

## **Tactile looking for mobile touch screen developments**

### **CAPE TOWN – SEPTEMBER 09**

Elo TouchSystems, the global leader in touch technology, brings a new level of performance to the small screen.

New touch technologies specifically developed for handheld devices expand the already broad Elo TouchSystems portfolio. The newest Elo handheld technologies deliver benefits that have been only partially achieved before by other touch technologies.

Bringing small screen multi-touch and gesture capabilities to market is an example of the innovation customers have come to expect from Elo TouchSystems products.

### **Resistive gestures**

"Elo invented touch technology nearly 40 years ago," says Tyco Electronics vice-president and Elo TouchSystems general manager Mark Mendenhall, "and we've continued to leverage our leadership and innovation to deliver on our commitment to provide an advantage to touch technology customers. Our new technologies will provide mobile and handheld touch device makers with value-added, cost-competitive touch interface alternatives."

The new Resistive Gestures delivers real-time, two-finger gesture recognition on analogue resistive touch screens. "The new technology, named Resistive Gestures, provides a richer user experience via intuitive gestures, which until now, had only been possible with higher-end, costlier technologies such as projected capacitive.

Consisting only of an enhanced controller and firmware set, the technology can be quickly integrated into analogue resistive touch screen systems. This new technology allows current resistive technology-based device manufacturers to cost-effectively develop next-generation products with enhanced applications."

### **Introducing mobile acoustic pulse recognition**

The Elo technologies portfolio is expanding to deliver cost-effective, high performance touch solutions to the handheld market. The need for a touch interface technology on portable devices that delivers high performance and durability in rough environments was recognized, while giving the user a choice of touch input tools.

Although resistive touch screens offer the benefits of low cost, low power consumption and choice of user input tools such as stylus and finger, these screens are not as durable and lack the higher optical quality of other technologies. Projected capacitive touch screens, on the other hand, do provide very high optical quality and durability, but they are higher cost, come at the expense of higher power consumption and are limited to touch inputs with bare fingers or tethered pens. The new Mobile acoustic pulse recognition (APR) touch technology is a cost-effective, lower power solution that combines the benefits of these two touch technologies **in one**.

### **New projected capacitive technology**

Today, most of the touch screens found in mobile and handheld devices are based on analogue resistive touch technology. It cost-effectively delivers multiple types of touch inputs, but the plastic top layer can become scratched and wears out with repeated use.

In recent years, projected capacitive has emerged as a new technology that increases the user experience, but is more costly than resistive technology and is more complex to integrate. Clearly, there is a need for an easy-to-integrate and cost-effective touch technology to fill this gap.

Elo TouchSystems now has the solution. With a single-ITO (indium tin oxide) layer, Elo's new projected capacitive touch technology reduces the cost of the technology used in most touch-enabled cell phones and mobile devices, while providing a sensitive, accurate and fast touch response. This latest touch technology joins the expanding Elo TouchSystems portfolio of touch products and offers design engineers an alternative to the existing touch technologies.

Engineers working with projected capacitive technology for portable devices face a significant challenge to reduce component costs while offering input flexibility to extend the life of the screen and maintain the user experience. Elo's novel single-layer projected capacitive technology for portable devices provides an alternative to the current two and three layer projected capacitive solutions available today.

This new touch technology can be easily customized to accommodate a device's unique bezel and electronic requirements. The touch sensor can be built such that trace routing is eliminated from up to three sides, resulting in an increased touch area that expands the amount of space available for application development. It can also be bonded and co-moulded to a plastic bezel to make unique finishes and product styles available. The touch electronics, consisting of analogue and microprocessor chips with firmware, can be easily integrated and deployed in a wide variety of portable devices.