Out with the old, in with the new: Enabling the proliferation of large-area touch devices with transparent conductive materials

John LeMoncheck, President and CEO of Cambrios Technologies for ECN

What trends and technologies have impacted the industry in 2012 and what does that mean for 2013?

The release of Windows 8 is revolutionizing the projected capacitive touch device market, increasing the already capacity constrained demand for large area touch screens. Computer makers are scrambling to equip a wide variety of new products like laptops and All-In-Ones with touch capabilities.

A recent *Digitimes* article states that manufacturers are unable to fulfill the increased demand for touch panels. Until recently, touch panel makers have focused on producing panels for smartphones and tablets. Now they are discovering their factories lack the resources and capabilities to cost effectively mass produce larger products using incumbent technology based on Indium Tin Oxide (ITO).

In 2013, those who wish to succeed in the large area projected capacitive touch device market will need to use cost effective transparent conductive materials that can be produced at high volumes using roll-to-roll processes. These materials must also offer high conductivity and excellent optical performance to enable extremely responsive large sized touch panels.

Silver nanowire-based transparent conductive films provide a high performance solution to this problem. Touch sensors created with silver nanowires enable thin, light, unbreakable large area touch screens, allowing faster mass-market adoption of touch devices. Large computers and monitors using silver nanowire based touch panels are already commercially available, and the trend to replace ITO with this technology continues to gather momentum. This ITO alternative will support the

transition to large area touch panels, and ultimately facilitate innovations such as flexible displays and touch screens, driving the future growth of the consumer electronics industry.

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About John LeMoncheck

John LeMoncheck is the president and CEO of Cambrios Technologies [1], maker of silver-nanowire-based ClearOhm coating materials used in touch screens, OLED displays, e-paper, OLED lighting and thin film photovoltaics. Prior to Cambrios, LeMoncheck served as president and CEO at SiBEAM.

He has a bachelor's degree in Electrical Engineering from U.C. San Diego and spent several years researching VLSI for imaging and pattern recognition applications at Caltech.

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[1] http://www.cambrios.com/