Qualcomm to spend $2 billion on e-ink-busting mirasol display plant

Medical Design Technology

LCD tech, particularly if you're referring to the advanced in-plane switching displays found in some modern gadgets, is the bees knees of flat-panel displays. It's got long lifespan, good contrast, excellent pixel response speeds, potentially retina-busting resolution, and in combination with LED backlighting, it can provide excellent brightness. But its performance in direct sunlight is barely acceptable, and since it requires electrical power to change the pixel states and to light it, it's very unfriendly to portable device batteries. Think iPad, and you're thinking of this screen tech.

E-paper tech, found in many e-readers, uses a completely different bunch of chemistry and physics to work. It's got a good lifespan, acceptable contrast, high resolution, and it works fabulously in direct sunlight. It has one major flaw--its pixel refresh rate is abominable, making almost anything other than use as an e-reader impossible--and one minor one, in that it requires direct lighting to be useful in a darkened room. Think Kindle, and you're thinking e-paper.

And then there's Qualcomm's Mirasol, a tech that's halfway between these two systems. It uses MEMS tech, and it has reliably good performance in back-lit situations, as well as in direct sunlight. Its pixel refresh rate is fast enough allow it to play video, and it has similar "easy on the eye" viewing qualities that e-ink screens purportedly have, for e-book reading. No mainstream device as yet sports a Mirasol display, though the company has been sending 5.7-inch sample units to numerous clients. The trick's worked. Qualcomm is now the sole investor in a new $2 billion plant in China. Installation is due to start late 2011, with bulk delivery in 2012, with that 5.7-inch size rumored to be one of the main products.

And who's the customer? Is it Apple? It could be, assuming the Mirasol plant produces a number of screens of different sizes--possibly suiting the iPhone 6 (presumably due in 2012) or a refreshed iPad that could boast better daylight e-book reading powers. Or is it Amazon? Jeff Bezos himself has said a color e-ink display is some way off, and the business market for dedicated e-reader hardware is likely to take some serious damage at the hands of tablets like the iPad.

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