client interface | 28-03-2025 |
| D6 | DTS/TCCE-00258 | Mission Critical (MC) services; Mission Critical Data (MCData) Application Server (AS) Protocol conformance specification for server-to-client interface; Test Applicability and Implementation Conformance Statement (ICS) proforma specification | 28-03-2025 |
| D7 | DTS/TCCE-00259 | Mission Critical (MC) services; Mission Critical Data (MCData) Application Server (AS) Protocol conformance specification for server-to-server interface including InterWorking Function (IWF) to non-3GPP systems | 28-03-2025 |
| D8 | DTS/TCCE-00260 | Mission Critical (MC) services; Mission Critical Data (MCData) Application Server (AS) Protocol conformance specification for server-to-server interface including InterWorking Function (IWF) to non-3GPP systems; Test Applicability and Implementation Conformance Statement (ICS) proforma specification | 28-03-2025 |
| D9 | DTS/TCCE-00261 | Mission Critical (MC) services; Mission Critical Video (MCVideo) Application Server (AS) Protocol conformance specification for server-to-client interface | 28-03-2025 |
| D10 | DTS/TCCE-00262 | Mission Critical (MC) services; Mission Critical Video (MCVideo) Application Server (AS) Protocol conformance specification for server-to-client interface; Test Applicability and Implementation Conformance Statement (ICS) proforma specification | 28-03-2025 |
| D11 | DTS/TCCE-00263 | Mission Critical (MC) services; Mission Critical Video (MCVideo) Application Server (AS) Protocol conformance specification for server-to-server interface | 28-03-2025 |
| D12 | DTS/TCCE-00264 | Mission Critical (MC) services; Mission Critical Video (MCVideo) Application Server (AS) Protocol conformance specification for server-to-server interface; Test Applicability and Implementation Conformance Statement (ICS) proforma specification | 28-03-2025 |

# Maximum budget

## Task summary/Manpower Budget

|  |  |  |
| --- | --- | --- |
| **No.** | **Task short description** | Budget (EUR) |
| 0 | Project Management | 12000 |
| 1 | Development of server side of the MCPTT server-to-client test cases and ICS | 20000 |
| 2 | Development of server side of the MCPTT server-to-server test cases including MCX server side interworking with non-3GPP systems and ICS | 32000 |
| 3 | Development of server side of the MCData server-to-client test cases and ICS | 20000 |
| 4 | Development of server side of the MCData server-to-server test cases including MCX server side interworking with non-3GPP systems and ICS | 32000 |
| 5 | Development of server side of the MCVideo server-to-client test cases and ICS | 20000 |
| 6 | Development of server side of the MCVideo server-to-server test cases and ICS | 24000 |
|  | **TOTAL** | 160000 |

## Travel budget

Travel of the TTF Leader to present TTF work at stakeholder meetings. The planned budget is 3 000 EUR

## Other budget line

NA

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 TCCE 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.

## Other interested ETSI Technical Bodies

3GPP (3rd Generation Partnership Project) is partnership project between seven regional telecommunication associations. The project covers cellular telecommunications network technologies, including radio access, the core transport network, and service capabilities - including work on codecs, security, quality of service - and thus provides complete system specifications.

3GPP RAN5 works on the specification of conformance testing at the Radio interface for the User Equipment.

ETSI TC RT is responsible for the development and maintenance of standards related to GSM-R (GSM™ for railways) as well as Next Generation Radio for Rail (NG2R). The Technical Committee Rail Telecommunications is developing and maintaining ETSI standards related to GSM-R as required by the applicable European Legislation.

## Other stakeholders

The Critical Communications Association (TCCA) is a Limited Company and is registered in the United Kingdom. TCCA represents all standardised mobile critical communications technologies and complementary applications. Members are drawn from end users, operators, industry and other stakeholders across the globe. TCCA believes in and promotes the principle of open and competitive markets worldwide using open standards and harmonised spectrum. The Association maintains and enhances the TETRA Professional Mobile Radio (PMR) standard and drives the development of common global mobile standards for critical broadband.

Global Certification Forum (GCF) is a non-profit, global membership driven organisation offering mobile and IoT certification programmes based on conformity to agreed standards. It provides assurance of device-network interoperability, reduction in testing costs and accelerated time-to-market.

GCF provides certification solutions for devices based on 3GPP and other relevant industry standards.

Union Internationale des Chemins de Fer (UIC) is the worldwide professional association representing the railway sector and promoting rail transport. UIC is the asso­ciation for technical cooperation amongst railways and coordinates the sector’s position as it negotiates its evolving relationship with the supply industry and research and develops needs in order to draw full advantage of potential interest to railway companies.

Part III: Execution of Work

# Work plan, time scale and resources

## Task description

|  |  |
| --- | --- |
| **Task #0** | **Project Management** |
| **Objectives** | * Technical lead of the TTF * Manage the resources assigned to this project * Chair periodic meetings of the TTF * Ensure that the project stays on track and meets all milestone delivery dates * Identify if/when there are impediments that may affect the delivery of the project at an early stage so that stakeholders can help mitigate potential risks |
| **Input** | Periodic meetings of this TTF, the tasks and schedule in this TTF. |
| **Output** | * Progress reports, including report to the TC TCCE after each meeting summarizing the current status of this TTF. * Progress Reports * Final Report |
| **Interactions** | TC TCCE will be consulted for guidance throughout the TTF. There will be regular interactions between the experts and the TC TCCE as well as with the stakeholders |
| **Resources required** | (See Budget Validation Table 4.1) |

|  |  |
| --- | --- |
| **Task #1** | ***Server side of the MCPTT server-to-client test cases and ICS*** |
| **Objectives** | Development of Server side of the MCPTT server-to-client test cases and Conformance Statement (ICS) proforma specification |
| **Input** | Existing base technical specifications based on 3GPP Release-15 |
| **Output** | Development of test purposes and detailed test cases for server side of the MCPTT server-to-client scenarios and Conformance Statement (ICS) proforma specification for these test cases. |
| **Interactions** | Regular interaction between the experts and the TC TCCE |
| **Resources required** | (See Budget Validation Table 4.1) |

|  |  |
| --- | --- |
| **Task #2** | ***Server side of the MCPTT server-to-server test cases including MCX server side interworking with non-3GPP systems and ICS*** |
| **Objectives** | Development of Server side of the MCPTT server-to-server test cases including MCX server side interworking with non-3GPP systems and Conformance Statement (ICS) proforma specification |
| **Input** | Existing base technical specifications based on 3GPP Release-15 |
| **Output** | Development of test purposes and detailed test cases for Server side of the MCPTT server-to-server test cases including MCX server side interworking with non-3GPP systems and Conformance Statement (ICS) proforma specification for these test cases. |
| **Interactions** | Regular interaction between the experts and the TC TCCE |
| **Resources required** | (See Budget Validation Table 4.1) |

|  |  |
| --- | --- |
| **Task #3** | ***Server side of the MCData server-to-client test cases and ICS*** |
| **Objectives** | Development of Server side of the MCData server-to-client test cases and Conformance Statement (ICS) proforma specification |
| **Input** | Existing base technical specifications based on 3GPP Release-15 |
| **Output** | Development of test purposes and detailed test cases for server side of the MCData server-to-client scenarios and Conformance Statement (ICS) proforma specification for these test cases. |
| **Interactions** | Regular interaction between the experts and the TC TCCE |
| **Resources required** | (See Budget Validation Table 4.1) |

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| --- | --- |
| **Task #4** | ***Server side of the MCData server-to-server test cases including MCX server side interworking with non-3GPP systems and ICS*** |
| **Objectives** | Development of Server side of the MCData server-to-server test cases including MCX server side interworking with non-3GPP systems and Conformance Statement (ICS) proforma specification |
| **Input** | Existing base technical specifications based on 3GPP Release-15 |
| **Output** | Development of test purposes and detailed test cases for Server side of the MCData server-to-server test cases including MCX server side interworking with non-3GPP systems and Conformance Statement (ICS) proforma specification for these test cases. |
| **Interactions** | Regular interaction between the experts and the TC TCCE |
| **Resources required** | (See Budget Validation Table 4.1) |

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| **Task #5** | ***Server side of the MCVideo server-to-client test cases and ICS*** |
| **Objectives** | Development of Server side of the MCVideo server-to-client test cases and Conformance Statement (ICS) proforma specification |
| **Input** | Existing base technical specifications based on 3GPP Release-15 |
| **Output** | Development of test purposes and detailed test cases for server side of the MCVideo server-to-client scenarios and Conformance Statement (ICS) proforma specification for these test cases. |
| **Interactions** | Regular interaction between the experts and the TC TCCE |
| **Resources required** | (See Budget Validation Table 4.1) |

|  |  |
| --- | --- |
| **Task #6** | ***Server side of the MCVideo server-to-server test cases and ICS*** |
| **Objectives** | Development of Server side of the MCVideo server-to-server test cases and Conformance Statement (ICS) proforma specification |
| **Input** | Existing base technical specifications based on 3GPP Release-15 |
| **Output** | Development of test purposes and detailed test cases for server side of the MCVideo server-to-server scenarios and Conformance Statement (ICS) proforma specification for these test cases. |
| **Interactions** | Regular interaction between the experts and the TC TCCE |
| **Resources required** | (See Budget Validation Table 4.1) |

## Milestones

**Milestone A – Final draft of server side of the MCPTT server-to-client test cases and ICS**

|  |  |  |
| --- | --- | --- |
| **Milestone** | **Description** | **Cut-Off Date** |
| **A** | Final draft of server side of the MCPTT server-to-client test cases and ICS | 2023-06-15 |
| Reference Body Deliverable | Final draft of server side of the MCPTT server-to-client test cases and ICS document.  Progress report and Final drafts approved (TC TCCE) |
| ETSI Deliverable | Final Drafts are available for review for TC TCCE two weeks before the meeting.  Report on progress and Final drafts accepted by TC TCCE |

**Milestone B – Final draft of server side of the MCPTT server-to-server test cases including MCX server side interworking with non-3GPP systems and ICS**

|  |  |  |
| --- | --- | --- |
| **Milestone** | **Description** | **Cut-Off Date** |
| **B** | Final draft of server side of the MCPTT server-to-server test cases including MCX server side interworking with non-3GPP systems and ICS | 2023-10-15 |
| Reference Body Deliverable | Final draft of server side of the MCPTT server-to-server test cases including MCX server side interworking with non-3GPP systems and ICS document  Progress report and Final drafts approved (TC TCCE) |
| ETSI Deliverable | Final Drafts are available for review for TC TCCE two weeks before the meeting.  Report on progress and Final drafts accepted by TC TCCE |

**Milestone C – Final draft of server side of the MCData server-to-client test cases and ICS**

|  |  |  |
| --- | --- | --- |
| **Milestone** | **Description** | **Cut-Off Date** |
| **C** | Final draft of server side of the MCData server-to-client test cases and ICS | 2024-02-15 |
| Reference Body Deliverable | Final draft of server side of the MCData server-to-client test cases and ICS document.  Progress report and Final drafts approved (TC TCCE) |
| ETSI Deliverable | Final Drafts are available for review for TC TCCE two weeks before the meeting.  Report on progress and Final drafts accepted by TC TCCE |

**Milestone D – Final draft of server side of the MCData server-to-server test cases including MCX server side interworking with non-3GPP systems and ICS**

|  |  |  |
| --- | --- | --- |
| **Milestone** | **Description** | **Cut-Off Date** |
| **D** | Final draft of server side of the MCData server-to-server test cases including MCX server side interworking with non-3GPP systems and ICS | 2024-06-14 |
| Reference Body Deliverable | Final draft of server side of the MCData server-to-server test cases including MCX server side interworking with non-3GPP systems and ICS document  Progress report and Final drafts approved (TC TCCE) |
| ETSI Deliverable | Final Drafts are available for review for TC TCCE two weeks before the meeting.  Report on progress and Final drafts accepted by TC TCCE |

**Milestone E– Final draft of server side of the MCVideo server-to-client test cases and ICS**

|  |  |  |
| --- | --- | --- |
| **Milestone** | **Description** | **Cut-Off Date** |
| **E** | Final draft of server side of the MCVideo server-to-client test cases and ICS | 2024-10-15 |
| Reference Body Deliverable | Final draft of server side of the MCVideo server-to-client test cases and ICS document.  Progress report and Final drafts approved (TC TCCE) |
| ETSI Deliverable | Final Drafts are available for review for TC TCCE two weeks before the meeting.  Report on progress and Final drafts accepted by TC TCCE |

**Milestone F – Final draft of server side of the MCVideo server-to-server test case and ICS**

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| --- | --- | --- |
| **Milestone** | **Description** | **Cut-Off Date** |
| **F** | Final draft of server side of the MCVideo server-to-server test cases and ICS | 2025-02-28 |
| Reference Body Deliverable | Final draft of server side of the MCVideo server-to-server test cases and ICS document.  Progress report and Final drafts approved (TC TCCE) |
| ETSI Deliverable | Final Drafts are available for review for TC TCCE two weeks before the meeting.  Report on progress *and Final drafts* accepted by TC TCCE |

**Milestone G – Final Report, final drafts approved by TC TCCE**

|  |  |  |
| --- | --- | --- |
| **Milestone** | **Description** | **Cut-Off Date** |
| **G** | Final Report, final drafts approved by TC TCCE | 2025-03-28 |
| Reference Body Deliverable | Final drafts and report approved by TC TCCE. |
| ETSI Deliverable | All Deliverables published.TTF closed |

## Task summary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Code** | **Task / Milestone** | Target Date | | Estimated Cost (EUR) |
| From | To |
|  | Start of work |  |  |  |
| T0 | Project Management | 20-02-2023 | 28-03-2025 | 12000 |
| T1 | Server side of the MCPTT server-to-client test cases and ICS | 20-02-2023 | 05-2023 |  |
| Milestone A | Final draft of server side of the MCPTT server-to-client test cases and ICS approved by TC TCCE.  Progress Report#1 approved by TC TCCE. |  | 15-06-2023 | 20000 |
| T2 | Server side of the MCPTT server-to-server test cases including MCX server side interworking with non-3GPP systems and ICS | 06-2023 | 09-2023 |  |
| Milestone B | Final draft of server side of the MCPTT server-to-server test cases including MCX server side interworking with non-3GPP systems and ICS approved by TC TCCE.  Progress Report#2 approved by TC TCCE. |  | 15-10-2023 | 32000 |
| T3 | Server side of the MCData server-to-client test cases and ICS | 10-2023 | 01-2024 |  |
| Milestone C | Final draft of server side of the MCData server-to-client test cases and ICS approved by TC TCCE.  Progress Report#3 approved by TC TCCE. |  | 15-02-2024 | 20000 |
| T4 | Server side of the MCData server-to-server test cases including MCX server side interworking with non-3GPP systems and ICS | 02-2024 | 05-2024 |  |
| Milestone D | Final draft of server side of the MCData server-to-server test cases including MCX server side interworking with non-3GPP systems and ICS approved by TC TCCE.  Progress Report#4 approved by TC TCCE. |  | 14-06-2024 | 32000 |
| T5 | Server side of the MCVideo server-to-client test cases and ICS | 06-2024 | 09-2024 |  |
| Milestone E | Final draft of server side of the MCVideo server-to-client test cases and ICS approved by TC TCCE.  Progress Report#4 approved by TC TCCE. |  | 15-10-2024 | 20000 |
| T6 | Server side of the MCVideo server-to-server test cases and ICS | 10-2024 | 01-2025 |  |
| Milestone F | Final draft of server side of the MCVideo server-to-server test case and ICS approved by TC TCCE.  Progress Report#5 approved by TC TCCE |  | 28-02-2025 | 24000 |
| Milestone G | Final Report, final drafts approved by TC TCCE |  | 28-03-2025 |  |
|  | | | | **160000** |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **2023** | | | | | | | | | | |  | **2024** | | | | | | | | | | | |  | **2025** | | |
| **Task/ Mil.** | **F** | **M** | **A** | **M** | **J** | **J** | **A** | **S** | **O** | **N** | **D** |  | **J** | **F** | **M** | **A** | **M** | **J** | **J** | **A** | **S** | **O** | **N** | **D** |  | **J** | **F** | **M** |
| T0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| T1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MA |  |  |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| T2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MB |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| T3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MC |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| T4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MD |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |  |
| T5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ME |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |
| T6 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MF |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |
| MG |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |

# Expertise required

## Team structure

2-3 participants to ensure the following mix of competences:

|  |  |
| --- | --- |
| **Priority** | **Qualifications and competences** |
| High | expert knowledge of Mission Critical Services |
| High | expert knowledge in 3GPP RAN5 conformance testing |
| High | expert knowledge of 3GPP RAN5 Mission Critical Services test cases |
| High | expert knowledge of SIP protocols, IMS, SDP, HTTP, XML, RTP, RTCP, MSRP, MIKEY-SAKKE, LTE |
| Low | expert knowledge of TTCN-3 |

Part IV: TTF performance evaluation criteria

# Performance Indicators

|  |  |
| --- | --- |
| **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 TC TCCE | X |
| 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 | X |
|  |  |
| **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 | X |
| Respect of time scale, with reference to start/end dates in the approved ToR | X |
| Comments from Quality review by Reference Body | X |
| Comments from Quality review by ETSI Secretariat | X |
|  |  |

# Document history

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Date** | **Author** | **Status** | **Comments** |
| 0.1 | 2022-04-06 | Saurav Arora | First Draft |  |
| 0.2 | 2022-04-20 | Saurav Arora | Early Draft |  |
| 0.3 | 2022-04-26 | Saurav Arora | Stable Draft | Splitting the deliverables |
| 0.4 | 2022-05-03 | Saurav Arora | Stable Draft | With minor corrections |
| 0.5 | 2022-05-24 | Saurav Arora | Stable Draft | Features added |
| 0.6 | 2022-06-13 | Saurav Arora | Final Draft | Supporters added |
| 0.7 | 2023-01-03 | ETSI Secretariat | Final Draft | Update before IKOM |
| 0.8 | 2023-01-13 | ETSI Secretariat | Final | Updates before CL publication |

Annex I Response to the Request for Proposals  
CfE – TTF T028 (REFERENCE BODY TCCE) Deadline: 31 January 2023

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Contractor information \*** | | | | |
|  | | | | |
| **Contractor name \*:**  *Indicate the Company/Organization Name* | |  | | |
|  | | | | |
| **Contact person for the technical aspects** | | **Contact person for Decision on ETSI financial offer to this project (if any)** | | |
| Title |  | Title |  | |
| First name |  | First name |  | |
| Last name |  | Last name |  | |
| Role |  | Role |  | |
| e-mail |  | e-mail |  | |
| Phone |  | Phone |  | |
|  | | | | |
|  | | **Yes** | | **No** |
| Do you or any employee of your Company/Organization hold an elected or appointed position in the Reference Body requesting the TTF T028 creation? | | o  Indicate in which position:  ----------------------------------- | | o |
| **If you are self-employed candidate:**  Do you currently have other contracts in progress with ETSI? | | o | | o |

All fields marked with an asterix (\*) are mandatory

**1.1 Introduction**

A short presentation of the technical structure responsible for this activity, e.g.:

* Business area, number of employees, link to WEB site,
* Department(s)/team(s)/experts in charge of the technical activities related to this Project,
* Reference to products/services of your Company/Organization or supporting Member to which the standards developed by this Project will apply,
* Motivation for your Company/Organization or supporting Member to participate in this Project.

**1.2 Proposed approach**

**Proposed contribution to tasks & related cost**

Identify the tasks to which your Company/Organization is proposing to contribute by filling-in the table below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tasks\_No** | **Tasks\_Description** | **Max\_Budget\_Allocated\_in\_Euro** | **Amount\_in\_Euro\_(mandatory)** | **%\_of\_whole\_Task\_(mandatory)** |
| 00 | Project Management | 12000 | . | . |
| 01 | Development of server side of the MCPTT server-to-client test cases and ICS | 20000 | . | . |
| 02 | Development of server side of the MCPTT server-to-server test cases including MCX server side interworking with non-3GPP systems and ICS | 32000 | . | . |
| 03 | Development of server side of the MCData server-to-client test cases and ICS | 20000 | . | . |
| 04 | Development of server side of the MCData server-to-server test cases including MCX server side interworking with non-3GPP systems and ICS | 32000 | . | . |
| 05 | Development of server side of the MCVideo server-to-client test cases and ICS | 20000 | . | . |
| 06 | Development of server side of the MCVideo server-to-server test cases and ICS | 24000 | . | . |

**Amount in Euro (mandatory)**: Indicate the price offered for your contribution to the task(s)

**% of whole task (mandatory)**: Indicate to which percentage of the execution of the whole task your offer corresponds

Provide a description of the proposed approach, competences, reference to related activities:

* Explain which part of the task is corresponding to the requested percentage that your Company/Organization will handle,
* Explain the scope that your Company/Organization will cover,
* Explain your approach to the management of the quality and,
* Explain your approach to the management of the risks and their mitigation,
* Describe and justify the proposed costs to achieve this project objectives.

Annex II Terms and Conditions  
CfE – TTF T028 (REFERENCE BODY TCCE) Deadline: 31 January 2023

**2.1 Submission of Proposals**

All proposals in response to this CfE shall be submitted before the deadline indicated in thisCollective Letter, using exclusively the WEB application on the ETSI Portal at the following address: <https://portal.etsi.org/cfe>.

Proposals shall be composed of Curriculum Vitae of the proposed service providers’ personnel and the Annex I of this CfE duly filled-out.

Proposals that will be partial or incomplete at the deadline will not be accepted.

The Terms and Conditions in this Annex will apply.

**2.2 Modification and Withdrawal of Proposals**

Applicants may, without prejudice to themselves, modify or withdraw their proposal by written request, provided that the request is received by ETSI prior to the due date and time, at the address to which their proposal was submitted. The applicant may submit a new proposal provided that such new proposal is received prior to the deadline for responding which is specified in this Collective Letter.

**2.3 Assessment of Proposals**

The ETSI Director-General, in consultation with the Reference Body Chairman, is responsible for the selection of the service providers that will be contracted to perform this Project work. The ETSI Director-General and the Reference Body Chairman may be assisted by a Selection Panel to assess the applications received and make the final decision.

As per article 1.10.4 of the ETSI Directives, the Director-General may discard proposals that could be identified as creating potential conflict of interest.

The ETSI Secretariat will only communicate to the applicants the result of the selection (accepted or not accepted). Should applicants need more information on the rationale for the selection, they must address a formal request to the ETSI Director-General.

The following evaluation criteria will be applied to all proposals, in order of priority:

* Evidence that the applicant has the necessary structure and expertise to ensure delivery
* Reference to current or previous activities in the specific technical domain of this project
* Critical review of the most efficient way to achieve the objectives in this Project ToR
* Effective proposed approach/methodology for the execution of the tasks
* Implementation schedule
* Clear pricing policy

Compliance with the first two (2) criteria is mandatory.

Proposals that are not considered compliant with these criteria will be discarded.

Priority will be given to technical quality of the proposals. Pricing considerations will be taken into account to ensure that the best value for money is achieved. Compatibility with the maximum budget allocated to this Project will be verified before placing a Service Contract.

Following the assessment process, ETSI reserves the right to grant contracts to other than the cheapest proposals, to accept or reject any offer completely or in part, or to reject all proposals, without providing the reasons. If no offer is accepted, ETSI may decide to abandon the work or proceed in any other manner ETSI may select.

**2.4 IPR and confidentiality Agreements**

The information provided in this CfE, as well as the fact that the applicant has received the CfE, is considered confidential and protected under copyright laws. The applicant may not discuss, share, or use the information in this CfE for any purpose other than the response to this CfE.

ETSI will not disclose the content of any proposals to other applicants or any other party, with the exception of the persons involved in the assessment process described in §2.3 above.

However, ETSI reserves the right to make use of the information provided in this proposal to improve this project definition for the purpose of this CfE or any other manner in which ETSI may decide to proceed to select the service providers.

If successful, the applicant will be required to sign a Service Contract, which includes IPR and Confidentiality clauses aligned with the relevant policies in the ETSI Directives.

**2.5 Preparation cost**

ETSI will not be responsible for any costs or expenses that the applicant may incur in preparing and/or submitting the proposal.

**2.6 Service Contract**

A Service Contract will be proposed to the applicants that will be selected to perform the work.

Details on the Terms and Conditions of this contract can be found on the ETSI Portal, at the following address: <https://portal.etsi.org/STF/STFs/Contracts.aspx>