New Emphasis at the Largest Printed Electronics Event

This year's Printed Electronics USA (www.IDTechEx.com/peUSA) will take place in Santa Clara on November 30 and December 1. Analysts IDTechEx who organise the largest event on the subject, have paid a lot of attention once more to the end user streams. Their presence and contributions to the latest instalment of the successful series of events will be appropriate to the new direction of this burgeoning industry.

Brand Enhancement for Consumer Goods

All consumer packaged goods (CPG) leaders and their best brand facing support companies now have multi-disciplinary teams working in the area of electronic functionality integration. They see printed electronics modernizing everything: product, packaging, shelf edge, point of sale, posters and rewards using electronics on both paper and plastic film. Much of this is not entirely printed as yet but that is the route to cost reduction and greater functionality. Fulton Innovation's concept of Nestlé's Cheerios cereal box, with displays on the packaging powered by inductive coupling, gave us a glimpse of what is coming and at the conference; companies such as MARS, P&G and Reckitt Benckiser will talk of their needs and adoption strategies.

Electroluminescent cereal packaging powered by inductive coupling, created by Fulton Innovation.

On the media and advertising side, with posters that interact with phones, emit aromas or talk alongside electronically enabled magazine pages, this industry now realises also that printed electronics is a route to much greater impact and targeting as well as reusable, reprogrammable, environmental media.

Product Enhancement for Consumer Electronics

The development and interest in previously impossible consumer electronics, such as very large volume printed electronics products, has now begun. It is at an earlier stage than CPG adoption with the exception of use in value-engineering existing consumer electronics (such as flat screen televisions, where many layers are replaced with one printed layer). Materials and electronics giants such as BASF, Samsung, SONY and LG, as well as start-ups and research institutions are all very actively involved in the development of the value chain, from equipment and materials providers all the way to integrators of components and complete device manufacturers.

Military and Aerospace

It is not reduction of cost that is the target in military and aerospace applications. The projects and developments at this front focus on reliability, damage tolerance, safety, space saving, and sometimes added benefits such as stretchability, flexibility and transparency. Printed electronics offer possibilities that haven't been available before and representatives from Boeing and the US Army will be at the conference to discuss current and future directions for the applications necessary, or already under development, in these sectors.

Healthcare

Healthcare applications address such aspects as improving speed of response and cost by introducing more disposable testers and electronic drug delivery systems, but also sophisticated uses elsewhere in healthcare. For example, Stora Enso will be presenting on their development of wireless pharmaceutical packaging solutions integrating printed electronics, while Dr Nanshu Lu from the University of Illinois will be discussing the challenges relating to bio-integration of "soft electronics". Dr Lu is a member of Prof John A. Roger's team of materials scientists, mechanical and electrical engineers and physicians that have successfully integrated stretchable electronics technology with standard endocardial balloon catheters.

Fully inflated multifunctional balloon instrumented with temperature, tactile and EKG sensors on islands interconnected by non-coplanar serpentine wires.

Finally, addressing the architectural and the build environment (photovoltaics and wireless sensors taking centre stage at this front) as well as mobility issues relevant to future generations of electric vehicles and how they can benefit from adoption of printed electronics technologies, the conference will cover a huge variety of potential applications as well as innovative solutions already available.

Printed Electronics USA 2011 will include a full 2 day conference, trade show, masterclasses, tours to local area companies, and an awards dinner. To find about more about the largest event on the topic or to register, please visit www.idtechex.com/peUSA [1].

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[1] http://www.idtechex.com/peUSA