

VMAP SC Technical Meeting

September 7, 2022

16:00 - 17:00 CET

Participants: Fraunhofer SCAI, Germany; Robert Bosch GmbH, Germany; Reden, Netherlands; BETA CAE, Switzerland; Karlsruhe Institute of Technology, Germany; Transvalor, France; 4a Engineering, Austria; Hagen Stiftung, Germany; Convergent, Canada; Simcon GmbH, Germany; Part Engineering, Germany; Key2Metals, Switzerland; BAM Germany; Swerim Sweden;

Foundation of VMAP SC association

- The tax office has not recognized the tax exemption on the basis of a charitable status of the association
- The current plan is now to establish the VMAP SC as a non-economic (not for profit) association
- Slight adaptations of VMAP SC statutes, IP policy, and license rules will be proposed by Fraunhofer - and have to be discussed/accepted by all members
- Some open tax issues were discussed during the meeting
- Hopefully, formal foundation can be executed within 2022

VMAP interfaces

- Ansys wrapper - no updates, no active use
- Abaqus wrapper – slight updates within an internal project
- OOFEM interface – VMAP export has been implemented and will be tested in detail
- FORGE interface – VMAP export is under development and makes good progress
- Visualiser – prototype for end of 2022

Working Group Full Model Storage

- Goal: standard should cover more information necessary to create running FEA model
- Discussion: which data and parameters are generic enough to be covered by a standard extension
 - Presentation of SMILE project (HTW Berlin and BMW)
 - Presentation of agnostic Solver Storage (DLR Braunschweig)
- There will be a specific [VMAP session on the NAFEMS DACH](#)
 - Use case on steel manufacturing (Swerim Sweden)
 - Short presentation of current status
 - Open discussion and collecting feedback

Working Group Sensor Data

- Goal: standardized information on sensor results, which could be used for comparison and validation of simulation results
- Discussion: which sensor details need to be covered
 - Presentation of some first sensor data (Fraunhofer SCAI)
 - Ongoing project on digital twins for blow-moulding cases
- Update will be presented on NAFEMS DACH

Working Group CFD Data and CGNS

- Goal: standardized information on CFD results – linked to available CGNS standard
- Discussion:
 - first discussion with ONERA
 - needs to be followed up
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Working Group Ontology

- Goal: semantic ontology concepts as an extension to the VMAP definitions
- Discussion:
 - Presentation of some first sensor data (Fraunhofer SCAI)
 - needs to be followed up by further VMAP members

Discussion with external groups and R&D projects

- AutomationML and digital twins – ongoing discussion with a US turbine manufacturer
- PIONEER: new CEC H2020 project to be started in Feb 2023