

The Pull of Magnetic 3D

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Magnetic 3D is a U.S. based company that produces autostereoscopic displays and glasses-free 3-D content. Headquartered in New York City, the company was founded in 2006 by Tom Zerega. Their proprietary Enabl3D™ technology allows them to create glasses-free 3-D images on high-definition displays and even 4K. "The TV is wearing the glasses for you," Zerega explains. From tablets to video walls, Magnetic 3D produces screens of every size and apps to work with a variety of software. In addition to the ability to convert and screen 3-D content in real time, the team produces autostereo videos and stills for their displays. Applications include marketing and advertising, digital signage, education, medical, military, trade shows, event marketing, interactive media, gaming applications and more. Magnetic has built a business around high-quality optics, software and content starting with retail and experiential marketing, trade shows, and digital signage.

When asked about the use of screens at tradeshows, Zerega says, "Magnetic 3D's technology is contagious so whenever it's out there and people see it, it tends to lead to another opportunity. In general, we've found that when our clients use the 3-D displays in their trade show booth they get more leads than they normally would without the 3-D display. People immediately stop and stare, allowing the salesperson the opportunity to step forward and engage them in a conversation which otherwise might be difficult or awkward to do. It's really a great icebreaker or a stop sign for your booth."

Zerega, Founder and CEO of Magnetic 3D, got his start in professional audio/visual work setting up technology for events and concerts. In the early 2000s he became aware of the burgeoning (2-D) digital signage industry and founded Magnetic Media. An early break came in the form of a contract with the Mall of America and 17 malls in the North-

east through Pyramid Management Companies. These early displays installed in the malls were low-resolution by today's standards at barely 720p. In spite of this success, the competition in the new market was fierce. In 2005, while looking for a way to differentiate themselves, Tom came across a company called X3D. X3D used a parallax barrier filter over LCD or plasma screen TVs that created an impressive 3-D effect. Magnetic Media began installing these screens in nightclubs and bars across the country, mainly in New York and L.A. as part of an early advertiser network.

While their customers loved the technology and the impact 3-D won consumers over, Magnetic faced a number of challenges. Out-of-home digital media was still relatively new and advertisers and ad agencies we're not sure where the content and budget should come from to support it. It was also difficult to get content out to the venues on the low bandwidths available at the time. There was also the concern of "gifting" expensive hardware to bars, which was still a gray area at the time. Perhaps the biggest problem was that the use of the parallax barrier filter, which blocked some of the color and light coming from the monitors. "Whites would appear grey and for example, Coca-Cola's red would become a little bit pink and that didn't cut it for the brand team," Zerega recalled.

By the end of 2006, the technology for lenticular TV screens was becoming available. Instead of a filter blocking out what a viewer's left and right eye see, lenticular lenses bend the light to direct the images to the appropriate eye using the curvature of the lens. Unlike with parallax barriers, the lens does not reduce the amount of light or change the color. Realizing that this technology represented the future Zerega and his partners made the decision to sell off everything they were doing in the 2-D market and become a manufacturer of lenticular-based glasses-free

3-D displays. Magnetic Media has since updated their name to Magnetic 3D and has produced glasses-free 3-D displays in a range of sizes for the past decade.

In 2010, Magnetic worked with Microsoft, the Miami Dolphins and Cisco for a project called "Suites of the Future" for Superbowl XLIV. Magnetic installed their "free-D" screens in 32 suites throughout the Miami Dolphins Stadium where NFL team owners watched the game. Each suite had team-specific content and, while the game was not shown autostereoscopically at the time, Zerega believes with a little magic it could be pulled off today. "As long as we had the right camera angles and conversion technology an autostereo game delivered in real-time would be possible." Instead, content switched back-and-forth between Cisco Stadium-Vision, the game in real-time 2-D while commercial breaks featured 3-D infographics similar to what the crowd traditionally sees on the Jumbotron.

Today, Magnetic 3D is launching an exciting new business within the Company called "Magnetic Networks", a business that is similar to where it all began in the digital signage market many years ago. "We have been waiting for almost a decade to bring back the concept of 3-D Digital Out of Home advertising and we can say for sure the technology has evolved to a point where it is truly ready for prime time as a next gen marketing platform for brands. Not only has technology matured and become better and more cost effective at the same time thanks to 4K displays, but the infrastructure and sponsor support is now there creating the perfect storm for the deployment of glasses-free 3-D signage en masse."

The idea behind Magnetic Networks is a futuristic, immersive and glasses-free 3-D media platform. "We think of it as the advertisers answer to what's happening in virtual reality and augmented reality for consumers," Zerega says. "Out-of-home

advertisers are desperately vying for new ways to capture your attention amongst the clutter outside the home with bigger and brighter signs but there is a theoretical limit. To have an immersive experience like VR that does not require a headset and functions as a 2-D or 3-D display seamlessly is the future that we are betting on and presently launching in NYC."

Magnetic 3D has recently installed some of their glasses-free monitors at the New York Waterway terminals at West 39th Street, Pier 79, 459 12th Avenue, as well as at the Port Imperial ferry terminal in Weehawken, New Jersey. They are part of a mobile phone charging station sponsored by T-Mobile. Magnetic 3D's content sits on a computer in what is called "store and forward" format. The schedule is forwarded to the computer within the display and because the content is already stored locally the display is told to play this content at a particular time. The 3-D network that is installed at the two ferry terminals runs in a five minute loop. A commuter's average wait-time is about ten minutes so the loop repeats twice. There are up to ten 30-second time slots available.

Zerega further explains, "There are also 2-D screens on the boats and in the terminals, so it's a combination of 2-D content and 3-D content on our charging stations. The stations can charge up to sixteen devices. People can just walk over and plug in and then hang out, watch the content for five or 10 minutes and then grab their phone and jump on the ferry."

Much of the content Magnetic 3D produces for advertisers is CGI. They use After Effects, 3ds Max and Maya and have their own plug-ins that allow them to take content produced in those programs and output them into the multiple views needed to produce autostereoscopic images.

They are experimenting with live action. "We really like shooting stills. There's a lot of control when you have an individual image and you can make it look its absolute best in post, whereas video is a lot less forgiving. There are just so many frames of content. We do have some tools that would allow us to take stereoscopic video and convert it into glasses-free 3-D. We can take a 3-D movie trailer for example and



Magnetic Networks' autostereoscopic T-Mobile charging station at the New York Waterways ferry terminal on 39th Street/West Side Highway in Manhattan. (Stereo by E. James Smith)

convert it from two views into glasses-free 3-D and its looks pretty incredible. Doing this live is a bit trickier."

While Magnetic's headquarters will remain in New York, Zerega just made the move to Los Angeles earlier this year and is splitting his time between coasts. "There's just so much interest in what we do from the creative side in L.A. We engage in a lot of conversations about our work that we might miss if we were only in New York. We're doing demos here every other day for different clients and talking about different opportunities to create more networks for both L.A. and New York. If we can build our presence in those two cities, and add Chicago and then maybe a couple of others, we can start to build a network with real impact in major markets."

Beyond Magnetic Networks and that advertising play, Zerega would

like to see the company's screens in the classroom. "I'm really a proponent for using this technology in an educational setting. My parents and my sister are teachers. They have access to some technologies that they can use, but the kids are just so quick nowadays with the latest gadget in their pocket. Everybody's got a smartphone or a tablet. I really believe you need to stay ahead of them to capture their attention and based on the reaction we see from people everyday, we feel like our technology could be the bridge that kids need to become re-engaged and focused on their education. So much of our world can be explained so much faster and easier in 3-D, from biology to math. It seems a shame to use the attention grabbing capability of our displays only for selling products when they could do so much more in education." 📺

Timothy McIntyre *(Continued from page 18)*

Tim eventually got back in touch with a lady he'd met earlier in his life in Fort McMurray, Alberta in the 1970s, Donna Logue. He moved to Edmonton and they married, and she got Tim's spirits back up for the rest of his life. It speaks volumes about what kind of man he was, that after he married Donna, he took her to Germany to meet Monika's family, and they all remained close. Donna asked me to include Tim's German in-laws in this tribute, as she considers them her family, too. Tim and

Donna spent the winters in Edmonton and the summers at their home in Prince Edward Island.

Tim watched the news and read the newspapers. He was knowledgeable about world affairs and we had some interesting conversations. Likely his extensive traveling fuelled his interest in these matters. I am proud that he considered me a friend. The world of stereoview collecting has lost a good man.

- John Saddy 📺