The Steadier State of the Flat-Panel TV

LAS VEGAS --The single most obvious, eye-catching device at this CES, as at every other one I’ve covered, is the flat-panel television. At first, flatness alone was enough to draw people’s attention. Then manufacturers competed to see who could make the biggest flat-panel display (the record still belongs to the 150-inch plasma Panasonic showed last year).

But prices have plunged over the past few years, while the basic technology behind these sets looks pretty much nailed down. So manufacturers are having to turn to other areas to set their sets apart, to judge from the exhibits of four mainstream flat-panel vendors -- LG, Panasonic, Samsung and Sharp.

One of the most striking changes this year is an emphasis on energy efficiency and lower environmental impacts. All four companies, along with many others, touted efforts to cut the power consumption of their LCDs and plasmas -- a goal often illustrated with a booth display of a future set hooked up to a power meter, showing its use in watts. They also promoted their efforts to reduce the amount of toxic materials, such as mercury, needed to build the sets.

LED (light-emitting diode) backlighting in LCD (liquid crystal display) sets seems to be a big part of that push. Instead of the fluorescent backlights normally used in LCDs, LEDs draw less electricity -- and last longer, provide a brighter image and allow manufacturers to construct a thinner set. Unfortunately, they've also been painfully expensive to incorporate into large screens. Manufacturers say that cost should drop, but LG and Samsung, each with a big chunk of their exhibit devoted to LED-backlit sets, wouldn't provide estimates for what those models would cost when they go on sale later this year.

Many upcoming flat-panel sets will also connect to Web content, as I noted yesterday. But you'll still have the problem of being limited to sources selected by a vendor. For example, Panasonic sets and Blu-ray players can play Amazon Video on Demand movies, but Samsung’s (at least for now) can't.

Then there are future flat-panel features that look less practical. Take super-flat sets that are only an inch and change thick, versus three or four inches: In houses with the LCD or plasma on a stand and not hanging on the wall, this doesn't strike me as a meaningful upgrade. Or consider 240 Hz technology, which aims to cut screen blurring on LCDs even more than the 120 Hz feature on many new sets (in which the set generates and inserts an additional frame of video between each existing frame); in demos at LG and Samsung's booths, it yielded only minor improvements compared to how much better a 120 Hz picture can look than a standard 60 Hz picture.
Then there's 3D technology, which a lot of manufacturers seem to think will grab consumers' attention as much as HDTV did at its debut. But not only will this technology be enormously expensive and suffer from a severe lack of 3D content, the industry also has to settle on a single standard among the four or five proposals out there (by a Panasonic executive's count). Good luck with that -- remember, this is the industry that brought us VHS vs. Beta, HD DVD vs. Blu-ray, Super Audio Compact Disc vs. DVD-Audio, Memory Stick vs. SD Card vs. xD-PictureCard, and so many other format wars.

Speaking of standards, LCD and plasma's dominance of the overall TV business appears stronger than ever. I don't think I've seen a single "microdisplay" rear-projection set on the floor, much less a CRT. And the ultra-thin OLED (organic light-emitting diode) technology that debuted in a $2,500 Sony set at least year's CES doesn't seem to have made it into any more shipping products.

In other words, if you've been worried that buying a flat-panel set now would mean missing out on some exciting new feature, you can probably relax and go ahead with the purchase. Prices will probably keep declining and performance should keep improving, but -- with the possible exception of LED backlighting -- it doesn't look like this part of the business is in for any big changes over the next couple of years.