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By Richard Slawsky | Contributing writer,
Digital Signage Today



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Although just a few years ago glasses-free 3D was billed as being the Next Big Thing in digital signage, adoption has been relatively slow.

But the modest growth of 3D digital signage in the market doesn't mean it's going away. In fact, those who predicted the coming popularity of glasses-free 3D signage may have missed the mark on the timeline, but there's a good chance they were spot on about the long-term potential of the technology.

"We're still knocking on the door, there are a lot of good things happening," said Mike Egan, CEO of Boca Raton, Florida-based Exceptional 3D. "It's just a matter of time before things really start to take off and the technology becomes more mainstream."

About 3D digital signage

As a refresher, the bulk of the 3D digital signage in the marketplace today is based on auto-stereoscopic imaging. Unlike the 3D technology popular at modern-day movie theaters, auto-stereoscopic technology doesn't require glasses to view images in 3D.

Applications that create a 3D effect without the use of glasses employ what's known as a lenticular lens, similar to the 3D trading cards of the past that created the illusion of movement.



A lenticular lens is actually an array of magnifying lenses designed so that when viewed from slightly different angles different images are magnified.

In digital signage, the 3D effect is created by affixing a lenticular lens on a standard digital display and displaying content designed to take full advantage of the technology. Such content incorporates multiple AVI files, allowing for multiple viewing angles. The net result is that the image appears to jump off the screen. Existing 2D content can also be easily converted to create the 3D effect.



One of the unique benefits of 3D displays is the ability to also play back traditional 2D content, giving network operators the flexibility to play both 2D content and 3D content. Exceptional 3D has taken the concept one step further by integrating their 3D playback software with several CMS companies, allowing the end user to set up a template where they can direct a certain area of the screen to play back 2D content, while another area plays 3D content. For example, the bottom portion of the screen can display an RSS feed in 2D while the rest of the screen displays other content in 3D.

Falling prices overcome objections

Over the past several years, one of the main factors slowing down the adoption of glasses-free 3D digital signage is the cost of the technology. That seems poised to change as some companies in the 3D space are finding ways to lower manufacturing costs.

“I’ve been to China six times in the past 12 months, and have now set up our OEM relationship to have our products assembled with our lens technology over there,” Egan said. “This has really brought our price point down allowing us to be able to compete on price with traditional 2D display manufacturers, which will really help level the playing field and allow our 3D displays to become a mainstream product.”

For a sense of the potential that continues to be held by 3D digital signage, one only needs to take a tour of the 2016 Consumer Electronics Show, held in Las Vegas at the beginning of January, where there were several companies showcasing glasses-free displays.

Exceptional 3D is also eyeing the consumer segment, entering into a distribution agreement to market the “Clear View” technology developed by Dutch company Dimenco B.V under the Exceptional 3D brand. Dimenco technology is based on applying an advanced optical layer in front of the LCD screen that sends different information to each eye, thereby creating the perception of 3D. The technology offers the ability to run a stereo-filmed 3D 4K video through their software to do a real-time conversion of the two stereo images, delivering an Ultra HD crisp stereo 3D image.

“You can basically take any 3D 4K filmed content and view it on an auto-stereoscopic display without requiring a viewer to wear 3D glasses,” Egan said.

“It opens up a world of possibilities for the digital signage industry as the cost associated of producing 3D content in the past has been a barrier preventing 3D digital signage to really take off,” he said. “But as more people are filming things in 3D and it becomes even more popular, working with Dimenco technology will make it easier to showcase amazing 3D 4K content for digital signage networks.”



In the United States, Chatsworth, California-based Provision Interactive Technologies has installed 450 of its 3D Saving Center Kiosks at Rite-Aid drugstores in a number of cities around the United States and is expected to deploy 1,000 units by April, said Provision CEO Curt Thornton.

Each kiosk incorporates a 2D interactive touch screen that provides consumers with access to promotions, rewards, coupons, or other retailer specific programs such as loyalty cards. Brand marketers are also able to showcase their products via 3D advertising.

For in-store products with various retailers, Provision has seen redemption rates topping 85 percent for high-value offers promoted via the kiosks. For out-of-store products, redemption rates have measured from 10 percent up to 40 percent on high-value offers, compared with industry averages estimated at 2-5 percent.

Elsewhere, the craving for 3D digital signage is even more in demand in the Asian and Middle East/ North Africa regions, as the appetite for the 3D technology is greater as more and more new networks are going up and companies are seeking the latest new technology, says Egan, who has seen a steady increase of inquiries from these markets.

“We are now seeing with the ease of producing 3D content and that the price point of 3D displays is competitive with 2D displays, that 3D digital signage is a cost effective alternative for the mass market to become a mainstream product,” Egan said. “That promises to drive the growth of 3D digital signage going forward.”

About the sponsor:

Headquartered in Boca Raton, Florida, Exceptional 3D is a global leader and the world largest provider of “Glasses-Free” 3D displays and software solutions for the Digital Signage industry, providing high quality, cost efficient auto-stereoscopic 3D displays, software and 3D content to resellers, system integrators and network operators for widespread adaptation.

Operating under several patents and licensing agreements, Exceptional 3D designs precision 3D lenticular lenses for virtually any display size display or application. Exceptional 3D solution enables traditional 2D displays to showcase amazing high-definition immersive 3D content without the need for 3D glasses, while still being capable of supporting playback of standard 2D content.

Ideal applications for this cutting-edge 3D display technology is wherever traditional 2D displays would be placed and would include vertical markets for retail, transportation, restaurants, stadiums & arenas, cinemas, hospitality, casino gaming and various other applications. More information about Exceptional 3D is available by visiting www.exceptional3d.com.