

CES unveils big TVs with 'ultra-high definition' (Update)

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John Herrington, President of Sharp Electronics Marketing Company of America, talks about Sharp's 2013 large screen Aquos line of tv's during press day at the Consumer Electronics Show, Monday, Jan. 7, 2013, in Las Vegas. (AP Photo/Julie Jacobson)

The race to make TVs larger and larger has created a colossal problem for manufacturers: As screens grow, picture quality worsens—unless the viewer moves farther away from the screen.

The issue is playing out in cozy dens and family rooms around the world. To get the full benefit of a large high-definition screen, viewers must move back from their sets. Because the ideal viewing distance is no closer than three times the height of your screen, or about one and a half times the diagonal length, big TVs have literally forced many families' backs against the wall.

This year, TV makers are doing their best to give huge-screen fanatics more breathing room. New "ultra-high definition" sets [were shown off Monday by LG Electronics Inc.](#), Sharp Corp., Sony Corp. and Samsung Electronics Co. at the International CES gadget show in Las Vegas.

Consumers tend to buy a new set every seven years or so, and television manufacturers are hoping the technology will give consumers a reason to upgrade.

TV makers are also making their sets smarter. New TVs from Samsung, for instance, will recognize an expanded range of gestures so people can swipe through on-screen menus in a way that revolutionizes the old remote control.

Samsung President Boo-Keun Yoon said the new features are a response to the increased choices consumers have in what they watch.

"We have developed TVs that respond to people's needs and lifestyles, TVs that know in advance what people want to watch, TVs that have the power to create the ultimate lean-back experience," Yoon said.

With nearly 8.3 million pixels, an ultra-high definition or "4K" screen contains four times more pixels than an HD TV. Because of the higher resolution, viewers can sit close—according to some estimates, as close as the diagonal length of the screen, which is about a third closer than before—without losing clarity. That could be appealing to big-screen

fanatics who live in small spaces.

Ultra-HD sets come as small as new models from LG and Sony, which stretch 55 inches (140 centimeters) diagonally. And estimated prices are dropping from the tens of thousands to below \$10,000, bringing these multi-megapixel TVs well within the spending range of early adopters.

"I hope you can see that 4K is not the future, it's now, and Sony is leading the way," said Sony CEO Kazuo Hirai.

It could be a few years before prices come down enough for the masses to justify buying ultra-HD TVs, especially considering that U.S. TV buyers spent a record-low average of \$364 on flat-screen TVs during the recent holiday shopping season, according to research firm NPD Group.



Sharp Electronics vice president for strategic product marketing Jim Sanduski, introduces the ICC Purios Ultra HD resolution Panel at a news conference during press day at the Consumer Electronics Show, Monday, Jan. 7, 2013, in

Las Vegas. (AP Photo/Julie Jacobson)

Hampering sales even further, ultra-HD faces another problem: There's very little content. Since 2004, only about 50 movies have been shot with an ultra-HD camera. They include the James Bond hit "Skyfall" and the Batman sequel, "The Dark Knight Rises." Only a handful of movies shot on film, including "Taxi Driver," have been converted to ultra-HD.

There's also no standard way of getting content to the TV, although Sony took the lead in making movies shot in native ultra-HD make it to market.

Sony Corp.'s 84-inch (213-centimeter) ultra-HD model, which it unveiled in November, comes with a computer server capable of storing and playing back giant movie files. It's definitely not affordable for most people, however, and the TV unit with the server thrown in has a price tag of \$25,000.

It also announced Monday that it would launch the world's first ultra-HD movie download service for owners of its compatible sets in the U.S. this summer. The company will launch the service with 10 movies.

Owners of the smaller ultra-HD sets from Sony may have to buy the playback device and movies separately, although a final decision hadn't been made, company representatives said.

Currently, there's no standard way for upgrading Blu-ray players and discs to handle the ultra-HD format, although plans are in the works. Broadcasters are also a few years away from an upgrade. LG and Sony said their ultra-HD sets come with upscaling technology to make regular HD images look better—the way some motion is smoothed out on some

TVs using complex computer algorithms.

Sony showed off movie footage from a standard Blu-ray disc player that had been upgraded on a 65-inch (165-centimeter) ultra-HD screen and the result was stunningly clear.

The file sizes of ultra-HD movies will only be about 25 percent or 30 percent larger than similar HD files, according to Pete Lude, the past president of the standards-setting body, the Society of Motion Picture and Television Engineers. It's not four times as much data, despite having four times as many pixels as HD, because of advances in compression technology, he said. That means broadcasters won't have to make infrastructure changes to upgrade just a few years after they made huge investments in HD, and that Blu-ray disc standards might be revised without the need for consumers to buy new hardware.

"We want to get it all right in one big standard," Lude said. He pegged the timing for an ultra-HD standard as being anywhere between months and decades away as industry players dispute the merits of different technical specs.

Still, ultrahigh definition may not be as far in the future as you might think. According to research group IHS, about 20 percent of TVs shipped globally in 2017 will measure 50 inches (127 centimeters) or bigger, up from 9 percent in 2012. And this past holiday shopping season, Americans were much more attracted to these big screens. Flat panels that are 50 inches (127 centimeters) and bigger saw unit sales rise 46 percent from a year ago, compared with a drop overall of 1.5 percent, according to NPD.

The average screen size of TVs purchased around the world is expected to creep up to 40 inches (102 centimeters) by 2016, from 22 inches (56 centimeters) in 1997, according to the Consumer Electronics

Association.

More big screens should create demand for a sharper image and more incentive for TV signal providers to start offering a premier service of ultra-HD channels.

But CEA analysts predicted that the high price tag and low availability means ultra-HD TVs will have a slow start.

Ultra-HD TVs are expected to account for only 1.4 million units sold in the U.S. in 2016, or about 5 percent of the entire market, the CEA said. The market share of all sets in the rest of the world is expected to be smaller.

"It's a very, very limited opportunity," said Steve Koenig, director of industry analysis at the Consumer Electronics Association, which officially kicks off CES Tuesday. "It is going to take some time for this market to gain traction as those price points come down."

Could ultra-HD be a passing fad? Possibly. But one advantage it has over other recent innovations is that most people can appreciate increased clarity on giant screens.

Other aspects of image quality that the industry has touted in recent years, like the color vividness of organic light-emitting diode (OLED) sets, can be a matter of taste. 3-D can even make people sick.

Ultra-HD is "the most buzz-worthy thing TV guys will be talking about," said Paul Gagnon, an analyst with NPD. "It has some potential in the future, but it'll remain a niche, high-end business for a while."

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