

REASON PROJECT IN FP 5

REASON - Research and Training Actions for System on Chip Design

The project consists of 13 workpackages, covering all important areas of micro-electronic design and microsystems.

ROMANIAN PARTICIPANTS

- "Politehnica" University of Bucharest - contractor (www.pub.ro);
- IMT-Bucharest - subcontractor (www.imt.ro);
- ICIA, Romanian Academy - subcontractor (www.academiaromana.ro).

ROMANIAN CONTACT PERSON

Prof. Dan Dascalu (dascalu@imt.ro)

The goal of this project is to facilitate integration of the academic and research institutions of Central and Eastern Europe working in the field of microelectronics into the mainstream R&D activities going on in EU countries and to minimise the consequences of the microelectronic skills shortage in Europe. To achieve this goal, the project aims at raising the level and the number of highly-skilled researchers and designers in CEE countries. This will be achieved by training courses, workshops, development of educational VLSI chip and other actions organised together with academic and research institutions from EU countries which have experience in industrially oriented research and links with the industry. The actions of the project include also analysis of the needs of local industries in the countries of Central and Eastern Europe as well as training and promotional actions addressed to local SMEs.

Politehnica University of Bucharest coordinates the Workpackage 7 having the aim to establish an environment for training in design of microelectronic chips based on

unconventional architectures such as reconfigurability based on genetic algorithms, artificial neural networks, fuzzy logic controllers, cellular automata.

This year under the frame of WP 7 were organized three courses by "Politehnica" University, one tutorial by Eindhoven University of Technology, one day seminar by Slovak University of Technology.

PUB activity in the REASON Project in 2002 was focused in eight Workpackages (WP1, WP6, WP7, WP8, WP10, WP11, WP12, WP13). PUB had completed actions in eight WP's, and worked for defining or starting future actions in twelve WP's.

Main completed activities:

a) Teaching activities: 3 courses under WP7, 1 course under WP12, 1 course under WP11, 2 tutorials under WP6, 1 tutorial under WP8, 1 Show under WP11. The teaching activities benefited of a large audience following the planned topics without problems.

b) We have designed Romanian web page having two data bases for automated collection and processing of data related to enterprises interested in REASON activities (courses, tutorials, conferences, workshops and distance learning system).

c) Dissemination by publications, web page dedicated to the project, discussion group for WP12, fliers, posters, Micro and Nanotechnology Bulletin, co-organiser at the REASON workshop

"A REASON for training" Marriot, Bucharest, show room at PUB, exhibition at CAS.

Nanosystems and Nanotechnology Workshop

"NEMS (Nano electro mechanical systems) for biomedical applications" (C. Moldovan, E. Franti and M. Dascalu) presented by E. Franti at Nanosystems and Nanotechnology Workshop. The workshop was organized by the Institute of Informatics of the Slovak Academy of Sciences under the 5FP project IST-2000-30193 REASON (Research and Training Action for System on Chip Design) on December 6, 2002, in Bratislava, Slovakia. (The goal of this project was to put together researchers from the middle Europe for exchanging experiences and results in the nanosystems and nanotechnology field and to create a nanoconsortium in the middle Europe.)



The programme of the workshop for 39 participants from Slovakia, Poland, Romania, Ukraine was divided into three parts:

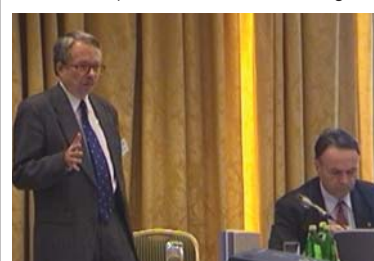
I. Lectures from the Slovak institutions (Institute of Informatics, Institute of Physics, Institute of Electrical Engineering, Polymer Institute of the Slovak Academy of Sciences, Slovak University of Technology, Bratislava) aimed to: nanotechnology and their applications in novel optoelectronics devices, e-beam lithography for micro- and nano-technology, magnetic nanoparticles for information technology, materials for new generation of CMOS devices and preparation of magnetic nanoparticles.

II. Lectures from the REASON project partner's institutions from Poland, Romania, Ukraine aimed to: Microelectronics in Cracow (University of Mining and Metallurgy), NEMs for biomedical applications (Polytechnica University of Bucharest), Diagnostic of micro/and nanosystems using scanning probe microscopy (Wroclaw University of Technology).

III. Panel discussion "Nanotechnology partnership" chaired by Ivan Kostic from the Institute of Informatics with the invited panelists: I.W. Rangelow (University of Kassel), T.P. Gotszalk (Wroclaw University of Technology), A. Kos (University of Mining and Metallurgy, Cracow), E. Majková (Institute of Physics), K. Fröhlich (Institute of Electrical Engineering), J. Kováč (Slovak University of Technology). The panel discussion was aimed to future possible cooperation in the 6FP programme and was followed by excursion to the E-beam lithography laboratory at the Institute of Informatics (www.ui.sav/ebli/index.html).

"A REASON for Training", Workshop in Bucharest

The Workshop "A REASON for Training" organized in the consortium of REASON (Research and Training Actions for System on chip Design) - an IST project (IST - 2000 - 30193) in the 5th Framework Programme on October 11, 2002. The workshop



Prof. Wieslaw Kuzmics (Warsaw University of Technology) left and Prof. Dan Dascalu ("Politehnica University of Bucharest")

was a satellite event of the Conference "Information Society Technologies (IST) for BROADBAND EUROPE", which was held at Marriot Grand Hotel, Bucharest ROMANIA, October, 9-11

The workshop was organized by European Commission, Warsaw University of Technology (Prof. Wieslaw Kuzmicz - co-ordinator of the REASON project), "Politehnica" University of Bucharest (Prof. Dan Dascalu) and National Institute for Research and Development in Microtechnologies - IMT-Bucharest.

The workshop was attended by 34 participants coming from Romanian enterprises, universities and research institutes and abroad.

The aim of the workshop was to discuss several controversial issues concerning directions and methods of education and research in microelectronics in the countries of Central and Eastern Europe (CEE countries). These issues include:

- role of microelectronics in economic conditions of CEE countries
- directions of training and research
- future scenarios: what training, who will train, who will be trained?

Following the main topic of the conference (Information Society Technologies for Broadband Europe), special attention was paid to new IT-based teaching methods

and tools such as e-learning and Internet based training. Their advantages and shortcomings was presented and discussed.

Full presentations have been done by Prof. Wieslaw Kuzmics (Warsaw University of Technology), Dr. Dieter Wuttke (Technical University Ilmenau), Prof. Gabriel Dima ("Politehnica" University of Bucharest).

The workshop benefited of Mrs. Gisele Roesems (REASON project officer) presence and comments.



Mrs. Gisele Roesems, European Commission



Prof. Dan Dascalu, Dr. Dieter Wuttke (Ilmenau Technical University) and Mrs. Gisele Roesems