|  |  |
| --- | --- |
|  | Moving Picture, Audio and Data Coding by Artificial Intelligencewww.mpai.community |

**Public document**

|  |  |
| --- | --- |
| **N1307** | 2023/07/12 |
| **Source** | Requirements (MMM) |
| **Title** | Template for responses: MPAI MMM Call for Technologies |
| **Target** | MPAI Community |

# Abstract

This document is provided as a help to those who intend to submit a response to Call for Technologies: Connected Autonomous Vehicle (MPAI-CAV) – Architecture. Text in

1. Yellow (as in this sentence) provides guidance to submitters and should not be included in a submission. Text in green shall be mandatorily included in a submission.
2. Green is text that must mandatorily be present. If the submission is in multiple files, each file shall include the green statement. If a submission does not include the green text, the submission will be rejected.
3. White is text that it is suggested, respondents may use in a submission.

# Introduction

This document is submitted by <organisation name> (if an MPAI Member) and/or by <organisation name>, a <company, university etc.> registered in <...> (if not an MPAI member) in response to the Call for Technologies: Connected Autonomous Vehicle (MPAI-CAV) – Architecture [4] issued by Moving Picture, Audio and Data Coding by Artificial Intelligence (MPAI) on 2023/07/12.

In the opinion of the submitter, this document proposes technologies that satisfy the requirements of MPAI document Use Cases and Functional Requirements: Connected Autonomous Vehicle (MPAI-CAV) – Architecture [5] issued by MPAI on 2023/07/12.

This document also contains comments on the Functional Requirements as requested by N1302 and N1303.

This document also contains proposed technologies that satisfy additional requirements as allowed by N1302 and N1303.

<Company and/or Member> explicitly agrees to the steps of the MPAI standards development process defined in Annex 1 to the [MPAI Statutes](https://mpai.community/about/statutes/) (N421) and [1], in particular <Company and/or Member> declares that <Company and/or Member> or its successors will make available the terms of the Licence related to its Essential Patents according to the Framework Licence: Connected Autonomous Vehicle (MPAI-CAV) – Architecture [6], alone or jointly with other IPR holders after the approval of the Technical Specification: Connected Autonomous Vehicle (MPAI-CAV) – Architecture by the MPAI General Assembly and in no event after commercial implementations of the Technical Specification become available on the market.

< Company and/or Member> acknowledges the following points:

1. MPAI in not obligated, by virtue of this CfT, to select a particular technology or to select any technology if those submitted are found inadequate.
2. A representative of <Company and/or Member> shall present this submission at a Requirements (CAV) meeting communicated by the MPAI Secretariat. If no <Company and/or Member> will attend the meeting and present their submission, this will be discarded.
3. <Company and/or Member> shall make available a working implementation – including source code – for use in the development of Reference Software Specification: Connected Autonomous Vehicle (MPAI-CAV) – Architecture and eventual publication by MPAI before the technology submitted is published in Technical Specification: Connected Autonomous Vehicle (MPAI-CAV) – Architecture.
4. The software submitted may be written in programming languages that can be compiled or interpreted and in hardware description languages, upon acceptance by MPAI for further eval­uation of their submission in whole or in part.
5. <Company> shall immediately join MPAI upon acceptance by MPAI for further evaluation of this submission in whole or in part.
6. If <Company> does not join MPAI, this submission shall be discarded.

# Information about this submission

This information corresponds to Annex A on N1302. It is included here for submitter’s convenience.

1. Title of the proposal
2. Organisation: company name, position, e-mail of contact person
3. What are the main functionalities of your proposal?
4. Does your proposal provide or describe a formal specification and APIs?
5. Will you provide a demonstration to show how your proposal meets the evaluation criteria?

# Comments on/extensions to requirements (if any)

# Overview of Functional Requirements supported by this submission

Please answer Y or N. Detail on the specific answers should be provided in Chapter 6.

|  |  |  |
| --- | --- | --- |
| **#** | **MPAI-CAV Architecture elements** | **Response** |
| 1 | Introduction | Y/N |
| 2 | Terms and definitions | Y/N |
| 3 | References | Y/N |
| 4 | Human-CAV Interaction (HCI) | Y/N |
| 4.1 | Subsystem description | Y/N |
| 4.2 | Reference architecture | Y/N |
| 4.3 | I/O Data of the HCI Subsystem | Y/N |
| 4.4 | AI Module functionalities | Y/N |
| 4.5 | Input/Output Data of the AIMs | Y/N |
| 5 | Environment Sensing Subsystem (ESS) | Y/N |
| 5.1 | Subsystem description | Y/N |
| 5.2 | Reference architecture | Y/N |
| 5.3 | Input and output data | Y/N |
| 5.4 | AI Module functionalities | Y/N |
| 5.5 | Input/Output Data of the AIMs | Y/N |
| 6 | Autonomous Motion Subsystem (AMS) | Y/N |
| 6.1 | Subsystem description | Y/N |
| 6.2 | Reference architecture | Y/N |
| 6.3 | Input and output data | Y/N |
| 6.4 | AI Module functionalities | Y/N |
| 6.5 | Input/Output Data of the AIMs | Y/N |
| 7 | Motion Actuation Subsystem (MAS) | Y/N |
| 7.1 | Subsystem description | Y/N |
| 7.2 | Reference architecture | Y/N |
| 7.3 | Input and output data | Y/N |
| 7.4 | AI Module functionalities | Y/N |
| 7.5 | Input/Output Data of the AIMs | Y/N |
| 8 | CAV-to-Everything (V2X) | Y/N |
| 8.1 | Description | Y/N |
| 8.2 | Input and output data | Y/N |
| 8.2.1 | CAVs within range | Y/N |
| 8.2.2 | CAV-aware equipment | Y/N |
| 8.2.3 | Other non-CAV vehicles | Y/N |
| 8.2.4 | Pedestrians | Y/N |

# New Proposed requirements (if any)

|  |  |
| --- | --- |
|  | Y/N |
|  | Y/N |
|  | Y/N |

# Detailed description of submission

## Proposal section #1

## Proposal section #2

....

# Conclusions

# References

1. MPAI Patent Policy; <https://mpai.community/about/the-mpai-patent-policy/>.
2. MPAI; Call for Technologies: Connected Autonomous Vehicle (MPAI-CAV) – Architecture; N1302; https://mpai.community/standards/mpai-cav/call-for-technologies-mpai-cav-architecture/
3. MPAI; Use Cases and Functional Requirements: Connected Autonomous Vehicle (MPAI-CAV) – Architecture; N1303; https://mpai.community/standards/mpai-cav/mpai-metaverse-model-architecture/
4. MPAI; Framework Licence: Connected Autonomous Vehicle (MPAI-CAV) – Architecture; N1251; https://mpai.community/standards/mpai-cav/framework-licence-mpai-metaverse-model-MPAI-CAV-architecture/
5. MPAI: Template for responses: Connected Autonomous Vehicle (MPAI-CAV) – Architecture; N1251; https://mpai.community/standards/mpai-cav/template-for-responses-MPAI-CAV-call-for-technologies/