

## NoE PATENT-DfMM "MEMS Packaging Roadmap" Project

The Network of Excellence "Design for Micro & Nano Manufacture (PATENT-DfMM)" is planning to set up a roadmap on MEMS packaging. Two initial workshops will be held in Q1/2006 to assess industry needs and discuss which research work the project should target for the next

two years.

1<sup>st</sup> workshop: HWU Edinburgh, Scotland: planned for end Jan 2006

2<sup>nd</sup> workshop: FhG-IZM Berlin, Germany: planned for Feb/Mar 2006

Both workshops are open to the public and especially industry participants are encouraged to join the dis-

cussion. More information will be available on the PATENT-DfMM website [www.patent-dfmm.org](http://www.patent-dfmm.org)

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## Further DfMM R&D Projects Funded

Being an FP6 Network of Excellence, PATENT-DfMM has a very flexible approach to distributing budgets within the project. In an annual (internal) review, which is supported by the Industry Advisory Board (IAB), priorities for the next period will be set. Internal calls for project proposals will then be launched throughout the year. The following internal projects have been recently approved for funding as part of the PATENT-DfMM research and integration activities:

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### Micro and Nano Technology - Engineering, Business and Society (MNT-EBS) Course Development (WP 5)

To develop a cross-disciplinary course in MNT (DfMM, Business and Ethics).

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George Bell

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### Development of a MEMS testing tutorial (WP 5)

To pull together MNT test material from 3 partners and turn it into a tutorial.

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### Proposal in support of an SME working in the field of Compound Semiconductor Technologies within the design and testing of a MOEMS (WP 7)

To design, manufacture and test a fully integrated and packaged optical microengineered encoder. The project forms a service to an external SME.

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### Database Activities (WP 4)

To establish on-line databases for Test structures for microsystems and microsystems packaging, Packaging capabilities, and Packaging solutions. In addition the databases on Materials and Failure Modes will be modified to allow packaging materials and package related failure modes to be included. The new databases will be constructed taking account of future integration/ inter-linking with databases on materials, instrumentation and failure modes.

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### Continuation of Biosensors/BioMems fluidics project (WP 1)

To develop test strategies for bio-mems platforms to detect key failure and degradation modes.

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University of Lancaster

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### Motionless accelerometer testing (WP 1)

Production testing of low-cost accelerometers using electrical only stimuli.

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### Round Robin modeling study (WP 2, 4)

To investigate and model the key trade-offs relevant to die attach adhesives for packaging/ CoB assembly of stress-sensitive MEMS devices. Specifically the trade-off between CTE, stiffness (modulus) and thickness, on package-induced thermo-mechanical stress. The project seeks to develop benchmarked and validated models for MEMS packaging, including poorly matched assemblies.

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More information will be published on our website [www.patent-dfmm.org](http://www.patent-dfmm.org)

## DfMM Contact

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Information Society  
Technologies

The NoE Patent-DfMM aims to establish a collaborative team to provide European industry with support in the field of "design for micro nano manufacture" to ensure that problems affecting the manufacture and reliability of products based on micro nano technologies (MNT) can be addressed before prototype and pre-production.



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