

Fundamentals of Touch Technologies and Applications

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NextWindow

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FlexTech Alliance
for Displays & Flexible, Printed Electronics



Agenda: Part 1

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- ❖ Touch Technologies with Continuous ITO
 - ★ **Analog Resistive** [7]
 - ★ **Surface Capacitive** [6]
 - ★ **Materials & Process 2: Touch Screen Flow & Sputtering** [15]
- ❖ Multi-Touch [9]
- ❖ Touch Technologies with Patterned ITO
 - ★ **Analog Multi-Touch Resistive (AMR)** [8]
 - ★ **Projected Capacitive** [11]
 - ★ **Materials & Process 3: Common Processes** [18]
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 - ★ **Materials & Process 4: Photolithography** [18]

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Agenda: Part 2

- ❖ Touch Technologies Without ITO
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 - ★ **Dispersive Signal Technology (DST)** by 3M) [4]
 - ★ **Materials & Process 5: Etch** [13]
 - ★ **Surface Acoustic Wave (SAW)** [6]
 - ★ **Traditional Infrared (IR)** [4]
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 - ★ **Optical** [4]
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- ❖ Comparing Touch Technologies [5]
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- ❖ 3 – Flexible Displays and Touch [4]
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About NextWindow

❖ NextWindow

- ★ Develops & manufactures optical touchscreens
- ★ Currently focused on two touch-screen markets
 - Windows-7 consumer monitors and all-in-one computers
 - Large-format display applications such as interactive digital signage
- ★ Global presence
 - New Zealand (HQ), Singapore (Ops), USA, Taiwan, Korea, Japan
 - Manufacturing in China, Thailand and Malaysia
 - 119 employees, 55 in engineering
- ★ Brief history
 - 2000: Founded by CTO and private investors
 - 2003: First product to market (optical touch for large displays)
 - 2005: Entered USA market
 - 2006: First major volume contract signed (HP TouchSmart AiO)
 - 2008: Entered Taiwan market with ODM focus
 - 2009: Engaged with many PC OEMs & ODMs on Win-7 products
 - 2010: Acquired by SMART Technologies

About Abbie Gregg, Inc.

- **AGI provides facility, process, industrial, and operations consulting engineering and design services**
- **Industries served**
 - Microelectronics
 - Semiconductor
 - Flat-Panel Display
 - Flexible Electronics
 - **Touch Screens**
 - Photovoltaics
 - Disk Drive
 - MEMS
 - Nanotechnology
 - Biotechnology
 - Medical



AGI Background

- Started in 1985
- Based in Phoenix, AZ
- 650+ projects completed in North America, Europe, Asia, the Middle East and Australia
- 40+ FPD, flexible electronics and touch projects completed



WE'RE SORRY, BUT...

Because this SEMICON short course was a joint presentation by Geoff Walker and Abbie Gregg, permission to download the complete 312-slide file must be obtained from both authors.

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