



NEWS RELEASE

Terepac and IMEC join forces in low-cost flexible electronics packaging

Next-generation wireless ECG patch drives joint research activity

Eindhoven, The Netherlands – October 20, 2009 – Terepac Corporation, an emerging leader in electronics miniaturization, packaging and assembly, and IMEC, a leading European research center in nanotechnology, announce their collaboration on novel packaging technologies for flexible electronics. The initial driver for this synergistic shared research relationship is a next generation wireless ECG system, developed in the Human++ Program at Holst Centre, Eindhoven.

As electronic systems will become ubiquitous, the demand for innovative packaging technologies increases. For many applications, like on-the-body devices, thin and flexible form factors greatly improve the comfort of the wearer. In order to allow large-scale manufacturing and market penetration, low-cost yet high value solutions are key. Traditional electronics packaging and assembly with rigid printed circuit boards and pick-and-place machines are unable to cope with these demands.

The technology developed by Terepac holds great promise to give a unique answer to the challenges mentioned above. In its patented photochemical printing process, thinned silicon dies and passive components can be placed on flexible substrates at speeds of more than one chip per second and with accuracies down to a few microns.

The wireless ECG patch that is being developed in IMEC's Human++ program at Holst Centre, an open-innovation initiative by IMEC and TNO, will be used as a test vehicle for further development of Terepac's technology. For IMEC it is an opportunity to go from a lab-scale assembly on polyimide carrier to a more production-ready version of its wireless sensor nodes. First results are expected by mid 2010.

Ric Asselstine, CEO of Terepac: "Following five years of development by a team of world-class scientists and engineers and based on the patents of co-founder and CTO Dr Jayna Sheats, Terepac is ready to completely transform the landscape of small form factor electronic packaging. The company aims to become a total solutions provider able to collaborate with companies up- and downstream in the value chain. Apart from being on the forefront of technological innovation, being able to tap into the existing partner network of IMEC and Holst Centre is a great asset to our collaboration."

Julien Penders, Program Manager Body Area Networks at IMEC/Holst Centre: "Initial contacts with Terepac were laid a few months ago. It quickly became clear that their expertise would be a valuable addition to the existing competences that we and our partners have on board. We look forward to further developing our sensor technology and opening doors towards low-cost and large-scale manufacturing for our existing partners or companies interested in this technology."

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About IMEC

IMEC performs world-leading research in nanotechnology. IMEC leverages its scientific knowledge with the innovative power of its industrial partners in ICT, healthcare and energy, IMEC delivers industry-relevant technology solutions. In a unique high-tech environment, IMEC's international top talent is committed to providing the building blocks for a better life in a sustainable society.

IMEC is headquartered in Leuven, Belgium, and has offices in Belgium, the Netherlands, Taiwan, US, China and Japan. Its staff of more than 1,650 people include over 550 industrial residents and guest researchers. In 2008, IMEC's revenue (P&L) was 270 million euro.

Further information on IMEC can be found at www.imec.be.

IMEC is a registered trademark for the activities of IMEC International (a legal entity set up under Belgian law as a "stichting van openbaar nut"), IMEC in Belgium (IMEC vzw supported by the Flemish Government), stichting IMEC Nederland (IMEC-NL) and IMEC Taiwan Co. (IMEC-TW).

About Holst Centre

Holst Centre is an independent open-innovation R&D centre that develops generic technologies for Wireless Autonomous Transducer Solutions and for Systems-in-Foil. A key feature of Holst Centre is its partnership model with industry and academia around shared roadmaps and programs. It is this kind of cross-fertilization that enables Holst Centre to tune its scientific strategy to industrial needs.

Holst Centre was set up in 2005 by IMEC (Flanders, Belgium) and TNO (The Netherlands) with support from the Dutch Ministry of Economic Affairs and the Government of Flanders. It is named after Gilles Holst, a Dutch pioneer in Research and Development and first director of Philips Research.

Located on High Tech Campus Eindhoven, Holst Centre benefits from the state-of-the-art on-site facilities. Holst Centre has over 145 employees from 25 nationalities and a commitment from close to 20 industrial partners. Visit us at www.holstcentre.com

About Terepac

Terepac Corp., a privately held emerging technology company in Waterloo, Ontario, has developed a system for transfer printing electronic components of any lateral size and thickness down to microns or below, at high speeds and accuracy. With costs far below any competing technique and no sacrifice in performance, this platform technology introduces revolutionary advances in assembly and packaging of micro and nanoelectronics. Ubiquitously deployed real time location systems, wireless sensors, RFID tags and embedded electronics products will provide the input to a Microelectronic Nervous System™ (MNS), a Terepac-enabled network which reports not only an object's location but also its condition, creating a uniquely powerful tool for economic competitiveness, quality of life and sustainability. For more information please visit www.terepac.com.

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