



NoE PATENT-DfMM Modelling and Simulation

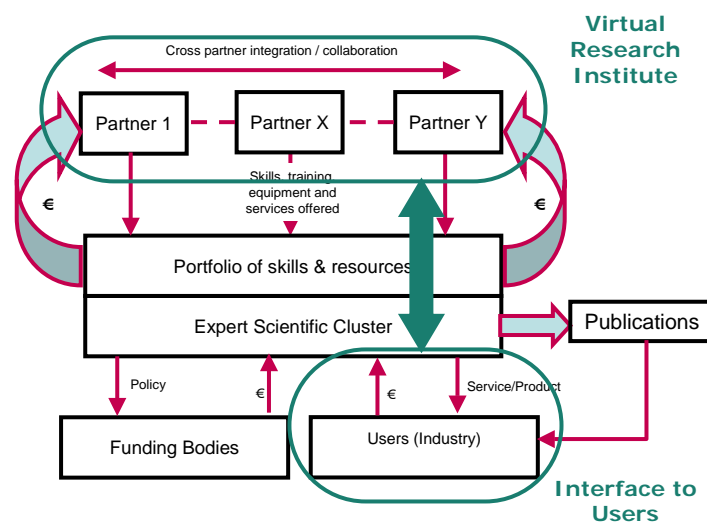
Methodology Development and Interface to Users

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PATENT-DfMM Business Model



Methodology / Users

- Integration of Activities
 - Cross-partner Integration/Collaboration
 - One-stop shop: Virtual Research Institute
 - Virtual Research Labs
 - Different approach depending on user

- Potential Users (Customers)
 - MNT Manufacturing
 - EDA Tools Developers

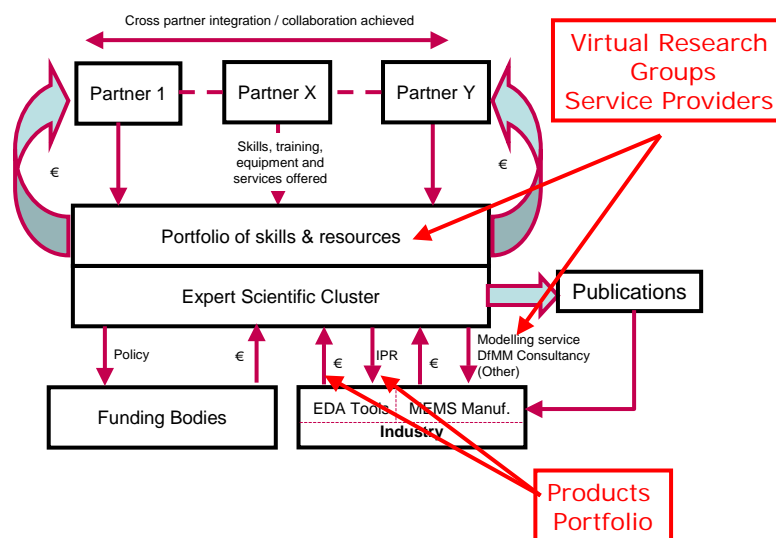
Cross-partner Integration/Collaboration



Virtual Research Institute

- Single point of contact access to key DfMM players in Europe
- Combination of individual expertise and resources
- Open to new partners with additional expertise
- Advantages:
 - For users: One-stop shop
 - For members: No replication of existing resources

Service Provider / Products Portfolio



Virtual Research Groups (VRGs)

- Several partners working together as one:
 - Acting as **SERVICE PROVIDERS**
 - Co-operate in areas of common interest
 - Start new areas of research when combined expertise is required
 - **Response to industry requirements**
 - Sharing common design tools:
Dissemination route for EDA vendors

Current VRGs

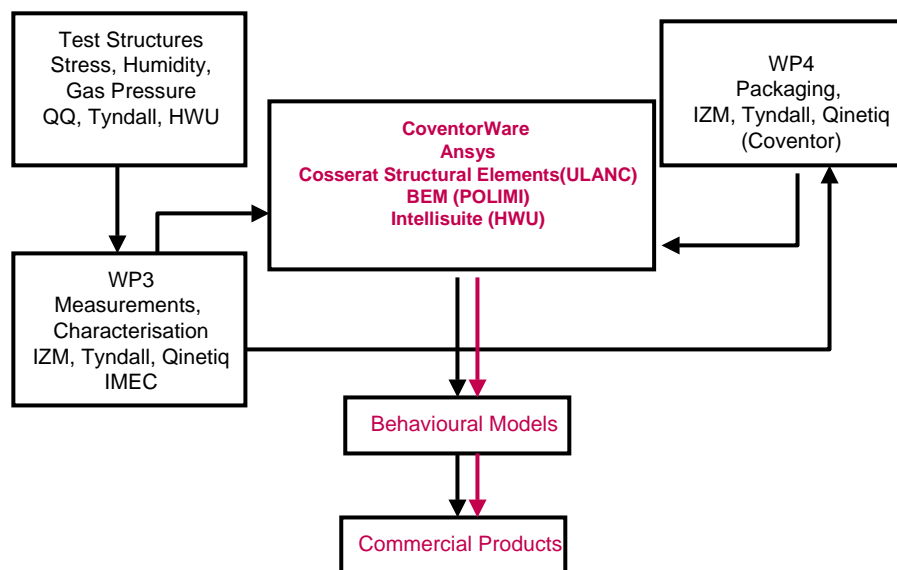
1. Simulation of Damping in MEMS in the Whole Working Pressure Range
2. Investigation of the Interaction of Electromagnetic Waves
Finite Difference Time Domain Method
3. Methodology and High-level Design of Failure Modes:
Micromotors and Thermal Actuators
4. Measurement, Modelling Simulation of Mechanical
Properties of MEMS
5. Microchannel Modelling Characterisation and Fabrication
6. Microfluidics Flowpaths in BIOMEMS
7. MOEMS and Multi-physics Coupling
8. Surface Effects in Metal to Metal Switches
9. Fault modelling and System simulation
10. Modelling Methodologies For Packaged MEMS

Current VRGs (2)

	LANCASTER CITY UNIVERSITY	Tyndal	HERIOT WATT UNIVERSITY	QinetiQ			ULg	UNIVERSITÄT SAKSEN	UNIVERSITY OF SHEFFIELD	CCLRC	ITEM
1	X						X			X	
2				X			X				
3			X							X	X
4		X				X			X		
5		X	X			X			X	X	
6									X		
7					X		X			X	
8		X	X		X				X		
9					X			X		X	
10	X	X	X	X			X			X	X

1: +Coventor 3: +IMEC

Commercial Route Example (VRG 10)



Services/Products Portfolio

- Services:
 - Design/Modelling Service
 - Consultancy
- Products
 - IPR
 - In-house design/modelling tools developed by VRGs
 - Commercial route: License to EDA vendors