



For Immediate Release

Contact: Heidi Hoffman
Tel. 1-408-993-8111
E-mail: heidi.hoffman@flectech.org

**8th Annual Flexible Electronics and Displays Conference Highlights Significant Progress
in R&D, Manufacturing and Product Applications**

February 18, 2009 – San Jose, Calif. – Flexible, printed electronics developments are expanding around the world and will open new markets in consumer, industrial, medical and defense applications. Continued progress in moving towards manufacturing - along with solid business plans – are needed before commercialization is widespread. That was the consensus of the **8th annual Flexible Electronics and Displays Conference** held February 2- 6, 2009 in Phoenix, Ariz. The **Flex Conference**, sponsored by the FlexTech Alliance, included a business & investment summit, a market analysis & technical conference, short courses, a product exhibition, and a focused workshop.

The **Flex Conference** is the leading North American event for announcing new products and R&D outcomes. In spite of a challenging business environment with many company travel reductions in place, the conference drew 375 registrants, equal to 2008 levels. Exhibits increased and the short course offerings grew three-fold. 151 presentations were held over the four-day event.

Keynote speakers at the inaugural Business & Investment Summit included Maurice Gunderson of CMEA Ventures, Subhendu Guha of UniSolar, and John Parmentola of the U.S. Army Research Lab. They described everyday applications for conformal electronics, including energy, displays, lighting, and military systems. Gunderson noted that flexible electronics business plans are being presented to the venture capital community, but entrepreneurs often over-estimate the market opportunity and underestimate the manufacturing and financing challenges. Dr. Guha reviewed the rapidly growing success achieved by UniSolar in the thin-films photovoltaic market, commenting that current challenges are light-to-electricity conversion efficiency and manufacturing at low cost and high yield, and the new market opportunities enabled by flexible substrates. Dr. Parmentola provided multiple examples of potential insertion of conformal electronics into soldier systems, including sensors, displays, batteries and medical products, such as tele-presence and human function replacement.

A panel session of market analysts including MJT & Associates, Cintelliq, Insight Media, Lux Research, and Needham & Co. followed the keynotes. Near and long-terms market opportunities for flexible electronics forecasted by these experts are in energy (e.g., lightweight batteries and new forms of photovoltaics), flexible lighting, and e-books. Energy R&D is expected to be boosted by anticipated U.S. government R&D spending and could accelerate advances in lighting and photovoltaics.

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Paul Brauss, president of printing/web handling machine manufacturer Mark-Andy, explained that his company's interest in printed electronics is driven by the availability of new electronics materials that are amenable to high volume and low cost. This can lead to printing innovative "active packaging" for, as an example, extending the shelf life or improving the safety of consumer products, such as food or liquids.

"The inaugural summit achieved our goals of linking entrepreneurs with potential private and public sector investors, while discussing the significant market opportunity ahead," stated Michael Ciesinski, FlexTech Alliance president.

The 8th annual Market Analysis & Technical Conference provided a remarkable level of product announcements and innovations, due to the event's expanded scope. Twenty-one (21) tracks were held this year, with new additions emanating from these industry segments: solid state lighting, graphics printing, medical applications, sensors, smart cards, RFIDs, solar and photovoltaic, novel printing tools, and functional inks.

Dr. Mark Pinto, senior vice president & corporate CTO and general manager, energy and environmental solutions of Applied Materials, opened the conference with a keynote address. Dr. Pinto identified several markets enabled by nano-manufacturing technologies, where cost per function reduction via scaling is the major driver. Beginning with the IC market, this has been extended to flat panel displays and now energy. He noted that challenges in energy and the environment represent great technical, business, and societal opportunities for nanotechnology. Dr. Pinto concluded that flex-based products may play an important role in providing solutions especially where shape, size or weight are uniquely served.

E- books were highlighted at the **Flex Conference**, due the availability of current and anticipated suppliers, including Sony, LG Philips, PVI and Plastic Logic, who highlighted a page sized e-book that will be available later this year. According to Michael McCreary, VP of R&D at E Ink, the next generation e-books and readers will be even more compelling due to:

- Thinner, lighter non-glass backplanes
- Expansion of number of available titles
- Geographic and language expansion of reader availability
- Adobe and other formats for reader-friendly non-copyrighted materials
- And more sophisticated operating systems and features (touch, wireless, etc.)

Cholesteric liquid crystal display manufacturer Kent Displays identified multiple market openings for conformal electronics, such as electronic skins for personal electronics, car/home interiors and architectural elements, mini displays for credit cards, and flexible writing tablets.

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The new medical applications segment was illustrative of the exciting R&D being conducted in flexible and printed electronics. Binghamton University opened the session by identifying numerous medical applications for flexible and conformal electronic devices. These included an EKG shirt, an EEG head cap, and cochlear and retinal implants. The Palo Alto Research Center unveiled a 3 year, \$5M federally funded project to develop printed sensors to measure acceleration, acoustics, pressure and temperature. The objective is to develop a prototype device to measure mechanical shock.

PhiloMetron concluded the medical applications segment by demonstrating the many benefits OLED displays and lighting can bring to health care, including ambulatory on-body displays and in-vitro diagnostics.

“With an outstanding set of companies and R&D organizations setting the pace, the field of flexible and printed electronics will grow rapidly in the next couple of years. The breadth of applications described at the conference underscores the impact flexible electronics will have in our future,” observed Dr. Mark Hartney, CTO of the FlexTech Alliance.

The 9th Annual Flex Conference is scheduled for February 2-5, 2010 in Phoenix, Ariz. Proceedings of the **Flex Conference 2009** can be purchased at www.flextech.org.

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About the FlexTech Alliance

The FlexTech Alliance is the only organization headquartered in North America exclusively devoted to fostering the growth, profitability and success of the electronic display and the flexible, printed electronics supply chain. Leveraging its rich history in promoting the display industry as the U.S. Display Consortium, the FlexTech Alliance offers expanded collaboration between and among industry, academia, government, and research organizations for advancing displays and flexible, printed electronics from R&D to commercialization. To this end, the FlexTech Alliance, based in San Jose, Calif., will help foster development of the supply chain required to support a world-class, manufacturing capability for displays and flexible, printed electronics. More information about the FlexTech Alliance can be found at the industry portal: www.flextech.org.