ASSEMİC, Marie Curie - Training by Research Network

Events organized in the frame of the FP6 Marie Curie Network

ASSEMİC
Advanced Handling and Assembly in Microtechnology
(Project MRTNCT 2003-504826)

www.assemic.net

Coordinator: Prof. Dr. Werner Brenner, from ISAS-TU Vienna


ASSEMİC Project, coordinated by Prof. Dr. Werner Brenner, from Institute of Sensor and Actuators Systems – Vienna University of Technology, is devoted to training and research in handling and assembly at the micro-dimension, involving advanced methods and tools and providing a multidisciplinary, complementary approach.

The project, started in January 2004, is organized in five objectives which address micro and nanotechnology, areas of strategic interest in the Thematic Priorities of FP6:

✓ New tools and systems for ultra-precision positioning accuracy (micro and nano range) with improved performance
✓ Innovative tools for micro handling and assembly
✓ Advanced control processes and strategies for micro-handling and assembly
✓ Methodology for micro-handling and assembly in special applications or conditions
✓ Industrial production issues and manufacturability of assembled MEMS

These objectives are realized by common research of the 14 partners involved (from 10 European countries) and by training and transfer of knowledge activities which assist the young early stage (ESR) and experimented appointed researchers (ER) in the developing of their professional careers.

The project propose a general approach, where all the applicable technologies and related applications will be covered, from micromanipulation for biological application to artificial intelligence based control systems, including strategies of design for assembly, study of material interactions between tools and components. The fellows have a unique chance of being trained and getting a wide perspective of all the practical needs, applicable technologies and classical, as well as extended, non conventional, applications of micromanipulation.

Two training events were organized at the end of 2004:

• Open Academic Seminar organized by ISAS-TU Vienna, November 4-5, 2004, TU Vienna. After an introduction of The FP6 Marie Curie Research Training Network ASSEMİC, each appointed ESRs and ERs presented their previous experience and the responsibilities within the network, their contribution to the ASSEMİC tasks, milestones, deliverables and training requirements.

MEMS Handling and Assembly, Markets and Applications, Technology Transfer lecturers were presented.

• 1st Summer School (in reality a "Winter School"), was organized by the training manager (FSRM) and it took place at Neuchâtel, December 6-8, 2004. The course lectures were on Handling and Assembling of MOEMS (topics: Overview of MOEMS, Optical Constraints, MEMS Constraints, Active Alignment, Passive Alignment). All appointed ESRs and ERs fellows participated at this event. It was a good opportunity to meet each others, to establish common research program and to make new friends!

In the period 14-15 March, the Annual Meeting was organized by Scuola Superiore Sant’Anna in Pontedera (Pisa). Progress of the common research, recruitment, training, dissemination and financial issues were discussed.

At the Training Workshop, supervised by the Training Manager: Annette Locher, from FSRM, each appointed fellow presented their work within the ASSEMİC project.

In the last day of the meeting Scuola Superiore Sant’Anna in collaboration with the partners of the project ASSEMİC organized an Info Day with the participation of a number of Italian companies.

After the welcome of Prof. P. Dario from SSSA, the ASSEMİC project was introduced by the coordinator, Prof. Dr. Werner Brenner, from ISAS-TU Vienna. Different partners of ASSEMİC network presented their work focused on technological achievements for micropositioning and microassembly in microtechnologies and exchange information with Italian companies about new frontiers and opportunities in micro-nanotechnologies. Novel solutions and concepts were discussed. PSV spin-off creation model and its relationship with Italian companies were presented.

All participants had the opportunity to visit an exhibition prepared in the form of a „Road Show on handling and assembly“, organized by the PR/Dissemination Manager, Prof. G. Kiriakidis, from IESL-FORTH-Heraklion. The same “Road show” with exhibits of components and achievements from all partner Institutions is now ready to travel to various selected European events in an effort to diffuse partner’s technologies and display the ASSEMİC achievements to the open public as well to specialists interested on microhandling and assembly techniques.

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