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OCUITY LTD. ANNOUNCES WIDE VIEWING ANGLE SWITCHABLE 2D/3D TECHNOLOGY

Ocuity demonstrates high-performance wide-viewing-angle 2D/3D technology

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Ocuity Ltd. (Oxfordshire, UK) has developed a reconfigurable lens component that when added to an existing flat panel display enables it to be switched at choice into a stereo 3D display with each eye receiving a separate image and without the need to wear special glasses. The Polarisation Activated Microlens technology is the subject of several Ocuity granted patents and patent applications. Uniquely the technology enables the lensing effect to be switched on and off through the use of a polarisation switch. Without the lensing, the display looks exactly as it would in its standard 2D mode. With the lensing switched on it forms the basis for a very high quality no-glasses type 3D display.

Ocuity has now added a wide viewing angle display format to its technology portfolio. By combining its patented lens technology with multi-view output and a mosaic pixel pattern, the viewing freedom has been increased by a factor of >5 compared to standard 2 view displays allowing a viewing angle of ~20 degrees.

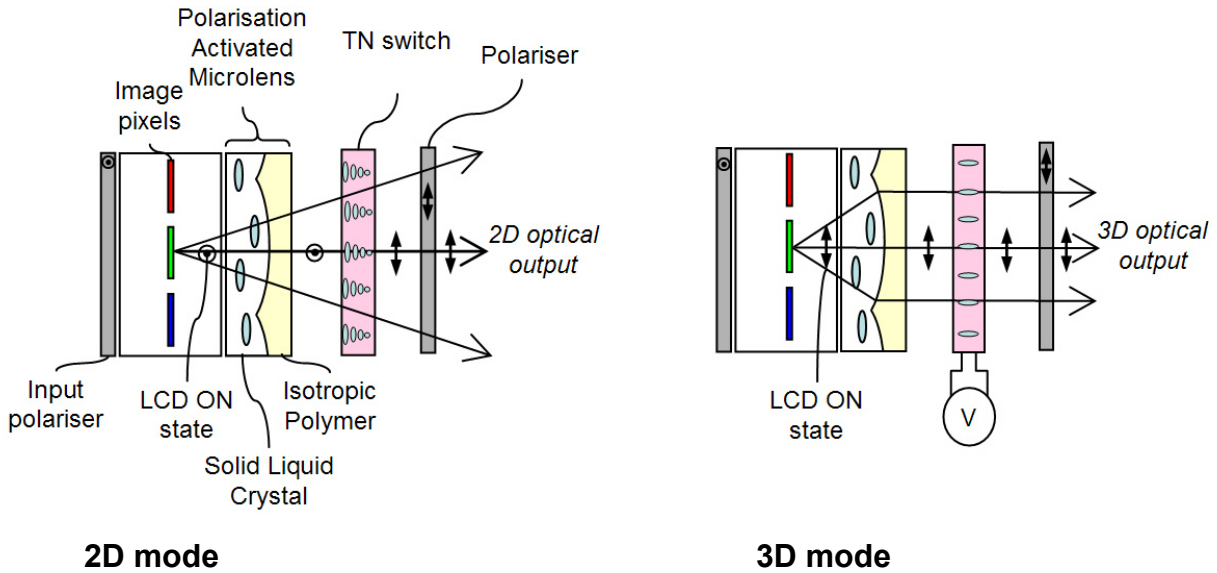
Uniquely, this gives a display technology that does not have the stripe artefact of standard panels, and does not suffer the same resolution loss as slanted lens approaches. It also maintains positions of low cross-talk, which enables a wide depth range, without the blurriness of competing wide viewing freedom displays.

Ocuity Background

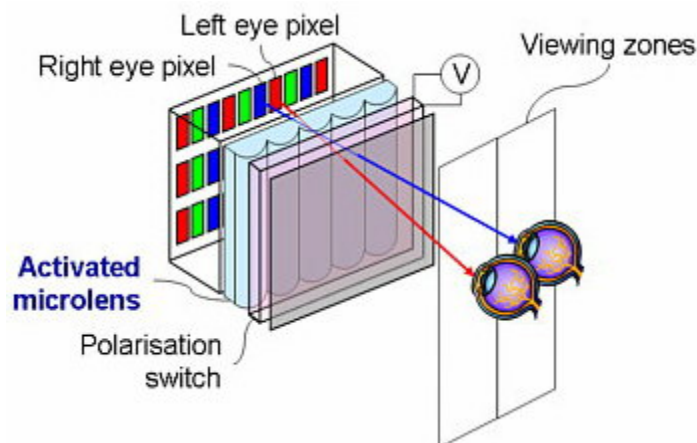
Ocuity specialises in delivering enhancements to flat panel displays. Its mission is to be the leading supplier of reconfigurable optical technology to the flat panel display industry. It was

founded in January 2001 by Graham Woodgate and Jonathan Harrold, both veterans of the stereo 3D industry, and is based near Oxford, England.

The company's key invention is the Polarisation Activated Microlens technology formed by an array of liquid crystal lenses together with a polarisation switch. For one polarisation of light the index of refraction of the microlens is matched to that of its surroundings and therefore no lensing takes place; for the orthogonal polarisation there is an index step at the lens interface and lensing takes place. The polarisation switch ensures that either a 2D (no lensing) or 3D image (lensing) is seen.



Ocuity's Polarisation Activated Microlenses have different optical properties depending on which polarisation of light passes through them.



3D mode of Ocuity's reconfigurable 2D/3D display using Polarisation Activated Microlens technology

In 2D/3D displays, for light of one polarisation the microlenses are transparent and a 2D image is seen. If the opposite polarisation is used, then the microlenses focus light to the left and the right eyes from alternate columns of pixels. The brain fuses the two images to give the appearance of depth on the display.

The Ocuity technology can be applied to a range of flat panel display platforms from mobile phones through to desktop monitors.

The use of a reconfigurable technology makes the technology suitable for mass market applications where most of the time the standard 2D display is needed and the 3D is switched on for particular gaming or picture messaging applications. For example this provides a new dimension to gameplay by making images 'jump' off the screen.

Ocuity's technology is a reconfigurable, glasses free, 3D technology that maintains the brightness of the underlying display in both 2D and 3D modes as well as providing high quality 3D images. Ocuity's component can be fitted to an existing LCD or OLED panel. Moreover, it uses standard materials and manufacturing processes in its fabrication and is therefore available at a small premium to the base display panel cost.

Other applications for the reconfigurable lens technology have been identified and demonstrated. For instance a switchable Enhanced Brightness display which allows a brighter image to be displayed over a concentrated field of view. This can be used, for example, in very bright ambient light conditions where some displays are difficult to view.

Further information on Ocuity is available at www.ocuity.co.uk.

Paul May, 1 December 2005