Go Big in Large Format Without Going Broke Whitepaper

Summary

In the electronics industry, product managers often cite "bigger" as a compelling motivating factor driving adoption of next generation products – particularly when it comes to display technologies. Going bigger however, frequently has unintended technical consequences as scaling up in size can push the bounds of the physics behind application of enabling materials, their performance over broader ranges, the capabilities of the manufacturing processes used in creation of the devices, or even the available supply of raw materials used in the device's fabrication. The net is that "going big" at best means more expensive and at worst can expose physical limitations preventing completion of the journey.

A case in point is going bigger with touch technologies that were originally created and perfected for small screen displays such as those used in smart phones. Imperceptible variations in electrical resistance at the diminutive screen area of 75 square centimeters are readily apparent at the square meter sizes resulting in inconsistent resistance across the surface inducing lag time effecting responsiveness of the display.

Going big for touch screens tests the bounds of traditional materials such as ITO, paving the way for new materials such as CNT hybrids. Combining transparency levels requisite for larger applications with higher conductivity delivering consistent, lag-free response across longer spans, CNT hybrids offer touch device manufacturers a viable option for going big.