

# nano-ε news

## EDITORIAL



*Dr. Fred van Roosmalen*

Dear Reader,  
Welcome to the first issue of the ENIAC quarterly magazine. A first time always has something magic about it. It is the opening of a new way, the promise of a vague but exciting future. Probably in one year from now we will look back at this first attempt, and smile at its naivety, but we have to start somehow.

We hope the ENIAC quarterly will give you more visibility on what is going on in the European Technology Platform on Nanoelectronics. Technology Platforms are still in full development and the subsequent establishment of Joint Technology Initiatives will probably require quite radical changes. Till now, I am afraid, we have privileged the organisation aspect over the communication one. This electronic magazine is intended to make all ENIAC Stakeholders aware of what is going on, and will be complemented by a short, concise monthly report. We apologise for the delay in starting this initiative, but we can promise you one thing: we will do our best to keep improving.

*Fred van Roosmalen,*  
*Director Technology Partnerships,*  
*Philips Semiconductors*  
*Chairman of the ENIAC Support Group*

## ENIAC AGENDA

**SEPTEMBER 22**

Joint SRA Workshop with MEDEA+  
- Montreux - open participation

**OCTOBER 12**

ENIAC Workshop on JTI Governance

**NOVEMBER 21-23**

IST Conference - Helsinki

**NOVEMBER 30**

ENIAC Forum - Monaco - open participation

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# Forum of Stakeholders

## The 3rd Meeting of the Forum



*Mr. Dirk Beernaert, Head of Unit Nanoelectronics and Photonics, Information Society & Media DG, European Commission*



*Prof. Gilbert Declerck, President and CEO of IMEC*



*Dr. Wolfgang Ziebart, Vice Chairman of the ENIAC Steering Committee*

**The 3rd ENIAC Forum of Stakeholders Meeting was held in Leuven, at the IMEC premises, on June 26, 2006.**

**T**he Forum of Stakeholders currently represents 37 major European companies and research centers, also including MEDEA+ and the ENIAC Scientific Community Council. Mr. Dirk Beernaert, Mr. Michel Hordies and Mr. Heico Frima represented the European Commission at the meeting, Mr. Ben Ruck, the ENIAC Mirror Group. The meeting was opened by Prof. Gilbert Declerck, IMEC's Chief Executive Officer and Chairman of the MEDEA+ Scientific Committee. Professor Declerck outlined the role of the recently established ENIAC Scientific Community Council in establishing a link between the European scientific community and industries involved in Nanoelectronics. Major issues on the agenda were the 7th Framework Programme and the developments of the Joint Technology Initiatives:

Mr. Dirk Beernaert, Head of Unit Nanoelectronics and Photonics at the Information Society & Media DG of the European Commission, informed the audience on the expected approval time schedule for the 7th Framework Programme, whose first calls might start by end 2006. As for the JTI, a decision is expected by mid 2007. With respect to JTI, Mr. Gérard Matheron, Director of the MEDEA+ Office and responsible for the ENIAC Working Group "Organisation" gave an overview of the required administrative and legal frame currently under preparation for both ENIAC and ARTEMIS in view of the JTI. Both platforms should be incorporated as non-profit organisations: ENIAC activities are expected to be integrated in a legal structure also representing industry in JTI, with the MEDEA+ Office supporting it. Finally several voting sessions took place:

new applications for ENIAC were proposed, discussed and officially accepted by the Forum of Stakeholders. This concerns three companies (Alcatel Vacuum Technology, QinetiQ and Applied Materials Israel) and three National platforms (FEEI, Genesis and Micro - and Nanoelectronics Network). It is the first time that National Platforms enter the ENIAC Forum of Stakeholders: their access is considered essential in order to allow SMEs to participate and contribute to ENIAC's goals and activities. The proposal, presented by Dr. Ziebart, President and CEO, Infineon Technologies, to admit SOITEC, already a member of the Forum of Stakeholders, into ENIAC's Steering Committee, was also accepted by the Forum. This may contribute to increasing visibility of Material Suppliers within the ENIAC organisation and also represents a showcase for the success of a former SME.



## Next Meeting

**Next Meeting of the ENIAC Forum of Stakeholders will take place on November 30 in Monaco, in connection with the first ENIAC Annual Forum.**

# Welcome to New Partners

## ENIAC is glad to welcome the new Members of the ENIAC Forum of Stakeholders\*:

### ▶ ALCATEL VACUUM TECHNOLOGY



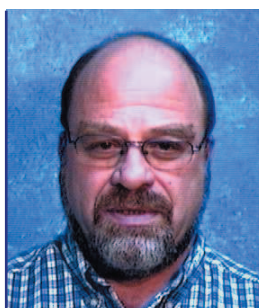
*Mr. Roland Bernard*

**Alcatel Vacuum Technology** is an equipment supplier with 900 employees worldwide, with annual sales of Euro 170 M and investment of around 6 % in R&D. Its core business is vacuum technology. Its products catalog includes vacuum pumps, vacuum gauges, leak detectors, all carrying the **Adixen** logo as a brand name. Alcatel Vacuum Technology is also involved in the MEMS market through its subsidiary **Alcatel Micro-Machining**

**Systems** (AMMS) providing DRIE tools.

The company is already actively cooperating with MEDEA+ and EURIMUS: **its representative in ENIAC is Mr. Roland Bernard, Director Advanced Systems and Business Development.**

### ▶ APPLIED MATERIALS ISRAEL



*Mr. Avi Simon*

**Applied Materials Israel** is an Israel - based supplier of Process Diagnostics and Control equipment for the semiconductor industry, with more than 1,000 employees in Israel and several hundreds worldwide, annual sales of several \$100M and over \$100M annual investment in R&D. The technology span includes DUV, SEM, FIB - part of which is carried out at a fully owned subsidiary in Munich (ICT). There are two additional Applied Materials P&L

entities in Europe: the Ion Implanters Facility in Horsham(UK) and an equipment refurbishment facility in Crolles (FR), also carrying out cooperation activities with IMEC. **The representative in ENIAC is Mr. Avi Simon, responsible of the New Business Division.**

### ▶ QINETIQ



*Dr. Tim Ashley*

**Qinetiq** is a UK - based science and technology provider with 11,000 employees and an annual turnover in excess of EUR 1.5 Billion. Within its R&D activities, the MNT division is represented with 80 employees. The company is a high-tech technology provider for defence, security, and commercial applications (including communications, energy, health and environment). **Its representative in**

**ENIAC is Dr. Tim Ashley, Technology Manager for the Micro-Nano Technology Labs.**

### ▶ FEEI



*Dr. Klaus Bernhardt*

**FEEI**, Fachverband der Elektro- und Elektronikindustrie, is a representation of interests aimed at supporting Austrian electrical and electronics industries. FEEI has established a Working Group "R&D" with special focus on the European Framework Programme and is preparing an "Austrian contribution" to the ENIAC Strategic Research Agenda through specific activities of the group "Electronic Components". FEEI has been endorsed

by the Austrian representative in the ENIAC Mirror Group as the national platform for Nanoelectronics. **Its representative in ENIAC is Dr. Klaus Bernhardt, responsible for industrial sectors with special focus on electronic component and semiconductor industry, R&D, technical standards and SMEs.**

\* Profiles refer to the organisations whose participation in ENIAC has already become effective.



# ENIAC Scientific Community Council

## The Council takes shape

**The Scientific Community Council was officially established on March 31, 2006.**

**A**fter preparatory meetings in Brussels (March 2005) and Leuven (October 2005), over 40 participants from 19 countries gathered on March 31, 2006 at the ENIAC Office in Paris, to formally install ENIAC's Scientific Community Council (SCC). The Nanoelectronics scientific community is an essential stakeholder in the realisation of ENIAC's ambition and objectives.

The SCC is a high-level body advising ENIAC's Steering Committee: its mission is to establish, strengthen and optimise the interactions between Europe's scientific community and the industry involved in Nanoelectronics. The call for participation in the SCC received an enthusiastic response; currently the SCC consists of 23 representatives from member states (all European countries, except Luxembourg and the Czech Republic), 3 representatives from associated member states (Israel, Switzerland and Turkey), 8 representatives

from research organizations (CEA-LETI, CNRS, CSEM, Fraunhofer Gesellschaft, IBM Zürich, IMEC, Tyndall and VTT) and 11 scientific representatives from the six ENIAC Domain Teams.

The SCC has given itself an ambitious agenda: it plans to assure an efficient bi-directional communication between the industrial actors and the scientific community, and to provide guidance in creating synergies between the educational system in Europe and the industrial "knowledge roadmap", while also contributing to enhance the visibility of the European nanoelectronics eco-system. There were two candidates for the position of Chairman of the SCC: Professor Patrick Dewilde (Delft University of Technology, The Netherlands) and Professor Enrico Sangiorgi (University of Bologna, Italy). After a formal election, organised in the course of May, Professor Dewilde was appointed as Chair of the SCC and introduced to the ENIAC Forum of Stakeholders on June 26. In order



*Courtesy of STMicroelectronics*

to coordinate the various SCC tasks, a Management Committee will now be put in place by the newly elected Chairman. One of the first priorities of the SCC will be to contribute to the updating of ENIAC's Strategic Research Agenda (SRA), which has been prepared and published in November 2005. Representatives of the Scientific Community Council participate in the activity of the various ENIAC Domain Teams, and the SCC will now prepare an overall strategic advice on the content of the Strategic Research Agenda.

## A challenging Mission

"Getting our act together! The European scientific community has a major role to play in the conception and development of modern Nanoelectronics, its technology, its applications and its societal impact. As a highly expert and diverse community we have the brains and the means to make crucial fundamental contributions in all aspects of our field, ranging from material science to system design, and to master unexplored technology for 'More Moore' evolution and especially the 'More than Moore' revolution.

The possibilities are endless, but require concerted effort for success. ENIAC is the appropriate vehicle to build on our strengths, our great institutes and our dynamic industry. The ENIAC Scientific Community Council should concentrate on giving our cooperation form by creating bonds, securing our participation in innovative programs, fostering scientific exchange and technological mutual support, defining and enhancing the role of the scientific community, so as to create a "European Research Space in Nanoelectronics" that is leading in the world."

**Prof. Patrick DEWILDE**  
Chairman of ENIAC SCC

## The Chairman

**P**atrick Dewilde received the degree in Electrical Engineering from the Katholieke Universiteit Leuven in 1966, and the Ph.D. degree from Stanford University in 1970. He became a Professor in Electrical Engineering at Delft University of Technology in 1977: in this capacity he has been Scientific Director of DIMES - the Delft Institute of Micro Electronics and Submicron Technology from 1993 to 2001, and again since 2005. Prof. Dewilde has been Chairman of the Dutch Technology Foundation STW from 1995 to 2004, and is presently Chairman of the Freeband consortium, a large Dutch research program in 4G technology. He has been project leader of major European projects in Design Automation and an advisor to the Dutch Government on several industrial projects (MEGA, JESSI, MEDEA, ITEA). In 1981 Prof. Dewilde was awarded the IEEE Fellowship for his work on scattering theory - work that has found its way into the GSM speech coding technology -, and in 1993 was elected a regular member of the Royal Netherlands Academy of Arts and Sciences. In 1998 he was General Chairman of the newly constituted DATE conference. Prof. Dewilde received several prizes for his scientific work and was recently elevated to the Knighthood of the Dutch Lion by the Dutch Queen Beatrix.



**Prof. Patrick DEWILDE**

# News

## Nanotechnology in Northern Europe (NNTE)

NNTE held its 3rd event in Helsinki on May 16-18, with more than 500 participants from 25 countries, and nearly 100 organisations involved in exhibitions and surrounding events. Livio Baldi presented ENIAC with a keynote speech in the opening session, together with such distinguished speakers as Sumio Ijima of NEC Research, and accredited with the discovery on Carbon Nanotubes, Dr. Bob Iannucci, SVP, Head of Nokia Research Center and Dr. Nick Hartley, Head of Unit Strategy&Policy at DG Research. ENIAC also participated in the press lunch afterwards. More information on the conference can be found at [www.nano.fi](http://www.nano.fi). Next year's conference, which changed its name to Northern Nanotech, will be held in Helsinki on March 27-29, 2007.

## The Austrian Presidency Conference on European Technology Platforms

The Conference was held in Vienna on May 4-5, 2006, under the joint sponsoring of Austrian Presidency of the European Union and of the European Commission, with the intention of bringing together for the first time a broad range of stakeholders and other relevant interested parties in European Technology Platforms. The Conference sought to draw lessons and conclusions, based on the to date experience of existing platforms, and to assess their role in boosting European competitiveness. ENIAC contributed with a presentation by Fred van Roosmalen in the Plenary Session on the second day, and with a stand in the exhibition area. A brochure to illustrate the Nanoelectronics Platform and posters were produced for the occasion.

## The 4th Meeting of Industrial Technology Platforms

The meeting was held in Brussels on July 5, coordinated by Mr. Robert-Jan Smits of DG Research. Commissioner Janez Potocnik opened the meeting, by recalling the results of Aho's report, which stress the importance of demand-driven innovation. Platforms should help, by identifying potential barriers and tools to remove them. The discussion, with the participation of representatives of six Directorates, focused on the key strategic role of lead markets, and on the actions to support them in the fields of regulations, standards, IP rights and public procurement. Platforms have been asked to contribute in identifying lead markets and all possible support actions.

## MIRROR GROUP MEETING

The representatives of the Commission expressed their support with regard to the ICT JTIs being established as soon as politically feasible i.e. immediately after adoption of the FP7 texts. The members of the Mirror Group were urged by the European Commission to send in their Letters of Support. As of today France, Germany, The Netherlands and Latvia have confirmed their support. As far as financial commitment by Public Authorities is concerned, delegates reminded the Commission that, due to national budgetary regulations, a multi annual financial commitment is expected to be often difficult to obtain, so that relevant commitment should be rather requested on a call basis. The Commission will perform an ex-ante evaluation and impact assessment for the JTIs. Two workshops will be held in early September on the ENIAC and ARTEMIS JTIs, the first one dedicated to content perspectives (ENIAC and ARTEMIS separately) and the other one on governance issues (common ENIAC/ARTEMIS meeting). JTI details should be finalised in Fall 2006, in order to be proposed for decision in 2007. The next joint ARTEMIS-ENIAC Mirror Group meeting is scheduled for September 21, 2006.

## OPENING OF THE ENIAC OFFICE IN PARIS

The ENIAC Office was opened in Paris. Its mission is to provide logistical, operational and organisational support to ENIAC and the European Technology Platform on Nanoelectronics, and to ensure information sharing and communication among the different groups participating in ENIAC. External awareness of the role of Nanoelectronics in the future development of Europe and about ENIAC's goals and activities should also be increased. Director of the Office is Selma Tedeschi. Set up of the ENIAC Office started in April 2006: the Office is now operational and acting as an Information & Communication centre for ENIAC Stakeholders and for external inquiries. Its first priority now is to establish an ENIAC Office web node and to organise the first ENIAC Annual Forum, both aimed at a wider dissemination of information on European Nanoelectronics.



**ENIAC OFFICE**  
 10, rue Blaise Desgoffe 75006 Paris  
 Tel.: 01 77 35 07 10 - 01 77 35 07 11

# Coming events

- **SCIENTIFIC COMMUNITY COUNCIL #4 MEETING** - SEPTEMBER 21, 2006, MONTREUX (CH)

- **ENIAC/MEDEA+ JOINT SRA WORKSHOP**  
SEPTEMBER 22, 2006, MONTREUX  
CONVENTION CENTER, MONTREUX (CH):  
The workshop will take place in connection with the ESSDERC Conference and focus on the revision of the ENIAC Strategic Research Agenda. Participation is open to all interested parties, registrations for the workshop can be made at the ESSDERC Conference secretariat: [esscirc-essderc@epfl.ch](mailto:esscirc-essderc@epfl.ch).

- **ENIAC WORKSHOP ON JTI GOVERNANCE**  
OCTOBER 12, 2006, ENIAC OFFICE, PARIS

- **IST CONFERENCE** - NOVEMBER 22, 2006, CONGRESS CENTER, HELSINKI:  
ENIAC will be present at the IST Exhibition with an information stand.

- **ENIAC FIRST ANNUAL FORUM** - NOVEMBER 30, 2006, MERIDIEN BEACH PLAZA, MONACO:



*Courtesy of Meridien Beach Plaza*

The event will be a privileged occasion for information sharing on ENIAC current activities and future developments and will also include a discussion panel. Participation is open to all interested parties, registration details will be available on the ENIAC web node soon.

- **FORUM OF STAKEHOLDERS MEETING**  
NOVEMBER 30, 2006, MERIDIEN BEACH PLAZA, MONACO.

- **FP7 LAUNCHING EVENT FOR INFORMATION MULTIPLIERS** - FEBRUARY 8-9, 2007, BRUSSELS:  
The event will be organised by the Information and Communication Unit of DG RTD in the Charlemagne Building, on the occasion of the First Call for proposals of FP7. Its aim is to give participants as complete a picture as possible of the Seventh Framework Programme, from its content to the conditions of participation, including information on the Joint Technology Initiatives.

- **TODAY IS THE FUTURE**

MARCH 7-18, 2007, BRUSSELS:

The exhibition, organised by the Information and Communication Unit of DG for Research, aims at triggering a generally positive attitude towards science and research in Europe, by showcasing European success stories in science and technology and remarkable achievements of EU-funded research projects. The event will be opened by high-level representatives of the German EU Presidency and the European Commission with an «Evening on European Research». The exhibition will be open to the public.

- **INC3** - APRIL 16-19, 2007, BRUSSELS:

April 16 will be the European Nanoelectronics Day, focusing on 7th FP, Eurela, EIT, ERC and National Programmes. On April 17 a press lunch will take place, including two commissioners, ENIAC, 3 regions and the German EC Presidency. A Nanoelectronics session is planned on April 17th.

## News from the Working Groups

### WG Organisation

The ENIAC organization in its present form is governed by the ENIAC Terms of Reference. In view of the planned developments which will bring together the EC, national states and industry in overall organizations, namely the Joint Technology Initiatives (JTI), far more structured governance rules are required. The first step required in order to establish the JTIs as Joint Undertakings is to incorporate the European Technology Platforms as legal entities. The ENIAC Working Group "Organisation" is already focusing its activities on this issue, and a further 3-month's legal work is expected to be needed in order to define the organisational and governance rules for the ENIAC JTI to be presented to the European Commission. The ENIAC Working Group will largely take into account the achievements of the ARTEMIS Working Group "Governance" and of their associated corporate lawyers, given the similarities of the two Joint Technology Initiatives in terms of structure and participation. The general principles for the governance of an ENIAC JTI were presented during the Forum of Stakeholders meeting in Leuven and the green light to proceed was given. A group of lawyers will now prepare Statutes for the Association of all participants expected to play a key role in the management of the future ENIAC JTI, such as major industrial groups and SMEs, National Technology Platforms, large research centres and academic associations. A Frame Agreement to be signed by all participants in future JTI projects will also be elaborated. Of particular importance will be the definition of rights and duties within the different groups composing the association, of the rules governing the chairman election process and the sharing of the financial cost for the organization.