Talkin’ displays in the City of Angels

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This year, the Society for Information Display (SID) returned to Los Angeles for its annual Display Week conference. Apart from the weather, which mimicked last year’s Seattle venue, the show was a smashing success.

This being Los Angeles, we had Hollywood royalty on display—visual effects pioneer Douglas Trumbull (2001: A Space Odyssey, Blade Runner)discussed trends in production and exhibition technologies, with a heavy focus on stereoscopy and high frame rates. Noting that the “transition to all-digital film is being driven by 3D”, Trumbull reiterated the basics of stereoscopy—120 frames/sec, 60 per eye, alternating left and right images. But this was just the window dressing.

One of the biggest trends at Display Week 2011 was the prevalence of LED backlights, overshadowing its CCFL cousin. ECN has slavishly documented the solid state lightning phenomenon, and we’re continuing to see greater market penetration. The pendingincandescent ban (commencing in 2012) puts greater emphasis on finding a suitable replacement. Most thoughtful critics have dismissed CFLs as a viable successor, so it falls on us to promote SSL.

To that end, nearly every vendor I spoke with emphasized their solid state lighting chops. Sharp made it a point to mention that theirentire repertoire featured LED backlights. Endicott Research Group (ERG) highlighted their drop-in replacement LED drivers, which power Sharp's displays.Similarly, Global Lighting Technologies showcased their new LED-based edge lighting solutions. Dontechbriefed me on their "Day Vu" line of displays, which function as performance enhancers. These devices replace embedded backlights, rendering the display sunlight-readable and raising the luminance to 1,000-1,500 nits.

Touchscreen tech was the other main area of focus. Cypress Semiconductor showed off their true single layer sensor, which can do both self-capacitive sensing and mutual cap sensing. This differential signal analysis allows it to recognize one mm tip stylus input and even sweaty hands. Ocular, which is celebrating its 25th anniversary, detailed their 15.6 inch multi-touch capacitive panel, capable of 16 simultaneous recognitions. Stantum talked up their IVSM (Interpolated VoltageSensing Matrix) multi-touch technology, which enables 10 touches with stylus input. IVSM distinguishes between "good" touches (finger or stylus) and "bad" touches (the palm, etc.).

At Renesas' booth, Bob Dunhouse and Dean Collins put on a master seminar, educating this lowly editor on the nuances of transflexive displays. I'd like to thank them for putting up with my endless questions. Sri Peruvemba from E Ink detailed the myriad applications of e-paper (including a cool "smart" credit card and an e-paper music sheet). At Wednesday's luncheon, E Ink won the coveted "Display of the Year" award from SID.

E Ink's smart card.

For more on SID 2011, check out the videos we shot from L.A. [1] on ecnmag.com. I'd like to thank David Arthur from SouthWest Nano, Phil Spivey from Ocular, Gauthier Chastan from Stantum, John Kerry from Cypress, Jeff Blake from Dontech, Bill Abbott from ERG, Alan Richard from Kopin, Tim Bixler from GLT, and Dave Hagan from Sharp for being such gracious hosts. Erin Olson from Ocular deserves extra special thanks for personifying the human teleprompter.

See you next year in Boston!

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