PLACE-it makes light flat and flexible

Eindhoven March 15th, 2010 – Leading companies and institutes in lighting and flexible electronics, including Philips, Holst Centre/TNO, imec, Freudenberg, TU Berlin and more have joined forces to co-develop the route to integrate light into people's surroundings be it ceilings, walls, floors, furniture, soft furnishings, and even garments. The ultimate aim of this PLACE-it (Platform for Large Area Comformable Electronics by InTegration) initiative is to realize an industrial platform for thin, lightweight and flexible optoelectronics systems that will not only open new dimensions in product design, but will also create unique opportunities for on-body applications in healthcare and wellness.

PLACE-it looks beyond the bulb for lighting applications, optimally exploiting the energy efficient and small form-factor characteristics of new lighting technologies like LEDs and OLEDs (organic LEDs). Imagine a lamp that is not fixed to the ceiling, but can instead be designed in any shape, or even blended into the surroundings, or curtains that emit light to mimic natural daylight conditions. Imagine illuminating jackets for children to safeguard them as they cycle home from school and even bandages that shine light on the body to treat skin diseases. These are just some of the examples of products that could become reality in the near future.

"Until now, large area electronics R&D has been carried out independently for flexible, elastic and fabric based technologies," says Liesbeth van Pieterson, senior scientist at Philips Research and project leader of PLACE-it. "In the PLACE-it project, foil, elastic and fabric substrate technologies will be systematically co-developed with the common goal of heterogeneous integration."

PLACE-it received €10.9 million funding by the European Community's Seventh Framework Programme. The project aims to realize an industrial platform for lightweight, thin and flexible optoelectronics systems within three and a half years and will:

- Develop an integration platform of foil, elastic and fabric optoelectronic technologies.
- Create foil, elastic and fabric-based devices for light emission, electronics and sensing.
- Formulate industry design guidelines for light-emitting flexible surfaces and textiles.
- Build demonstrators of compelling beyond-the-bulb applications.

PLACE-it will share the outcome of the project with third parties and start the dialogue with designers, architects, governments, industry and other stakeholders to discuss the future of comfortable ambient lighting and the requirements/conditions for an industrial platform.

About PLACE-it

PLACE-it is the"Platform for Large Area Conformable Electronics by InTegration" and aims to integrate lighting into people's daily surroundings. The point of departure is that technology should be bendable and stretchable – not flat, square and fragile. The aim is to combine technical performance with elasticity, comfort and light in light-emitting flexible surfaces and textiles. PLACE-it works with 12 partners in the project: Centexbel, Freudenberg Forschungsdienste KG, Freudenberg NOK Mechatronics, Freudenberg Mektec Europe, Grupo Antolin, imec's associated laboratory at Ghent University, Philips Research, Philips Lighting, Philips Lumalive, Netherlands Organisation for Applied

Scientific Research (Holst Centre/TNO), Ohmatex , RWTH Aachen, Technische Universität Berlin, TITV Greiz and University of Heidelberg. More information www.place-it-project.eu .

Figure 1 – Philips explores opportunities to integrate for light therapy into the baby's blanket

Figure 2 - Holst Centre develops flexible OLED on transparent substrates

Figure 3 Michael Jackson's designer Zaldy created a special costume using Philips Lumalive light emitting textile

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