



**A Customer Support  
Centre for MOEMS  
MOEMSC IST-2001-33444**



## COORDINATOR

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## PARTICIPANTS

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- Scuola Superior di Studi Universitari e di Perfezionamento Sant'Anna, Pisa, Italy,
- Applied Research and Communications Fund, Sofia, Bulgaria,
- CSEM, Neuchatel, Switzerland,
- Institute of Electron Technology (IET), Warsaw, Poland

## OUR ROLE IN THE PROJECT

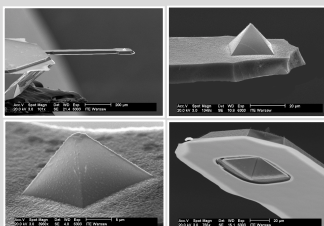
IET as a member of the MOEMS Competence Centre groups specialists able :

- to assess the "state of the art" and advise on the applicability of a microsystems solution
- conduct feasibility studies and the evaluation of new product concepts
- design application specific products
- produce, or access, fabrication of prototypes and trial devices
- provide, or access, the route to mass production.

IET competence is focused mainly on integration of different silicon technologies such as technology of photo- and radiation detectors, silicon micromachining and CMOS integrated circuits. The main task of the Institute is to promote in Polish and C&E European industry new opportunities created by dint of joining of European scientific Community.

## RESULTS

Within the first year of the Project (started 1<sup>st</sup> of January 2002), Institute of Electron Technology (IET) has established links with partners and collected detailed information about their expertise and competence. Participating in EUROPRACTICE networking events, IET has initiated co-operation with other Competence Centres, Design Houses and Foundries. This effort, combined with IET own expertise allowed us to form an offer for Industry. In parallel, contacts with industry and with academic institutions has been initiated. As a result, even in this short, initial period first serious industrial inquiries and even orders has been obtained.



Optical nano-probe (IET)



SOI sensor on quartz



Micro-Spectrophotometer



Optical micro-switch 1x8

## PROJECT DESCRIPTION

MOEMS CENTRE is a project organised on EUROPRACTICE platform, focused on MOEMS technology.

EUROPRACTICE is an European organization which helps users to take their ideas from concepts, through studies and design to manufacturable, tested and packaged products by opening access to Design House and Competence Centres, and Manufacturers.

A microsystem is a miniaturised system comprising several functions such as sensing, signal processing and actuating. Microsystems can make existing products smaller, cheaper, better and more reliable but also facilitate the creation of entirely new products. In particular, MEMS (Micro Electro- Mechanical Systems) combine Electronic and Mechanical functions in one microsystem while in MOEMS the Optical functions are added.

MOEMS & MEMS technology to even greater extent than microelectronics gives opportunities for exciting, interdisciplinary applications; however broader exploitation of its advances requires often introduction of new diversified processing techniques

In most cases it is not practical and not even feasible to develop all processes required for MEMS/MOEMS technologies in one R&D institution. Besides, interdisciplinary approach requires diversified expertise from different sciences. Both observation implies necessity of co-operation between institutions specialising in different areas of science. Thus, MOEMS CENTRE forms Competence Centre which is a collection of institutions with complementary expertise providing access to technologies and knowledge required for advanced MEMS & MOEMS devices.

A first objective of this programme is to promote the industrial value of MOEMS mainly in the small and medium sized companies.

A second objective of the programme is to introduce MOEMS at an industrial level in new market segments. It is fundamental to help industrial companies involved in Telecom and Peripherals, Automotive, Consumer Goods, Environment, Medical & Biomedical, to take advantage of the potentialities offered by MOEMS.

A third objective is to make the access to MOEMS technologies easier by connecting potential customers to foundries.

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