1st VMAP User Meeting 2024

Agenda
Wednesday, 14 February 2024

11:00	**Registration & Networking**	
	We will start with the initial networking where you can interact with all the participants & presenters. The exhibitions from various software vendors will be open for all - small snacks and drinks are offered. We request you all to attend this session	**Gold Sponsor**
13:00	**VMAP SC Status and WGs**	
13:00	**Welcome Ceremony**	VMAP SC Chairman
	VMAP SC Chairman will officially welcome all the participants and provide a brief overview about the intention, vision & strategy of the VMAP SC eV.	Klaus Wolf
13:15	**VMAP IO LIB Overview**	Authors
	Short summary about the VMAP IO Lib & Architecture.	FhG SCAI
13:30	**VMAP Working Group - Full Model Storage**	WG Members
	Vision is the further automation of CAD & CAE workflows. Details about the demands from IT & workflow integration perspective and first basic solutions for handling 'numerical' units & parameters will be presented	**BETA,** HTW, BMW, SCAI, DLR
13:50	**VMAP Working Group – Sensor Data Storage**	WG Members
	Details about demands from validation & calibration processes will be shown, leading to concepts for incorporation of data from measurement & monitoring into the VMAP Standard.	HagenStiftung, FhG SCAI, HS BRS, Swerim, DLR
14:20	**VMAP Working Group – Visualization of VMAP Data Sets**	WG Members
	The integration of VMAP IO Lib into Paraview & other visualization tools will be demonstrated.	HagenStiftung, Convergent, KIT, FhG SCAI, REDEN
14:40	**Break**	

15:10	**Integrating measurement and monitoring data into simulation workflows (1)**	
15:15	**Project Smart Blow Moulding Solutions**	Project Consortium
	Focussing on incorporation of stereography and thermography data; alongside the validation of simulation models.	Rikutec, HagenStiftung
15:40	**Project VMAPanalytics - Furnace modelling**	Project Consortium
	Sharing the experience for data analytics and modelling in the steel production domain	Swerim, PREVAS AB, et.al.
16:05	**Virtual manufacturing validation data in composite production**	
	A simulation based end-to-end processes in DLR's Virtual Product House using measured manufacturing deformation for validation.	DLR Institute of Lightweight Systems & Structural Mechanics

16:30	**Break**	

17:00	**Integrating measurement and monitoring data into simulation workflows (2)**	
17:00	**Archiving of data sets in the NDT (Non-destructive Testing)**	
	Related standards, scope and usage in non-destructive testing domain	Fraunhofer IZFP
17:25	**Ultrasonic Guided Waves data in SHM design**	
	Structural health monitoring (SHM) systems using simulation of ultrasonic guided waves	DLR Institute of Lightweight Systems & Structural Mechanics
17:50	**Scalable principles for integration pipelines of sensor data and simulations using knowledge graphs**	
	Design of integrated and smart sensor environments	SICK AG - Think Tank

18:20	**End of Day**	

19:00	**Dinner at Hotel Waldcafe**	

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Preliminary Agenda
Thursday, 15 February 2024

08:00	**VMAP for Full Model Management and Flexible CAx Workflows**	
08:05	**VMAP-enabled multi-disciplinary collaboration on jet engine design**	
	Transition from conceptual/preliminary design to higher fidelity design using central data models in the GTLab (Gas Turbine Laboratory)	DLR Institute of Structures and Design
08:30	**Semantic concepts for VMAP based simulation data**	Authors
	Integrating physical simulation data into data ecosystems, ontology concepts to enable semantic search in simulation data	HBRS, SCAI, PROSTEP
08:55	**VMAP Standard in CAE workflows for CoFRP**	
	Efficient aerospace structures with a focus on use cases from automotive and aerospace domain	KIT FAST
09:20	**Standardized Simulation Workflows in the Automotive Industry**	
	Demands for standards for data exchange in automotive engineering; concepts and application of SMILE (Unified Simulation Modeling Language)	BMW, HTW Berlin
09:45	**Process Automation for CAE Engineers**	
	Learn how Synera has leveraged VMAP and other open formats to create a vendor agnostic automation platform for engineers	Synera GmbH
10:10	**Break**	
10:40	**VMAP in R&D Projects**	
10:45	**Project PIONEER - Open platform for optimising production systems**	Project Consortium: **AIMEN**, ESI, ENG, Limitstate, EBBAMS, TTP, Fankom, Tekniker, ENSAM, IMPERIAL, Uni Patras, CORE, SCAI, IRES, CLESGO, Marelli, MX3D
	Integrated CAX workflows for Wire Arc Additive Manufacturing (WAAM) and Carbon Fibre Sheet Moulding Compound (CF-SMC)	
11:05	**Integrated design process for flexible electronics using VMAP**	Project Consortium: **TU Dresden, Reden,** Capical, FhG EMFT, Gdansk Uni, IMS CHIPS, ISS RFID, Integer, IMR, NanoWired, OSYPKA, Philips, Salvia, SMG, Signify, TNO, Würth
	Project HyperStripes - New packaging technology for reliable bendable electronics. Flexible and stretchable electronic stripes used to create smart cables, medical im-plants and transparent displays using PCB programs	

11:25	**VMAP in R&D Projects**	
11:25	**Standards in Welding related activities from EWF** *Project RESTORE - Sustainable Remanufacturing solution with increased automation and recycled content in laser and plasma-based process*	Project Consortium: **European Federation For Welding**, Flowphys, SCAI, MSC, TS, Dalforsan, Fiat, Navtek, Intellegens, IREPA, Parida, IRIS, EITM, WA, LUC, Cranfield Uni, PHD, Endurance, Aerobase, GSMC
11:45	**Use of VMAP in Projects Alabama & Base** *ALABAMA - Adaptive Laser Beam for additive manufacturing* *BASE - Battery Passport for Resilient Supply Chain and Implementation of Circular EconomyyPassport*	Project Consortium: **FhG SCAI**, Aerobase, Fiat, Flowphys, FUNDACIO, GKN Aerospace, IRIS, Lulea Uni, MTN, NAM, SINTEF, TVS ...
12:05	**Integration platforms for Digital Product Passports** *A brief demonstration of the DPP related to automotive, wind turbine, and waste*	Technovative Solutions
12:25	**Lunch**	
13:25	**Related Standardisation Activities**	
13:30	**FAIR Data in Platform MaterialDigital (PMD): Ontologies, Semantic Data Integration and Data Exchange** *Platform Material Digital - The implementation of digitalization tasks for materials in a sustainable manner*	BAM Bundesanstalt für Materialforschung und -prüfung BMBF funded Project Cluster MaterialDigital
13:55	**MODA and CHADA** *Standardization and digitalization of Simulation and Characterization Data in Materials Science*	FhG IWM
14:20	**STEP by STEP to a Model-Based Enterprise** *STEP/CAD formats and product data management*	PROSTEP AG
14:45	**Conclusions**	FhG SCAI
15:00	**Farewell**	