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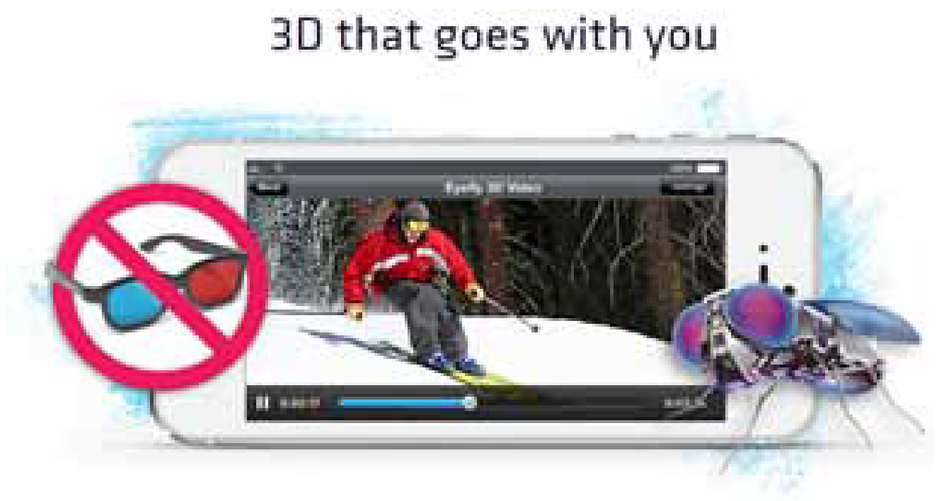
EYEFLY 3D
SCREEN PROTECTOR THAT ALLOWS 3D VIEWING ON PERSONAL DEVICES



(From left)

1) The Eyefly 3D

2) Placement of the film

CHALLENGES

Viewing of 3D-enabled videos is inconvenient and could be costly, as they have to be viewed using cumbersome glasses and can only be viewed with a pricey active inbuilt-display. Glasses-free 3D technology is available but faces problems in usability mode, such as brightness and resolution compromise.

OUR SOLUTION

A*STAR's Institute of Materials Research and Engineering (IMRE) worked with Temasek Polytechnic to develop the EyeFly 3D. It is the first nanoimprint-based screen protector that allows viewing of clear, distortion-free 3D content with the naked eye. Using IMRE's proprietary nanoimprinting technology, about 500,000 perfectly-shaped lenses were imprinted onto the plastic surface of EyeFly 3D. The pattern, known as a lenticular lens array, gives a smoother and more transparent finish than that of existing 3D filters. These lenses will send a slightly different image to both the right and left eye, turning movies and videos into stereoscopic 3D content.

BENEFITS

Eyefly 3D is the first glasses-free accessory that can display 3D content in both landscape and portrait mode. The film measures less than 0.1mm in thickness. As the nano-sized lenses are so miniscule, they do not affect the quality of normal 2D screen resolution. These factors allows the Eyefly 3D to be used as a screen guard that can fit current smartphones or tablets. Moreover, the use of EyeFly 3D will not affect the brightness of the displays. Users do not need to increase the intensity of the backlight, hence it will not affect battery life as well.

APPLICATIONS

The Eyefly 3D has been licensed out to a company called Nanoveu Pte Ltd. To complement the filter, the applications for Apple IOS and Android devices have been developed. These applications allow users to view 3D videos from YouTube and other sources and also enable conversion of 2D images to 3D. The Eyefly 3D enables quick adoption of 3D content and games into existing portable devices, hence this creates opportunities for creation of more affordable premium 3D content and games.

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