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| ToR SPLU 181 (Ref. Body TC ITS) |
| Version: 0.2 |
| Author: Saurav Arora – Date: 2024-04-07 |
| Last updated by: ETSI Secretariat – Date: 2024-04-10 |
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**Terms of Reference –PLUGTESTSTM Technical Proposal**

**SPLU 181 (Ref. Body ITS)**

**C-V2X#4**

**Summary information**

|  |  |  |
| --- | --- | --- |
| Event Name | CV2X#4 Plugtests | |
| Event start date | 10 September 2024 | |
| Event end date | 13 September 2024 | |
| Format of the event | Interoperability testing | |
| Type of event | Face to Face | |
| Place of the Event (if so) | Malaga, Spain | |
| Reference Body /ISG involved | TC ITS | |
| In collaboration with/with the support of | 5GAA | |
| Standardised methodologies, techniques and best practices used: | • EG 202 237: Generic Methodology for Interoperability Testing | |
| ETSI Funding | Maximum budget : 15 000 EUR | |
| Time scale | **From** | 2024-05-20 |
| **To** | 2024-10-15 |

Part I –Technical Proposal

# Rationale & Objectives

The C-V2X Plugtests event will enable On-Board-Units (OBUs) and Roadside-Units (RSUs), Public Key Infrastructure (PKI) vendors to run interoperability test sessions to assess the level of interoperability of their implementation and validate the understanding of the standards. The goal of interoperability testing is to check that devices resulting from protocol implementations could work together and provide the functionalities specified in the standards. Different topics will be addressed, including Collective Perception Services (CPS), Vulnerable Road Users (VRU), Automated Valet Parking (AVP), 5G NR Sidelink, ITS Security, etc.

# Expertise required / Budget allocated

## Task summary

**Task description:**

|  |  |
| --- | --- |
| **Task** | **Task description** |
| T0 | Technical Project Management (Handled by CTI) |
| T1 | Development of a selection of interoperability tests based on ITS technical specifications for lab and outdoor based testing; |
| T2 | Collecting the observations and issues seen in the ITS technical specifications; |
| T3 | Supporting the preparation and remote integration phases, including participation to regular conference-calls and outdoor testing; |
| T4 | Assisting with the production of the report of the test execution and the production of the event Report. |

## Expertise required / Team structure

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

|  |  |
| --- | --- |
| **Priority** | **Qualifications and competences** |
| High | Practical experience in writing interoperability test scenarios for the ITS technology. (Lab and Outdoor based) |
| High | Expert knowledge of the ETSI TC ITS Specifications and 3GPP specifications. |
| High | Expert knowledge in ETSI ITS protocols, PC5, 5G NR Sidelink and LTE sidelink |
| High | Previous experience in interoperability events with outdoor testing. Familiar with the ETSI interoperability testing methodology. |

Note: Selected experts must be present on site in Malaga, Spain, during the Plugtests. No travel budget is allocated for onsite participation.

## Budget allocated:

**Budget table:**

|  |  |  |
| --- | --- | --- |
| **Task**  **No.** | **Task description** | **Total in EUR** |
| T0 | Technical Project Management (Handled by CTI) | **-** |
| T1 | Development of a selection of interoperability tests based on ITS technical specifications for lab and outdoor based testing; | 4000 |
| MILA | The new interoperability tests should be uploaded to Plugtests Wiki | 31/07/2024 |
| T2 | Collecting the observations and issues seen in the ITS technical specifications; | 1000 |
| T3 | Supporting the preparation and remote integration phases, including participation to regular conference-calls; | 8000 |
| T4 | Assisting with the production of the report of the test execution and the production of the event Report. | 2000 |
| MILB | Publication of Plugtests report | 15/10/2024 |
| **TOTAL** | | **15000** |

# Document history

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Date** | **Author** | **Status** | **Comments** |
| 0.1 | 2024-04-07 | Saurav Arora | Stable draft |  |
| 0.2 | 2024-04-10 | ETSI Secretariat | Final | Update before CL publication |

Annex I Response to the Request for Proposals  
CfE – SPLU 181 (TC ITS) Deadline: 06 MAY 2024

|  |  |
| --- | --- |
| **Contractor name \***  *Indicate the Company/Organization Name* |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Contractor information \*** | | | | |
| **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 SPLU 181 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 |

**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,
* Motivation for your Company/Organization or supporting Member to participate in the 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 | Technical Project Management | Handled by ETSI/CTI | | |
| 01 | Development of a selection of interoperability tests based on ITS technical specifications for lab and outdoor based testing; | 4 000 | . | . |
| 02 | Collecting the observations and issues seen in the ITS technical specifications; | 1 000 | . | . |
| 03 | Supporting the preparation and remote integration phases, including participation to regular conference-calls; | 8 000 | . | . |
| 04 | Assisting with the production of the report of the test execution and the production of the event Report. | 2 000 | . | . |
| **TOTAL** | | **15 000** |  |  |

**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 – SPLU 181 (TC ITS) Deadline: 06 MAY 2024

**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 CTI Director, is responsible for the selection of the service providers that will be contracted to perform the Project work. The ETSI Director-General and the CTI Director 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 the Project’s 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 STF 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 the 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/Portals/0/TBpages/STFs/Docs/SPLU_Service_Contract_%20Template_V1.0_Clean_Final.pdf>