

VMAP Standards Community

General Assembly Meeting – 31.January 2023



Organisational Details

List of Participants - Annex to the Meeting Minutes



Institution	VMAP SC member	Participant, eligible to vote	Further Participants
4a engineering	X		
BETA CAE	X	Samouil Saltiel	Thanassis Fassas, George Mokios
Convergent	X	Anthony Floyd	
DYNAmore	X	Tolga Usta	
Dr Reinold Hagen Stiftung	X	Olaf Bruch, Vice Chairman	
Fraunhofer SCAI	X	Klaus Wolf, Chairman	Victor Lüddemann, Philipp Spelten
inuTech GmbH	X	Frank Vogel	
Key To Metals	X		
KIT FAST	X		
NAFEMS	X	Tim Morris, Treasurer	Albert (Roger) Oswald , Gino Duffett
PART Engineering	X	Marcus Stojek	
Philips Consumer Lifestyle	X	Mark Veldhuis	Mark Kamps
Reden BV	X		
simcon	X		
Swerim	X		
TRANSVALOR	X	Laurence Gaston	
Number of participants	16 partners	10 partners represented	+ 7 further participants

Organisational Details

Chair and secretary for this meeting



Session Chair

- Klaus Wolf, Fraunhofer

Meeting minutes / Secretary

- Olaf Bruch, Dr. Reinold Hagen Stiftung

Agenda

as distributed by invitation email on January 17, 2023



Date: Tuesday January 31, 2023 at 4PM CET

Location: Online MS Teams

1. Re-election of treasurer
2. Short update on the registration process
3. Updates on Working Group and Interfaces
 - WG Sensor Data: shall we initiate a new WG (Fraunhofer)
 - WG Full Model Storage: Very first ideas (BETA CAE)
 - Interface implementations: Transvalor, OOFEM (by Convergent), PERMAS Wrapper (by DLR)
4. Marketing
 - NWC23: Update and request for further contributions / support
 - NAFEMS ASSESS, other initiatives
 - VMAP Open community meeting (to be planned)

Re-Election of Treasurer

Status and Background for Re-Election

Situation

- At the founding meeting Tim Morris (NAFEMS) has been elected as Treasurer
- Due to other obligations, Tim Morris would like to resign from this positions.

Statutes

Clause 9: Resolutions by the General Assembly / Part 6

Any duly convened General Assembly has a quorum regardless of the number of Members physically or virtually present.

Statutes

Clause 9: Resolutions by the General Assembly / Part 7

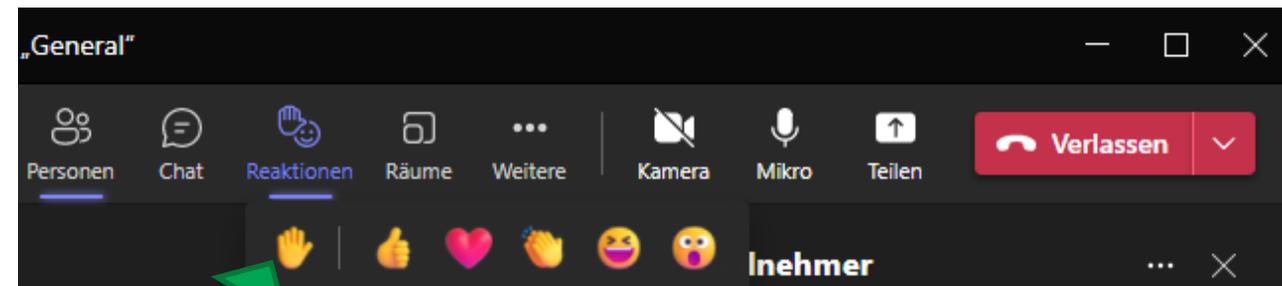
- The decisions of the General Assembly are made with a **simple majority** of the valid votes cast.
- How-ever, a majority of 3/4 of the valid votes cast is required to amend the Statutes and/or the Bylaws, and/or the IP Regulations, to change the purpose of the Association and to decide on the dissolution of the VMAP SC.

Proposal for Re-Election

- Albert (Roger) Oswald (NAFEMS) is standing as a candidate for this position.
- **Are there any other candidates for this position?**



- Voting procedure
 - Session chair (Klaus Wolf) will act as election officer, secretary (Olaf Bruch) as assessor
 - Election officer will ask for the votes to be cast
 - YES / NO / ABSTENTION
 - Authorized people should activate 'raise hands' in MS Teams
 - The election officer and the secretary shall count the votes
 - The secretary records the results of the votes in the meeting minutes



Re-Election of Treasurer

Votes

Term of office - 2 years

Candidates	Yes	No	Abstention
Albert (Roger) Oswald, NAFEMS DACH GmbH	10	0	0
...	—	—	—

- Signatures for Statutes, GDPR and Logos
- Steps for the formal registration process
- Preparation of invoices – Company size to be confirmed

Update on Foundation Process

Signatures for Statutes, GDPR and Logos

Situation

- After the foundation meeting Annika Amthor distributed on December 21, 2022
 - the meeting minutes, request on logo usage and GDPR, and statutes & signature pages

Ongoing signature process

- Swerim

Formal Registration

- 16 formal founding members of VMAP SC

	Company	Use of Logo	DSVGO/GDPR	Authorisation	Signature Page	
					Post	E-Mail
1.	4a engineering - Austria	x	x	signed as CEO		x
2.	BETA CAE - Switzerland	x	x	x		x
3.	Convergent - Canada	x	x	x		x
4.	DYNAmore - Germany	x	x	x		x
5.	Dr Reinhold Hagenstiftung - Germany	x	x	x		x
6.	Fraunhofer - Germany		x	x	x	x
7.	muTech GmbH - Germany	x	x	x		x
8.	Key to Metals AG - Switzerland	x	x	x		x
9.	KIT FAST - Germany	x	x	x		x
10.	NAFEMS Dach - Germany	x	x	x		x
11.	PART Engineering - Germany	x	x	signed as CEO	x	x
12.	Philips - Netherland	x	x	x		x
13.	REDEN - Netherland	x	x	x	x	x
14.	Simcon kunststofftechnische Software - Germany	x	x	x		x
15.	Swerim AB - Sweden	x				
16.	Transvalor - France	x	x	x		x

Update on Foundation Process

Steps for the formal registration process



Next Steps

- If missing - collect last missing signature pages
- Local Notary will get (from Fraunhofer)
 - Formal invitation to the Foundation meeting & 1st General Assembly
 - Meeting minutes of Foundation Meeting (Dec 20, 2022) & 1st General Assembly (Jan 31, 2023)
 - Statutes including all 16 signature pages & authorisation letters
 - Full contact details for all 3 board members
- Notary
 - Chair and Vice-Chair additionally provide date of birth and private address
 - The chairman and vice-chairman must have their signatures notarized by the notary public with their identity cards.
 - Notary will ask for registration at the Registration Office in Siegburg

Update on Foundation Process

Steps for the formal registration process



Next Steps

- Registration Office
 - Fees ~120€
 - Confirmation of the entry in the register after ~4 weeks
- Bank Account, Web Domain, Liability Insurance (after confirmation)
 - Bank - could be any German bank
 - Liability Insurance - Annika is asking about the conditions with some providers ~350-400€ per year
 - Web Domain – VMAP SC (i.e. Klaus) will ask NAFEMS to provide 'AuthInfo' to initiate the domain change
 - Web & mail service - VMAP SC (i.e. Klaus) will ask about conditions with some providers like NetCologne
 - Invoices for member fees – SCAI queries the correct company sizes, invoices will be sent after registration

Update on Foundation Process

Steps for the formal registration process – Company size



Institution	Type	Size (to be checked)	Fees
4a engineering	Company	10-24	600
BETA CAE	Company	➤ 249	5.000
Convergent	Company	10-24	600
DYNAmore	Company	???	
Dr Reinold Hagen Stiftung	Non-profit	1 Institute	600
Fraunhofer SCAI	Public R&D	1 Institute	600
inuTech GmbH	Company	???	
Key To Metals	Company	???	
KIT FAST	Public R&D	???	
NAFEMS	Non-profit	Non-profit	600
PART Engineering	Company	1-9	300
Philips Consumer Lifestyle	Company	➤ 250	5.000
Reden BV	Company	10-24	600
simcon	Company	???	
Swerim	Public R&D	???	
TRANSVALOR	Company	50-99	1.200
TOTAL			15.100 + ...

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VMAP Standards Community Member Fees

VMAP SC annual membership fee

Organization Type	Size ¹	
Individual ²		100 €
Company	1-9	300 €
	10-24	600 €
	25-49	900 €
	50-99	1.200 €
	100-249	2.500 €
	250 and above	5.000 €
Non-profit organisation		600 €
Research & Non-profit ³	Per institute	600 €
Research & Non-profit ⁴	Per Organisation	4.500 €

- WG Sensor Data: shall we initiate a new WG (Fraunhofer)
- WG Full Model Storage: Very first ideas (BETA CAE)
- Interface implementations
 - Transvalor,
 - OOFEM (by Convergent),
 - PERMAS Wrapper (by DLR)

Sensor Data

- Fraunhofer, HagenStiftung, HS BonnRheinSieg
- Swerim, 3-4 Swedish steel manufacturers from VMAP analytics project
- Partners from just started CEC PIONEER project might follow in a few months
- *Presentation V Lüddemann* → [VMAP SC GeneralAssemblyMeeting SensorData 20230131.pdf](#)
- Questions: export formats from measurement? Frequency and file size?

Technical Proposal #1



- shall we initiate a new **VMAP WG on Sensor Data**?

WG Full Model Storage

- Fraunhofer, BETA CAE, HTW, BMW, BAM, DLR BT, DLR FA
- Group can be extended !
- Status Active, will present very first concept on NWC23
- *Presentation Th. Fassas (BETA) → [VMAP SC GeneralAssemblyMeeting FullModelData 20230131.pdf](#)*
- Questions: storing alg. Parameters? Translation between parts only supported in 1 code;

Technical Proposal #2



- VMAP WG Full Model data shall go on in this direction?

Transvalor

- FORGE, Z-set
- *Presentation L. Gaston (Transvalor) → [VMAP SC GeneralAssemblyMeeting Transvalor 20230131.pdf](#)*

OOFEM

- Open Source Code OOFEM,
- *Presentation A. Floyd (Convergent)* → *VMAP SC GeneralAssemblyMeeting Transvalor 20230131.pdf*

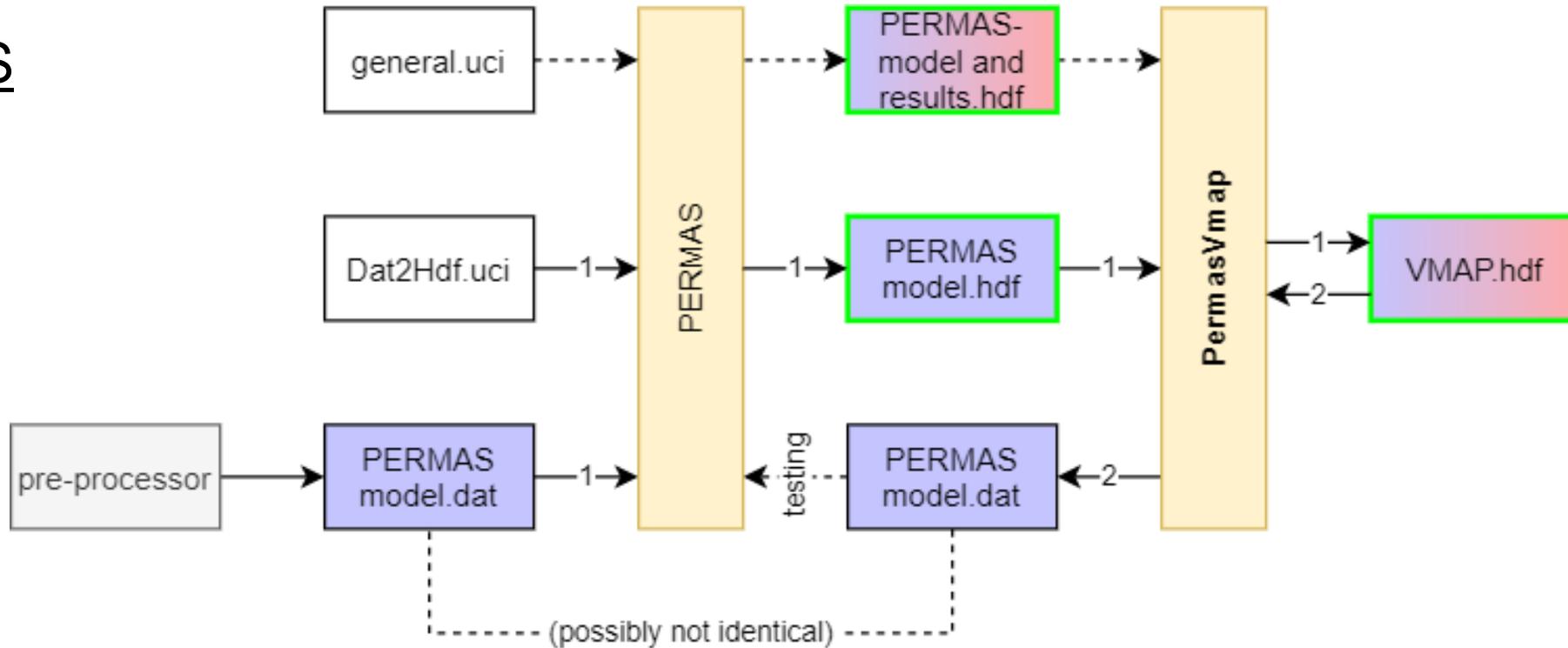
PERMAS

- Realised by *Oliver Kunc (Oliver.Kunc@dlr.de), DLR BS Stuttgart*
- A converter for FEA models and results from Permas to VMAP and vice versa
- <https://elib.dlr.de/190868/> & <https://github.com/BT-DLR/PermasVmap>
- This software converts **models and results** from the Finite Element software Permas to VMAP vice versa. It is written in Python with automated applications in mind, such as cross-disciplinary optimization. The initial focus is on 3D scenarios with solid volume elements only but extensions to other kinds of elements (shells etc.) are envisioned.

Working Group Updates

Interface Implementations

PERMAS



- NWC23: Update and request for further contributions / support
- NAFEMS ASSESS initiative
- VMAP Open community meeting (to be planned)

NWC23 – accepted VMAP related presentations

- DLR Institute of Composite Structures and Adaptive Systems: Development of a hierarchical data format for modeling, simulation and post-processing in structural mechanics and its ecosystem
- BETA CAE: Breaking down the interoperability barrier among different FEA software
- Swerim: A smart manufacturing platform for process control and optimization
- Digital Twin4 Multiphysics Lab (SCAI, HSBRS, HagenStiftung): An ontology for integrating VMAP based simulation data into digital twins
- Fraunhofer SCAI & PROSTEP: A methodology for integrating hierarchical VMAP-data structures into an ontology to enable semantically represented analyses

NWC23 – further contributions

- Plan to organise a VMAP Workshop inside NWC23 (2 session blocks)
 - General introduction – status and plans of VMAP interface standard
 - previously mentioned 5 presentations
 - further contributions on interoperability would be good
 - Discussion with SW-Vendors
- Technical Proposal #3 Booth @ NWC23 
 - Official exhibitor on website, with company logo and link to your website
 - Stand area (8' x 10' - 2.5 x 3m) in exhibition hall
 - Company logo on congress program...
 - 1,000 USD (*standard fees would be ~6,650 USD*)

NAFEMS ASSESS Initiative

- Analysis, Simulation & Systems Engineering Software Strategies
- <https://www.nafems.org/community/assess/>
- *“The vision of the ASSESS Initiative is to bring together key players for guiding and influencing the software tool strategies for performing model-based analysis, simulation, and systems engineering. To achieve this vision the ASSESS Initiative will collaborate with multiple activities and organizations across the complete spectrum of Engineering Simulation.”*
- *Presentation by G. Duffett (NAFEMS) → VMAP SC GeneralAssemblyMeeting NAFEMS ASSESS 20230131.pdf*

Technical Resolutions

Proposals #1 - #3

Topics		Present partners	Yes	No	Abst.
#1 Initiate new VMAP WG Sensor Data		10	10	0	0
#2 VMAP WG Full Model data shall go on		9 ⁽¹⁾	8	0	1
#3 VMAP Booth @ NWC23		6 ⁽¹⁾	6	0	0
#4 NAFEMS ASSESS Initiative / cooperation		6 ⁽¹⁾	6	0	0

⁽¹⁾ few partners had to leave earlier

Conclusion

Next Steps ...



Regular Assembly Meetings

- Every 3 months
 - Defining the process in more detail: Idea → WG discussions → Proposal → VMAP Release
 - Finding more VMAP friends and members

WG Meetings

- WG Full Model Storage – date to be fixed, in February/March 2023
- WG Sensor Data – Fraunhofer & HagenStiftung & Swerim will organise a Kickoff asap

Marketing & Communication

- Open Community Meeting in ...
- VMAP Workshop @ NWC23 May 2023 in Tampa, Florida