

# Three Dimensions of Opportunity

With digital signage quickly becoming part of the crowd, it's time for a new technology to stand out.

SPONSORED BY:

**exceptional3D™**  
keeping it simple

By Richard Slawsky  
DigitalSignageToday.com

When digital signage first appeared in the marketplace, one of the key selling points of the technology was its ability to stand out from the blizzard of static signage competing for the attention of the consumer. The bright, sharp colors and full-motion video served as a natural draw.

Today, though, digital signage is nearly ubiquitous, appearing everywhere from storefronts to the side of buses. It seems to be just a matter of time before traditional digital signage is no longer the attention grabber it once was.

Clearly, then, digital signage deployers have an opportunity to take the next step to stand out from the crowd. For many, that step could be 3D technology.

## Eliminating the eyewear

Nearly everyone who has been to the movies in the past five years or so is familiar with the concept of 3D. Digital projectors display two images on the movie screen, and by donning a pair of specialized glasses the viewer sees a single three-dimensional image.

While the technology is great when viewing an action-packed science-fiction movie, the necessity of the glasses limits its use for applications outside the theater.

Autostereoscopic 3D, on the other hand, is a method of displaying stereoscopic images that does not require glasses to see 3D images. The technology goes by a variety of names, including “glasses-free” or “no-glasses” 3D.

While it sounds complicated, the technology has its roots in a kid's toy. Many of us remember images of a wild animal or our favorite superhero printed on a cardboard card or other medium; slightly shifting that card created the illusion of motion or caused the character's eyes to open and close.

Those toys, post cards and other applications where a 3D effect is created without the use of glasses, employ what is known as a lenticular lens. It's 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 overlaying a standard display with a lenticular lens,





**“Even though glasses-free 3D has been out there for some time, it still is somewhat in the infancy stage.”**

— Mike Egan, CEO of Exceptional 3D

---

displaying content specially designed with multiple views ranging from 5 to 32 driven by special player software to take full advantage of the technology.

In the case of digital signage, 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 also can be converted easily to create the 3D effect.

Because of the high cost of entry, coupled with the speed at which technology becomes obsolete, many deployers so far have shied away from incorporating 3D into their digital signage networks.

“Even though glasses-free 3D has been out there for some time, it still is somewhat in the infancy stage,” said Mike Egan, CEO of Boca Raton, Florida-based Exceptional 3D.

“The widespread adoption compared to 2D and interactive and other technology hasn’t yet happened,” Egan said. “Part of the reason is because the product has been priced at such a high level by some of the companies in the industry, it hasn’t been affordable for widespread adoption.”

We are knocking those stumbling blocks though by bringing down the price points of our displays and making the ease to do 3D content more cost effective which will allow for more widespread adoption of 3D networks being deployed.

### **Taking the chance**

With all the digital signage options on the market today, why should a deployer take the chance with 3D digital signage?

The most obvious reason is the ability of 3D digital signage to grab the consumer’s attention and hang on to it. Although the effect is difficult to quantify, a simple way to test the interest of 3D is to visit any retailer that has a display of 3D monitors and watch to see how many people stop to look, and how long they linger.

While information on increased dwell time is limited, preliminary studies have indicated that average dwell time for 3D content averages about 10 seconds versus just 1.2 seconds for similar content displayed in 2D.

Although the use of 3D digital signage is still relatively small in the United States, it is taking off in other parts of the world. In the United Arab Emirates, for example, the digital signage market is projected to see a compound annual growth rate of about 23 percent through 2019, according to consulting firm TechSci Research, driven in part by the increasing use of 3D displays.

For those whose primary concern is the bottom line — the vast majority of us — the cost of 3D digital signage isn’t quite the factor it once was. Although





## About the sponsor:

Headquartered in Boca Raton, Florida, Exceptional 3D is the world's largest provider of no-glasses 3D displays and solutions for the digital signage industry, providing high-quality autostereoscopic 3D displays, software and 3D content to resellers, system integrators and network operators for widespread adaptation. The company's hardware and software solutions are a "future-proof" technology that allows flat-panel displays to show high-definition 3D content without the need for any eyewear or 3D glasses, while still being capable of supporting playback of standard 2D content.

when they first appeared on the market 3D displays costs several times as much as a standard 2D display, today that difference may amount to only a few hundred dollars.

And along with cost, obsolescence is fading as an objection.

Network operators can continue to play back 2D content seamlessly, while also displaying immersive, eye-catching 3D advertising. There is even an option using content management software templates for playing 2D and 3D content simultaneously via a split screen while also having RSS newsfeeds playing across the bottom of the screen

While in the past 3D displays had a typical size of 42 inches, today virtually any size display can be adapted for 3D use. Exceptional 3D, for example, is marketing an 85-inch 4K 3D display that supports 16 viewing zones as well as video walls. It also has a similarly sized "high-bright" display for large-format outdoor 3D digital signage.

"Our commercial-grade, high-definition displays are a 'future proof' solution which supports the continued use and playback of all your current 2D content," Egan said. "In addition, you will immediately expand your current capabilities by bringing an unmatched 'glasses-free 3D' experience to your network or stand-alone application."

## Case Study: Heathrow Airport goes 3D

London's Heathrow Airport has deployed patented autostereoscopic 3D display technology from Exceptional 3D as part of a trial for assisting passengers through designated security areas. The project uses a glasses-free 3D solution to capture the attention of travelers who pass through hand-luggage security checkpoints prior to entering the boarding terminals.

The 3D deployment is aimed at reducing traveler delay within security areas prior to entering Terminal 1. The 3D technology acts as a part of the checkpoint process in an effort to reduce the number of items that should be disposed of prior to boarding that travelers have inadvertently packed in their carry-on luggage.

Large screens show 3D images of items that are not permitted through security, such as scissors and large bottles of liquids. Passengers are shown how to dispose of them in the recycling bins provided.

"Helping prepare passengers for security saves them time and reduces the chance of having their bag searched," Richard Harding,

head of IT innovation at Heathrow, told the on-line publication Future Travel Experience. "3D technology is the latest way to help get this message across."

Heathrow served a record 73.4 million passengers in 2014, so shortening delays is critical to the airport's smooth operation. Depending on the results of the initial deployment, the airport will decide whether to expand the technology to the rest of the facility.

"It's very rewarding to help make a positive impact on the daily lives of so many as they endeavor on their worldly journey through Heathrow Airport," Egan said. "It's our expectation that this will not only improve the traveler experience but also help minimize delays at necessary and very critical stages of air travel."

