Request for Quotations:

P_2023_05 – ASAM OpenMATERIAL® & 3D Model Structures

ASAM calls for offers to support an ASAM project group for ASAM OpenMATERIAL® & 3D Model Structures. Please send your offers for this project to offers@asam.net.
Offers shall be submitted no later than 15.04.2024.

Project

With increasing computing power and more efficient simulation methodologies, virtual testing plays a stronger role throughout all phases of system development. This correlates to a growing need to accurately represent the real world in simulation, a so-called digital twin, particularly as the need for physical sensor simulation grows. However, for this to be feasible, physically correct modelling of material properties is fundamental. To ensure consistent testing across platforms and by different stakeholders, 3D models and corresponding material properties need to be unambiguously exchangeable.

The goal of this project is to define material parameters and 3D model structures to be used in perception sensor simulation.

Here you can find the original proposal:
P_2023_05 ASAM OpenMATERIAL®

Tasks

The service provider is responsible for setting up a documentation template, compiling a glossary, enhancing documentation content from the project groups, e.g. with formatting, proof reading, and illustrating figures and generating schema validation files for the material data format.

1. **Set up documentation framework on GitHub**
   The service provider shall implement the ASAM documentation framework in the project's GitHub repository with Antora and ASCiiDoc, a lightweight markup language that supports all structural and semantic elements necessary for writing technical documentation. Setup an automated CI pipeline that combines AsciiDoc/Antora files (source) with styling templates in order to achieve a fully featured html output. This framework shall contain the general structure of the documentation with all mandatory chapters as defined by ASAM. Furthermore, external and future stakeholders shall be enabled to easily extend the documentation. Therefore, the setup of the documentation and means to extend it shall be

well documented and templates for issues and pull requests shall be provided to ensure a certain quality of new proposals.

GitHub repository:
https://github.com/asam-ev/OpenMATERIAL

2. **Compile Glossary**
The service provider shall attend dedicated group meetings to support the relevant project group terminology in identifying terms to be defined and ensure that definitions are clear and unambiguous. The final list of terms shall be added to the central ASAM repository for terms and definitions as an AsciiDoc fragment compliant with the instructions defined therein. All authored content shall be aligned with the ASAM Editorial Guide. This is the responsibility of the contracted partner. Where necessary, restructuring or editorial changes shall be made to comply with the Editorial Guide.
Supplementary documents:
   - ASAM terminology repository
   - ASAM Editorial Guide

3. **Enhance Documentation**
While the main contents of the documentation will be created by the project groups, the service provider shall enhance this content by proof reading and bringing it into a unified format. Restructuring or editorial changes shall be made to comply with the Editorial Guide. Furthermore, the service provider shall create illustrating figures to facilitate the understanding of the definitions of the standard.

4. **Schema Generation**
The material data will be stored in some form of markup language, which is still to be determined, e.g. JSON or YML. The service provider shall generate schema validation files to define and validate the data format. This also entails setting up a schema validation pipeline in the GitHub repository. The setup of the pipeline shall be well documented. The documentation shall also include a guide on how to change and enhance the schema validation for further development of the standard.

Deliverables

The deliverables of this project from the service provider constitute the first version of OpenMATERIAL from ASAM.
   - Documentation (including illustrative documentation) according to ASAM Editorial Guide with unified formatting and clean spelling.
   - Glossary (Terms and definitions) as one chapter within the documentation
   - Schema validation file(s) for the material data

Qualification

To be able to carry out the tasks, the service provider shall meet the following conditions:
- Practical work experience in writing standards and technical detail specifications.
- Experience in working with git-based & issue-driven workflows as well as GitHub Actions
- Experience in creating illustrative figures
- Experience in markup language schemas, AsciiDoc and Antora
- High proficiency in technical English

General Conditions

Please note the following general conditions for the project:
- The project period is from 18.04.2024 to 31.03.2025
- The project lead, ASAM office and service provider will jointly determine the need for attendance of the service provider in meetings.
- Offers shall be based on total effort and fixed hourly rates. The offers can be made addressing one, more or all the tasks.
- In case of variable-price offers, please indicate upper limits for the costs
- In case a deliverable is found to be defective or not up to customary industry quality standards, the service provider will correct the deliverable without charging ASAM for the extra work. Not completed work is exempted from the service provider's warranty, i.e. if a deliverable is found to be incomplete, then its completion will not be paid by ASAM
- Modification to deliverables, should they be required, will be jointly reviewed and the order adjusted accordingly.
- All work results of the project (including the sources to create them) will be handed over to ASAM and will become the exclusive property of ASAM. If the general terms & conditions of the service provider contain rules that are in conflict herewith, then they must be identified and explicitly declared as invalid for this offer.
- Offers must be submitted in writing to ASAM within the above stated bidding period, including a clear description of the provided services and deliverables, terms & conditions, time period and costs for the service.
- Please note that offers will be reviewed by the members of the project group, the Technical Steering Committee of ASAM and the ASAM Office. The project group members will not receive pricing information. For this purpose, please put all pricing information on a separate page.