

EPIC NEWS

The annual General Assembly of EPIC will take place on April 3, 2006. Please note this date in your planner! Your participation is needed to approve the annual accounts and confirm the strategy of the Consortium.

THE QUARTERLY EPIC NEWSLETTER FOR PHOTONICS

EDITORIAL

The Photonics Technology Platform: a Crucial Element in the Dynamic Growth of the European Economy

On 1st December 2005 I had the pleasure to take part in the launch of the European Technology Platform Photonics²¹. Industry and research representatives as well as policy makers jointly expressed their will to increase their cooperation on the EU level in this area. This event sends a very important signal that clearly shows that efforts are underway to create a common Strategic Research Agenda which will enable a strong European vision for optics & photonics sector. It will help to avoid fragmentation and thus fully underpin the European potential for leadership in this area. An integrated scientific approach is necessary for further dynamic industrial development.

The multidisciplinary character of photonic technologies - ICT, life sciences, health, security or nanotechnologies - makes them extremely important for improving the competitiveness of European economy, reinforcing the knowledge-intensive industry and therefore contributing to the success of the Seventh Framework Programme, FP-7, for Research and Development.

FP-7 is a core element for re-launching the Lisbon process and creating a knowledge-based society. In continuity with the Sixth Framework Programme, it will strengthen the cooperation within the European Research Area and contribute to its development. That is the aim of collaborative research carried out under the different thematic priorities. Moreover, the work of Technology Platforms and regional innovative clusters will be accompanied by Joint Technology Initiatives, designed to face the challenges of global competitiveness. In order to inject a high level of flexibility in the system, SME participation in both small and big projects should be adequately guaranteed. Special attention should be paid to high-tech SMEs and start-ups.

All these activities should contribute progressively towards the creation of the European Research and Innovation Area. This idea, foreseen already in the text of Lisbon Strategy, will contribute to a very close integration of research with innovation and convert the scientific knowledge into new commercial products.

In this context, exploring the borderless applications of light and the resulting applications over a broad range of industry sectors is of particular interest and could have potentially high leverage effects. In simple terms, it will be a crucial element contributing to the dynamic growth of European economy.

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Prime Minister of Poland (1997 – 2001)
Professor of power, processing, and environmental engineering



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European Photonics Industry Consortium

Photonics Technology Platform Starts Work on the Strategic Research Agenda

Following the launch of Photonics²¹ members of the Platform have been working on the Strategic Research Agenda for FP-7. The Strategic Research Agenda defines the priority areas for R&D funding. The research budget has yet to be defined, since on 18 January, European Parliament overwhelmingly rejected the agreement reached in December by Heads of State and Government on the EU's financial perspectives, agreeing with the Budgets Committee's assertion that it does not guarantee an EU budget for prosperity, competitiveness and cohesion. Continued negotiations offer some hope for an improvement in the R&D budget above the currently suggested value of 48 billion euros for the 5-year FP-7 programme.

The Strategic Research Agenda for photonics is being developed in 7 areas:

Working Group 1

Information & Communications

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Working Group 2

Industrial Production / Manufacturing and Quality

Contact: Dr. Sven-Silvius Schad

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Working Group 3

Life Sciences and Health

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Working Group 4

Lighting and Displays

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Working Group 5

Metrology and Sensors

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Working Group 6

Design and Manufacturing of Components and Systems

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Working Group 7

Photonics Education, Research and Training

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Deadlines for contributions to the strategic research agenda are tight, and the first completed draft will be delivered to the European Commission at the beginning of April. It is very important for the voice of EPIC members to be represented in this agenda. Please be sure to contribute to this document by contacting the responsible person in the thematic area that interests you.

EPIC has sent a CD-ROM with introductory material about the Platform and also about the Strategic Research Agenda to all members. If you need additional copies, please let us know.

All EPIC members are encouraged to join the Photonics Technology Platform. There is no financial cost associated with membership. You may access the membership application through this link:

http://web13.vdi.net-build.de/index.php?content=membership_form

Accord Proposal Scores 22 out of 25 Possible Points, Advances to Finalist Position

The ACCORD Proposal (Advanced Components Cooperation for Research and Development) has been evaluated by a panel of independent experts, and has passed all thresholds for funding. The ACCORD action proposes to create a new instrument for supporting industry-university interactions by putting advanced photonic components and systems in the hands of university research laboratories. This initiative is widely supported by EPIC members.

As the EPIC News went to press, we are waiting for details of a final decision from the Commission about the final negotiation concerning resources and the description of work for this initiative.

The Review Committee cited the potential impact of this proposal in the following words: "The need to perform this action at a European level is clearly justified; a critical mass of industrial participation is necessary for success. With only ten projects being funded in the proposed action, the short-term potential may be limited, but if the idea becomes self-sustaining, it will have an outstanding impact."

The ACCORD proposal team consists of SMEs, large enterprises, research institutions, and photonics associations. Six out of the eight team members: IMEC (coordinator), EPIC, Haute Ecole ARC, Perfos, SAGEM, and Wrocław University of Technology also belong to the EPIC organisation.

EPIC New Members

EPIC is pleased to welcome 4 new members who joined the Consortium in December 2005. They are:

CEDOVA B.V.

Optoelectronic Device Fabrication
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TECHNOLOGY

Acquisition complete: Antitrust authorities approve the takeover of ORGA by Sagem Défense Sécurité “Milestone for the entire smart card industry”

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The acquisition of the Paderborn-based smart card expert ORGA Kartensysteme by France's Sagem Défense Sécurité, a subsidiary of the SAFRAN Group, is complete, following approval of the deal by all necessary antitrust authorities. As a result, the global smart card market is seeing the emergence of a new major player with a new name – Sagem Orga.

Paris, December 5th 2005

“This alliance is an exciting step in strengthening the leading position of Sagem Défense Sécurité in the security market,” said Jean-Paul Jainsky, Executive VP and Director of the company's Security Division. “Moreover, Sagem Orga will leverage Safran's technological expertise to deliver cutting-edge technology solutions to customers in all sectors. The new unit will consolidate its leadership in the telecommunications, healthcare, banking and identification markets.”

The company will be led by Patrick Samier, Executive Vice President Strategy and Industry at Sagem Défense Sécurité, and Philippe D'Andréa, who will run operations.

Samier emphasized, “By joining forces, Sagem and ORGA have given birth to a major player – Sagem Orga. The strong support of our shareholder and the outstanding skills and dedication to customers of all our employees worldwide will be the key drivers of our future growth.”

Samier described today as a “milestone for the entire industry” and view the combination of the two companies as an “ideal strategic orientation for the future.”

About Sagem Défense Sécurité

Sagem Défense Sécurité is one of the high-technology companies in Europe's SAFRAN Group. It is the worldwide leader in fingerprint biometrics. The company is also a major actor in smart cards and secure terminals, onboard information systems for aircraft, navigation and optronics. Through the SAFRAN Group, Sagem DS is present on all continents. For further information, please visit www.sagem-ds.com.



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Victory Media Network awards Barco 18 million USD contract for LED displays in Victory Park, Dallas

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Over 46,000 Barco LED modules to be installed in both fixed and movable configurations, for Hillwood's new Victory Park development in Dallas.

Sacramento, CA, 16 December 2005 — Barco announced today that Dallas-based Hillwood, a Perot Company® and Hicks Holdings, have selected Barco to provide over 46,000 OLITE 510 outdoor LED modules for the new Victory Park development in downtown Dallas. In what will become one of the largest high-definition outdoor media installations worldwide, eleven individual LED displays will be constructed at Victory Park, one of the most significant master planned urban developments in the country. The Victory Media Network will include two fixed 20' x 20' tower displays, a digital portal, and eight movable 15' x 26' LED walls (installed in two four-panel groups that face each other across the 60-foot wide Victory Plaza).

The movable media displays will be mounted on rails, and stacked two-on-two. Using the Barco Screen Movement System, the panels can be choreographed individually with discreet video and surround-sound feeds, or locked together to form 30' x 50' HD screens with true 16:9 aspect

ratios. The entire project uses four million individual OLITE SMT (Surface Mount Technology) LEDs, each with a capability of 185 trillion colors.

"The project's biggest challenge was the proximity of the crowd," said Steve Simard, Barco's Branding Market Manager for the Media market. "With a maximum viewing distance of 60 feet and sharp viewing angles, Hillwood needed a technology with the highest perceived resolution, and that's why the OLite 510 was selected. With the physical limitations in this Plaza, the OLite proved to be the very best for resolution at short distances," noted Simard. "Equally important, the OLite gives this project the cutting-edge display technology that won't be outdated."

Barco's specialized visualization solutions targeted at the needs of the Media & Entertainment industries are used at high-profile venues and events. Barco counts names such as U2, Ferrari, Louis Vuitton, Madonna and Daimler Chrysler, Clearchannel Spectacolor, as well as installations for Merrill Lynch, Kinopolis, China Film Group, Bank of America, Deutsche Bank, Reliant Park Stadium (USA) and Miami Heat NBA amongst some of its key references.

Picogiga Sales Rocket as Soitec Grows Fast

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Picogiga, the EPIC member that specializes in GaN-on-silicon material, is on track to double its annual sales. According to its parent company Soitec, which supplies silicon-on-insulator (SOI) wafers, in the nine months of the current fiscal year, Picogiga's sales have grown by 76.5%. Already spectacular, that growth should increase over the next quarter, says Soitec, with the full-year Picogiga revenue for 2005-2006 set to be double the 2004-2005 figure. In the most recent quarter Picogiga's sales surged to Euro 2.6 million (\$3.1 million).

Meanwhile, the parent company Soitec is enjoying similar success, saying that the "era of the SOI wafer has arrived". That appears to be the case: in a red-hot market, Soitec sales have more than doubled from last year to reach Euro 70.9 million in the most recent quarter.

Silicon giant AMD has signed a whopping \$150 million contract with Soitec for calendar 2006. The two companies agreed a long-term deal in 2005 under which Soitec is supplying both 200 mm and 300 mm wafers manufactured using their proprietary "Smart Cut" process.

Jenoptik, Kantum Form New Company

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JENA, Germany and TOKYO, Nov. 14, 2005-- Jenoptik Laserdiode GmbH of Jena, Germany, and Kantum Electronics Co. Ltd., an importer and distributor of lasers and optical instruments in Japan, have founded a new company, Jenoptik Laserdiode Japan Co. Ltd.

The new venture, which has three employees at its Tokyo headquarters, is retroactive to Aug. 1, 2005. Jenoptik Laserdiode GmbH holds a 33-percent stake and Kantum owns the remaining share. The two companies have had a marketing partnership since 1997. They said Jenoptik Laserdiode Japan will focus on expanding their Japanese markets for sales of high-power diode lasers.

Jenoptik Laserdiode GmbH is a subsidiary of Jenoptik Laser, Optik, Systeme GmbH, in the photonics division of Jenoptik AG. It makes high-power diode lasers that are used chiefly as an excitation source for solid-state lasers or as a direct beam source in medical technology and material processing. Kantum Electronics, based in Tokyo, also makes CO2 lasers and peripheral products, such as power supplies and cooling units.

For more information, visit: www.jold.com



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CDT Sees New Record In Display Lifetime Development

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CAMBRIDGE, United Kingdom, 12th December 2005 - Cambridge Display Technology (CDT) announces two major milestones in the development of long lifetime, high efficiency light emitting polymers for full color, video capable displays.

A phosphorescent red device has been produced by CDT and Sumitomo Chemical which has a lifetime of half a million hours from an initial luminance of 100cd/m²; this is a record for lifetime of solution-processable materials of any color. The efficiency is also improved at over 7cd/A. Red efficiency is especially important as this color consumes the largest share of power input in a color device, so improvements in red efficiency have important practical implications.

The second major milestone announced is a lifetime of 150,000 hours for a fluorescent blue device based on a new material developed by CDT, and now part of the Sumation™ portfolio. Just eighteen months ago, CDT announced the achievement of 30,000 hours lifetime for fluorescent blue. The efficiency is also the highest recor-

ded for a blue polyfluorene material at 10cd/A.

The new blue material yields very good color values and efficiency. The OLED industry has come to regard progress on blue materials as a key indicator, since this performance dictates the range of full color applications which can be implemented. The progress announced today gives a strong indication that the technology is moving rapidly to satisfy the requirements for applications including large display screens.

These new materials are fully printable - a major advantage of polymer OLED technology over other OLED technologies. They are also compatible with each other and could be combined in the same device.

Dr David Fyfe, CEO of CDT expresses delight at the progress: "The progress on red lifetime and efficiency is astonishingly rapid. Increasingly, the progress on blue lifetime is building on the synergies arising from both the acquisition of Dow Chemical's P-OLED technology by Sumitomo, and the merging of CDT's and Sumitomo's know-how into Sumation. We are confident of further progress."

u²t Photonics Works With Lucent Technologies In A Joint Development Program For 43 Gbit/s Balanced Receiver Components

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Berlin, Germany – September 26, 2005

u²t Photonics AG, a provider of innovative, leading-edge optoelectronic components for fiber optic systems, announced that a joint development activity for their balanced photoreceiver BPRV2123 with Lucent Technologies at Nuremberg, Germany and Lucent Technologies Bell Labs has passed the first verification tests for application in Lucent's next generation 43Gbit/s DWDM system. This successful test took place in August 2005 and represents another major design win for u²t in the 40G market with a tier 1 system vendor already delivering 40G products to market.

The product is based on u²t's widely introduced 43Gbit/s balanced detector BPDV2020R, however it is enhanced with an electrical amplifier that boosts the device performance to 520mV differential output swing. For the joint development activity, Lucent is contributing its outstanding application expertise in designing and delivering the sys-



tems that drive next-generation communications networks of service providers. Lucent was first to market in 2002 with commercially available 40G optical products and this joint development activity with u²t, which will lead to both improved product performance and cost, shows the company's unwavering commitment to remain an industry leader in this technology area.

u²t Photonics' CEO, Andreas Umbach said, "We are facing significant demand for our balanced product line and are prepared and continuously committed to support the industry's efforts to progress down the 40G path."

About u²t Photonics: u²t based in Berlin, Germany, is a leading provider of ultra fast optoelectronic components, for fiber optic systems and networks including photodetectors and receivers for 50 GHz and beyond. For more information, visit their website at www.u2t.com



OPERA²⁰¹⁵

OPERA Symposium on FP-7 and the Technology Platform – Photonics 2006 Strasburg, April 4, 2006

The main objectives of OPERA-2015 are to provide a platform for adequate interaction of European IST-research in Optics and Photonics and to develop and implement a joint strategy for research and industry to shape the future of this highly important industrial area. Within this framework, OPERA-2015 is organizing a symposium on April 4, 2006 in order to support the building of the Photonics Technology Platform.

Many European players from academia, research labs, SMEs and major industries have collaborated to write a strategic vision document for photonics in FP-7: Photonics for the 21st Century. This vision paper is the foundation for a Photonics Technology Platform. Now the European photonics community is invited to contribute the muscle that will give the Technology platform its force to develop and execute a strategic research agenda in FP-7.

In this symposium contributions will cover research and development topics that should be part of the Strategic Research Agenda for the platform in the following areas:

- Communications and Information
- Laser-assisted Manufacturing and Machine Vision
- Life Sciences and Health
- Lighting and Displays
- Metrology and Sensors
- Design and Manufacturing of Components and Systems
- Photonics Research, Education and Training



A Technical Programme Committee composed of Kevin DONNELLY, Enterprise Ireland, Eva GARCIA, IdeTra, Madrid, Prof. Tom GLYNN, National Centre for Laser Applications, Galway, James O’GORMAN, Eblana Photonics, Dublin, Tom PEARSALL, EPIC, Paris, Jorge Julián SÁNCHEZ, SDG-TECEN Madrid, Juan Luis VADILLO, Aragón Photonics Labs, Zaragoza, selected following program:

1. Commission:

Dirk Beernaert, IST
Head of Unit, Nanoelectronics and Photonics
European Commission

2. Photonics21

Bernd Schulte
Vice-President and COO
Aixtron AG (Germany)

3. Information and Communications

John Oberstar
Head Optical Procurement - Global Supply Management-
Optics
Cisco Systems, Inc. (USA)

4. Laser-assisted Manufacturing and Machine Vision

Koji Sugioka
RIKEN-The Institute of Physical and Chemical Research
(Japan)

5. Life Sciences and Health

Sune Svanberg
Atomic Physics Division - Lunds University (Sweden)

6. Lighting and Displays

Bernhard Stapp
Chief Technical Officer
Osram Optical Semiconductors GmbH (Germany)

7. Metrology and Sensors

Germán Vergara
IR sensing and applications in Security and Defence
Centro de Investigación y Desarrollo de la Armada - CIDA
(Spain)

8. Design and Manufacturing of Components and Systems

James O’Gorman
Eblana Photonics, Ltd (Ireland)

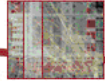
9. Educational Issues in Research and Training in Photonics

Dr. Marc Nantel
Director, Photonics Research Ontario (Canada)

All EPIC Members are urged to attend.

Workshop on
**Laser Applications
In Europe**

23-24 November 2005, Fraunhofer IWWS, Dresden, Germany



On November 23-24, 2005 the EPIC **Workshop on Laser Applications in Europe 2005** took place in beautiful Dresden, hosted by the Fraunhofer Institute für Werkstoff- und Strahltechnik and organised by a technical committee made up of: Wolfgang Gries (Chair, Spectra Physics), T.P. Pearsall (Chair), EPIC, Arnold Gillner, Fraunhofer Institut für Lasertechnik, Thomas Klein, Esko-Graphics Imaging GmbH, Udo Klotzbach, Fraunhofer-Institut für Werkstoff- und Strahltechnik, Ralf Koch, Acreo AB, Terry Nowell, Powerlase Limited, Reinhart Poprawe, Fraunhofer-Institut für Lasertechnik ILT, Kurt J. Weingarten, Time-Bandwidth Products AG.

Over 60 Laser stakeholders coming from 20 different countries gathered during two days in Dresden to attend following program:

Wednesday, November 23, 2005: Presentations

Welcome address

Thomas P. Pearsall, European Photonics Industry Consortium (France)

Delivering laser based technologies for Rolls-Royce Aerospace
Paul Williams, Rolls-Royce International Ltd. (United Kingdom)

Opening presentation

Eckhard Beyer, Fraunhofer-Institut für Werkstoff- und Strahltechnik (Germany)

Laser materials processing at Philips Applied Technologies
René Sanders, Philips Applied Technologies (The Netherlands)

European programmes in lasers and their applications and perspectives for the 7th Framework Programme

Ronan Burgess, European Commission, Directorate General for Research (Belgium)

Laser applications in Europe microelectronics
Terence A. Nowell, Powerlase Ltd. (United Kingdom)

Improvement of residual strength in integral (laser beam welded) fuselage structures: the way to extend applications of laser beam welding in aircraft fuselages

Dr. Frank Palm, EADS/Airbus Metals Corp. Research Ctr. (Germany)

A novel laser-based process to manufacture RFIDs
Marcus Hüske, LPKF Laser & Electronics AG (Germany)

Photonic devices: opportunity for the consumer electronics industry

Willem Hoving, Philips Applied Technologies (The Netherlands)

Laser marking: market and technology
Ulrich Heffer, Rofin-Sinar Laser GmbH (Germany)

Aerospace applications of industrial lasers

Roy G. Clarke, R. L. Cooke, BAE Systems plc (United Kingdom)

Laser engraving in gravure industry
Guido Hennig, MDC Max Daetwyler AG (Switzerland)

Status and vision of laser processing at Volkswagen

Klaus Löffler, Volkswagen AG (Germany)

Lasers in flexographic platemaking
Thomas Klein, ESKO Graphics (Belgium)

New challenges in biophotonics

Hans-Gerd Loehmannsroeben, Universität Potsdam (Germany)

New developments of solid-state lasers for laser vision correction

Georg Korn, Femto Technologies (Germany)

In the evening a dinner was organised at Pulverturm, a traditional saxon restaurant built in old vaults where Powder used to be stored. All attendees could relax and enjoy a conference dinner with music by a wonderful ladies band.

Thursday 24 November 2005

During the second day, the workshop was moderated by Christian Körber, Kienbaum Management Consulting (Germany). Distributed in 5 break-out working groups the participants had to consider the future of laser applications technology in Assembly (macro- and microprocessing) Processing industry (process industry, forming), Surface oriented applications (semi-conductors, marking, writing...), and Life Science/Healthcare and Biotechnology.

An important product of this workshop is a market and technology report, being written by EPIC, the European Laser Institute and Kienbaum Management. This report will be distributed to EPIC members in February 2006.

A CD-Rom including all presentations, poster sessions and results of the break-out working groups has been produced and sent late December 2005 to all EPIC Members.



Ronan Burgess, European Commission, Directorate General for Research gave a lecture on European Laser programmes



From right to left: Prof. E. Beyer, Fraunhofer IWS, Th. Pearsall, EPIC and S. Kaierle, Fraunhofer ILT



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