

**IST-2003-507255 FP6 Network of Excellence “Design for Micro & Nano Manufacture (PATENT-DfMM)
Technical Activities Launched to Sept. 2004**

Project	Partners	Workpackage	Duration	Value	Objectives and Strategic Deliverables
DfT for Biosensor and for Biosensor Interface	Lancaster University, LIRMM, MESA, Twente	1	Oct 2004 – Jan 2005	22K	<ul style="list-style-type: none"> ➤ New collaboration aiming to build distributed critical mass of researchers in DfT integration in bio-chemical MEMS. ➤ Proposal preparation for national / EU funding ➤ Services for Virtual Lab in Test Engineering.
Design for Testability of Micro-Electronic Fluidic Arrays	MESA, Twente LIRMM	1	Oct 2004 – Dec 2004	3K	<ul style="list-style-type: none"> ➤ Travel grant to help partners to launch of common actions in 2005
Quality Factor measurement and reliability for MEMS resonators	Universite Paris-Sud Lancaster University, Qinetiq	1	Oct 2004 – Jan 2005	18K	<ul style="list-style-type: none"> ➤ A study involving a new collaboration to deliver a key skill base for a DfMM methodology for resonance based MEMS
MEMS Testing through Bias Superposition	Lancaster University LIRMM Qinetiq MESA, Twente	1	Oct 2004 – Jan 2005	22K	<ul style="list-style-type: none"> ➤ New collaboration into an interesting possibility for MEMS built-in-Test ➤ Potential for a new distributed collaborative group ➤ New proposal preparation ➤ Initial joint publication
Benchmarks for MEMS testing	LIRMM	1	Oct 2004 – Dec 2004	3K	<ul style="list-style-type: none"> ➤ Foundation for a service for the Virtual Lab in Test Engineering
Modelling and testing of microengineered cooler for microelectronics packaging	HWU CCLRC Budapest University Of Technology NMRC	2	Sept 2004 – January 2005	31K	<ul style="list-style-type: none"> ➤ New collaboration aiming to build Distributed critical mass of researchers in thermal & uFluidic simulation technology ➤ Capability for the Virtual Lab in Simulation & Modelling.
Mechanisms of formation of preferential flow paths in microcirculation vessels for BIOMEMS	Warsaw University of Technology CCLRC	2	Sept 2004 – Jan 2005	8.2K	<ul style="list-style-type: none"> ➤ Visits from WUT to Daresbury to advance State-of-the-art
Review of optical simulation and modelling techniques for MOEMS	Centre Spatial de Liege Institute Of	2	Sept 2004 – Jan 2005	13K	<ul style="list-style-type: none"> ➤ Compilation of State-of-art in the field ➤ Compilation of partner skills portfolio for Virtual Laboratory

	Microtechnologies, Bucharest Fraunhofer IZM, Berlin				
Simulation of the stiction effect in the metal-to-metal resistive contact occurring in MEMS switches	Institute of Microtechnologies, Bucharest, NMRC Heriot Watt University, Warsaw University of Technology	2	Sept 2004 – Jan 2005	21K	<ul style="list-style-type: none"> ➤ Integration of partner skills ➤ Advance in the field ➤ Simulation service to industry (virtual lab)
Fault Modelling and System Simulation of Flow-FETs	MESA, Twente CCLRC Institute Of Microtechnologies, Bucharest	2	Sept 2004 – Jan 2005	19K	<ul style="list-style-type: none"> ➤ Joint FP6 / FP7 proposal ➤ Joint publication ➤ Web-site area ➤ Collaborative service to the Virtual Laboratory – Simulation & Modelling
Methodology to assess the impact of packaging on MEMS components	Qinetiq Lancaster University, NMRC, Heriot Watt University, Politecnico Di Milano, Fraunhofer IZM, Munich and IZM, Berlin.	1,2,3,4	Sept 2004 – Jan 2005	118K	<ul style="list-style-type: none"> ➤ Flagship project for year 1 ➤ Cross WP project ➤ 1st steps towards a new approach to design & network capability
Reliability of M(O)EMS in harsh conditions	Centre Spatial de Liege Universite Paris-Sud Fraunhofer IMS,Dresden Budapest University of Technology IXL Fraunhofer IZM, Munich, Institute Of Microtechnologies, Bucharest	3	Sept. 2004 – Jan 2005	44K	<ul style="list-style-type: none"> ➤ New application for funding ➤ Critical distributed mass achieved in the field ➤ Portfolio of services for the Virtual Laboratory in Reliability Engineering
Reliability of MEMS basic movable structures	Institute of Microtechnologies,	3	Sept. 2004 – Jan 2005	57K	<ul style="list-style-type: none"> ➤ Integration of teams ➤ State-of-art review & publication

	Bucharest. IMEC Universite Paris-Sud NMRC, Fraunhofer IMS, Dresden LAAS, Toulouse Politecnico Di Milano Warsaw University of Technology Budapest University of Technology University of Lancaster				➤ Service portfolio for the Virtual Laboratory in Reliability Engineering
Methodology and high level design of failure modes of MEMS	IMEC Heriot Watt University LAAS, Toulouse. Lancaster University	3	Sept. 2004 – Jan 2005	37K	<ul style="list-style-type: none"> ➤ Development of an FMEA service ➤ Critical mass in field of industrial demand ➤ Joint publication ➤ Service portfolio development
Input for materials data bases	All WP3 partners	3	Sept. 2004 – Jan 2005	45.5k	➤ Collection & integration of know-how for web-based database accessible through the Virtual Laboratory in Reliability Engineering
Failure mode database	Heriot Watt University	3	Sept. 2004 – Jan 2005	9.5K	➤ Collection integration of data into a web-based data base to support the Virtual Laboratory portfolio in Reliability Engineering
MEMS testing by electro-thermal excitation	LIRMM Budapest University of Technology TIMA, Grenoble MICRED, Budapest	7	Sept 2004 – Jan 2005	18K	➤ Support to the SME “MICRED” develop IPR that will be made available to the PATENT-DfMM NoE
Scoping study for future programme to “Demonstrate a methodology for reliable, packaged of Micro and Nanosystems”	Qinetiq Lancaster University, IMEC, NMRC, Fraunhofer IZM, Berlin Politecnico di Milano	7	Sept 2004 – Jan 2005	20k	➤ Seed corn funding for the development of a new proposal for funding to demonstrate a DfMM methodology on a key product.

MOEMS Packaging in harsh environment Phase 1 Study	CSL	4	Sept. 2004 – Jan 2005	12.5k	➤ Development of a core skill for the Virtual lab in Package Engineering
FEA and modelling of IMS packaging structures using ANSYS	ULAN Fraunhofer IZM	4	Sept. 2004 – Jan 2005	12.4K	➤ Visits between the two institutes ➤ Development of a core skill for the Virtual lab
Packaging Failure Mode Database	IMEC	4	Sept 2004 – Jan 2005	8.5K	➤ Key resource for the Virtual lab.
Investigation of Laser Based Processes for MEMS Assembly and Packaging	Heriot Watt University IMEC Lancaster University	4	Sept. 2004 – Jan 2005	35K	➤ Development of a core skill for the Virtual Lab in Package Engineering ➤ New collaborative team.
Packaging Material Parameter database	Budapest University of Technology	4	Sept. 2004 – Jan 2005		➤ Key resource for Virtual laboratory in Package Engineering