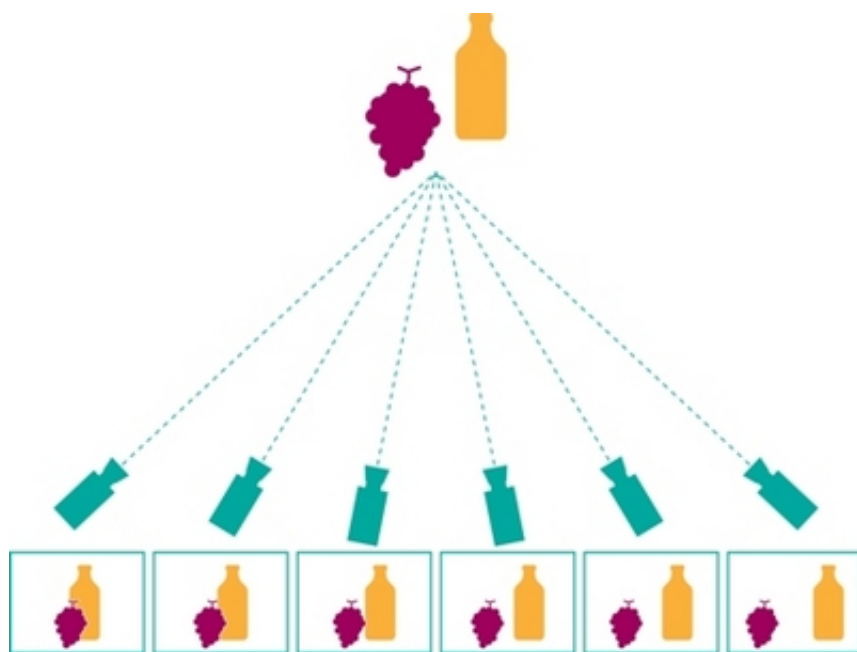


NLT announces naked-eye display with better 3-D view

May 18 2012, by Nancy Owano



(Phys.org) -- NLT Technologies has announced its development of an autostereoscopic multiview display based on the success of its HxDP technology. HxDP stands for Horizontally x times Density Pixels. The company reports impressive end results as improvements in 3-D and 2-D viewing. NLT Technologies together with its sales and marketing channels in the Americas and Europe, Renesas Electronics America and Renesas Electronics Europe GmbH, announced the autostereoscopic multi-view high resolution display earlier this week.

This is a low-temperature [polycrystalline silicon](#) thin-film-transistor color liquid crystal display in a 2-D/3-D module prototype with wide quarter video graphics array (WQVGA) resolution. Viewers are able to see, without the aid of glasses, multi-angle images with smooth [motion parallax](#), providing a realistic 3-D view.

NLT's HxDP technology makes it possible for 2-D and 3-D images to be displayed simultaneously in the same resolution on the same screen without the need for 3-D glasses. In addition, it is possible to choose the number of viewpoints for a 3-D image and display a 3-D image with the given number of viewpoints anywhere on the screen.

HxDP Advantage

- ◇ Perfect 2D images (characters..) without 3D/2D switching
- ◇ Both 3D and 2D images can be displayed simultaneously just by changing the input data

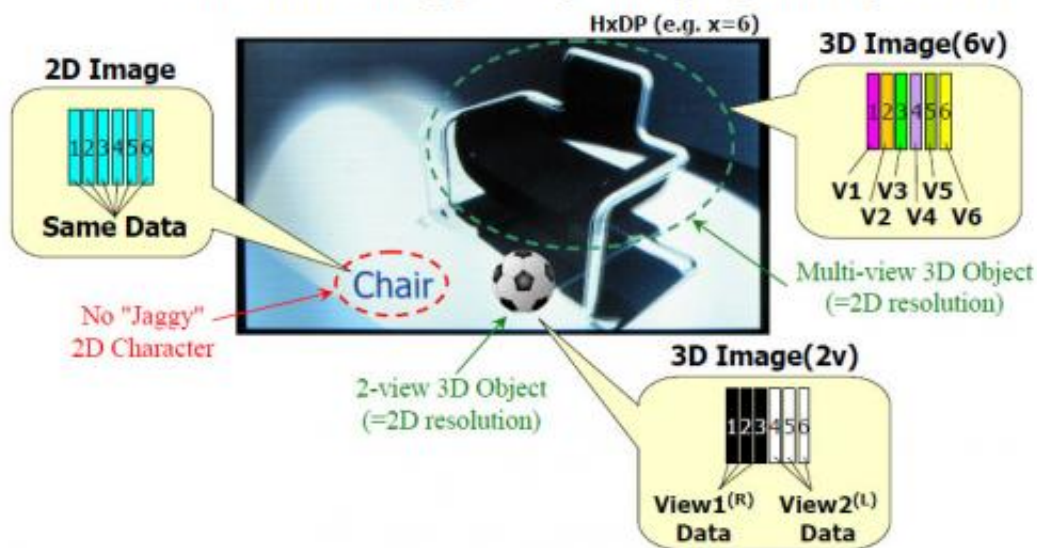


Image: NLT

NLT's HxDP technology is reported as a step up from its HDDP (Horizontally Double-Density Pixels) technology. The autostereoscopic displays can support multiple views, which provides a more natural 3-D viewing experience, notes NLT. One hurdle in particular that NLT says it addressed has to do with 3-D cross talk, which is said to be a common issue with 3-D displays. Cross-talk happens when the human visual system mixes left-eye and right-eye information, causing 3-D effects to be limited or decreased. NLT's new HxDP 3D technology results in displays with reduced levels of overall 3D cross talk and a wide 3-D viewing area, all for easier viewing.

This is a six-view module composed of horizontally striped RGB color pixels, "each consisting of three sub-pixels striped horizontally and split in 1/6 lengthwise resulting in a resolution six times that of 3D LCD modules constructed with vertically striped pixels," according to a company release from [Renesas](#). Alternating displays of the horizontal pixels for each eye produce 3-D images.

The company envisions its products supporting industrial applications calling for stereoscopic displays such as CAD/CAM, medical, and mapping/topography, as well as for gaming.

The prototype HxDP module will be shown at The Society for Information Display's "Display Week 2012" event in Boston next month, from June 3 to June 8.

More information: [Press Release](#)

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