

Insight Media's Special Report on 3D at CES 2010

Mocomtech Shows Polarization-preserving Screen

On the last day of CES, we met with [Mocomtech](#)'s (Seoul, South Korea) VP, Benson Koo and president, Harrison Choi. The 50-year old company has developed a very high-gain (20) polarization-preserving screen designed for use with 3D projection systems. This screen was definitely bright in the high ambient South Hall floor when we looked at 3D content using passive polarized glasses.

The design of this screen is definitely different. For one, the shape is slightly concave and the screen itself has a series of tiny concave optical elements (matched to the focal length of the projector). These elements are oriented to capture the light from the projector and scatter other ambient light. The reflected light is focused toward the viewer, thus providing the 20X gain. In addition, the screen is polarization preserving (it retains 99% of the polarization state), allowing the use of inexpensive passive glasses. For applications in which glasses can be worn, the geometry is fairly narrowly defined and the ambient light conditions are high, this is a great solution.

Koo said the screen uses aluminum with nano-level diffusion lines and minute particles. And, the microlenses increase on-axis brightness to four times that of a PDP or six to 10 times that of a standard polarization-preserving screen. And there is no color shift, Koo said.

This technology provides bright images on big screens (above 100 inches) in high ambient



light. Mocomtech said it is selling this screen to some 3D mini-multiplexes and 4D simulator applications, and will soon target 3D sports bars, arcades and are planning on installing their screens in the Las Vegas area.

The company also showed its Dupic screen, which allows the projected image to be seen clearly from both sides of the screen. (See photo).

Mocomtech has a manufacturing operation in Korea and is doing well in the 100-inch+ range, as its prices are low and screen performance is good. They are planning on having a manufacturing facility in Barstow, CA too. - *Chris Chinnock*

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