

BACK TO THE FUTURE (Part One)

"If you can look into the seeds of time and say which grain will grow and which will not, speak then unto me," William Shakespeare wrote in "Macbeth." In the past decade, EXHIBITOR has gazed deep into the seeds of time and charted the marvels that would spring forth into the trade show world, from Near-Field Communication (NFC) to Quick Response (QR) codes. Today, those marvels, once as improbable as teleportation devices, are as commonplace as the Roomba. Starting this month, EXHIBITOR boldly goes back to the future where we search for the tools of tomorrow's trade shows today. Join us for the ride, because after all, the future is where we're going to spend the rest of our lives.

By Charles Pappas





Augmented Reality

What is it?

Its origins rooted in a quirky 1962 machine called the Sensorama that vibrated the seat you sat on, played stereo sounds, and projected stereoscopic 3-D images, augmented reality (AR) meshes digital information such as sound, video, graphics, or even GPS data with existing live video or your physical environment, in real time, through a digital device. “Augmented reality” wasn’t minted as a phrase, however, until 1990, when professor Tom Caudell coined it while working on Boeing Co.’s Computer Services’ Adaptive Neural Systems Research and Development project. Until then, the Seattle-based aerospace company placed oversized plywood boards on the factory floor, complete with individually — and expensively — designed wiring instructions for each plane being manufactured, to guide workers. Every time wiring designs were changed, the boards had to be redone at considerable cost. Caudell replaced the boards with a head-mounted apparatus that displayed a plane’s specific schematics through high-tech eyewear. Currently, AR-capable headsets, tablets, phones, eyeglasses, and contact lenses are being produced to accommodate overlays of computer-generated information on the physical realm.

How fast is it growing?

AR didn’t truly make its way into popular culture until 1998. Its Rubicon moment that year was a fluorescent yellow “first down” line that debuted during a professional football game on ESPN. The system, called 1st and Ten, invented by New York-based Sportvision Inc., depicted a radiant strip on viewers’ television screens that represented the first-down yard line. It’s been 17 years since 1st and Ten was introduced, and AR has become a driving force in commerce and culture. According to TechSci Research’s “United States Augmented Reality & Virtual Reality Market Forecast & Opportunities, 2018,” AR’s virus-like spread from compartmentalized niches to sweeping prevalence is reflected in its projection of 30-percent annual growth domestically for the next three years. Supporting that projection, consulting firm KZero Worldwide SA’s report, “Consumer Virtual Reality, State of the Market,” pegs the global worth of the AR market by 2018 as \$5.2 billion — which may be wildly underestimating its impact.

But when it comes to AR, the eyes may have it. Business Insider Inc.’s BI Intelligence unit predicts Google Inc.’s Google Glass will rack up sales of 21 million units annually by the end of 2018. Weighing about as much as a pair of sunglasses, Google Glass has a display that when activated appears like a 25-inch-diameter color TV hovering 8 feet

in front of your face. Like smartphones, Google Glass is a sort of tabula rasa to be filled in by an ever-increasing number of software applications. Currently, the eyewear offers Google's basic functions such as search, calendar, and Gmail. In addition to that suite of services, there are about 100 third-party apps currently available for it, such as UniSpeech for Google Glass (which can translate languages on the fly), DriveSafe4Glass (which alerts drowsy drivers when they're nodding off at the wheel), and Evernote for Glass (which allows you to send pictures directly to the popular organizing tool).

Whether it's software or spectacles, the brand loyalty AR offers is not a computer-generated illusion. Research from Hidden Creative Ltd., a Manchester, U.K.-based digital marketing firm, concludes customers are 165 percent more likely to buy a product when it includes an AR component. In fact, AR's allure for exhibitors in 2015 might be as irresistible as the Gold Rush's temptation was for prospectors in 1849. "AR gives companies the ability to delve deeper into their offerings at trade show booths," says Dana Drissel, the senior director of marketing for Kaon Interactive Inc., which provides interactive 3-D product marketing and sales applications. "The nonsequential nature of AR allows users to experience products in the way they want at the pace they enjoy, making it a universal sales tool."

How are marketers using it?

Food shows can be a feeding frenzy that could teach piranhas a thing or two about overeating. Nobody knows that better than Tyson Foods Inc. The 80-year-old Springdale, AK-headquartered

firm was looking for a way to educate attendees about its food products at the School Nutrition Association's Annual National Conference in Kansas City, MO. But instead of feeding key decision-makers' minds, the company typically ended up stuffing the mouths of random attendees, who swarmed into the booth for a taste of tortilla or a bite of burger. Working with Global Experience Specialists Inc. (GES), Tyson Foods felt a more palatable solution was to experiment with removing most edibles from its exhibit, and replace them with an AR experience that would fill its target audience more with ideas than calories.

Instead of positioning staffers at the front of its 30-by-60-foot island exhibit with trays of free samples, it armed them with less-digestible iPads. When attendees stopped, the staffers initiated an activity by heading a few feet closer to the wall behind them where a row of four 36-inch LED screens were aligned about 7 feet off the floor. Over each monitor was a food category heading, such as Patties & Handheld, or Tortillas, Tostadas, and Chips. If a visitor expressed interest in, say, Patties & Handheld, the staffer called up the particular topic on the iPad, then handed the tablet over to the guest. Cradling the iPad with both hands,

the guest manipulated the visuals of the specific products that appeared on the second screen below, e.g., chicken strips, tortilla chips, or hamburgers. While information on the mouthwatering meals appeared on the iPad, including their ingredient lists, cooking instructions, and nutritional facts, the attendee could view the food on the screen from various angles, spin the pictures like a Lazy Susan, or focus in on a particular part.

While guests gazed at the repasts, staffers qualified the prospects and discussed key features and benefits of Tyson Foods' products. Attendees at previous shows might have zoomed in and out of the booth as if picking up an order from a fast-food outlet, but here they stayed for 10 minutes or more, engrossed by the AR activity that spurred them to ask more questions about the company's offerings. By substituting a novel visual interaction for the usual gustatory one, the company used AR to connect with customers and serve them what they needed.

Similarly, PerkinElmer Inc. used AR to educate trade show attendees, but with a decidedly entertaining twist. The Waltham, MA, company, whose corporate repertoire includes technologies that test food products for purity and safety, finds that engaging attendees at trade shows is no piece of cake even if, for example, the Centers for Disease Control and Prevention estimate that 48 million Americans are laid low by food-borne illnesses every year. So, for the Institute of Food Technologists Annual Meeting & Food Expo in Chicago's McCormick Place, it decided to add an AR-based game to leaven the usual saltine-dry sales

Where can you find out more?

If you feel you don't know your AR from your elbow, there are several good guides to help you understand the merging of the digital and physical worlds. "Augmented Reality: An Emerging Technologies Guide to AR" by Greg Kipper and Joseph Rampolla and "Understanding Augmented Reality: Concepts" by Alan Craig are excellent starting points.

If those seem too academic, Tech50+'s bite-size "A Boomer's Primer on Augmented Reality" will appeal to anyone from baby boomers to Millennials. Meanwhile Marxent Labs' online resource guides, "What is Augmented Reality?" and "An Augmented Reality Glossary" will have you expounding on AR like an authority in minutes.

To jump in and try AR ASAP, download popular apps such as Wikitude World Browser or Google Sky Map. Wikitude World Browser overlays data from 3,500 content providers on any physical landmark around you, while Google Sky Map graphically identifies any planet, star, or constellation in the night sky faster than you can say "Copernicus." Both are available for the iPhone on iTunes, and for Android-based phones at Google Play.

spiels on the firm's products and benefits. Teaming up with Marxent Labs LLC, a Kettering, OH, designer of AR software, the company devised a custom AR game for the iPad dubbed "Food Fraud Defender," which PerkinElmer hoped would inspire engagement and increase leads among its target audience of those involved in food manufacturing, research and development, and safety fields.

When attendees wandered into the 20-by-20-foot booth, one of the half-dozen or so staff offered them game play instead of a sales pitch. Wielding iPads, the staffers escorted attendees to an area where the company had set up five common food items on a counter, including milk, olive oil, and cranberry juice.

After a quick explanation of the game, attendees took the iPads and held them in front of, say, the carton of milk's nutritional label. When they did, animations of food contaminants such as arsenic molecules popped up on the screen like something from "The Andromeda Strain" that threatened the foodstuffs.

Designed to play like the popular game "Fruit Ninja," PerkinElmer's "Food Fraud Defender" challenged players to swipe their finger across the screen and wipe out the contaminants before they got to the food. While guests swiped the microbial monsters into sterilized oblivion, images of the game play wirelessly streamed from each of the iPads to several 50-inch flatscreen displays set near the front of the exhibit, drawing in swarms of attendees faster than a norovirus can spread on a cruise ship at sea. "Food Fraud Defender" took no more than two minutes to play from start to finish, and the technical information it supplied to clients and prospects was more comic book than textbook.

Even so, the AR game provided a cartoonish depiction of what the company's complex machinery does invisibly and helped booth staffers segue into a deeper discussion of PerkinElmer's technology with interested attendees. That engagement in turn led to a result as remarkable as the AR technology itself: PerkinElmer accumulated 150 leads — the same number it amassed from the previous three trade shows combined.

Biometrics

What is it?

The practice of identifying and tracking individuals through unique physical traits goes back to at least 500 B.C., when the Babylonians employed fingerprints on clay tablets for business transactions. But biometrics' (the term hails from the Greek words for "life" and "to measure") first true modern application was in law enforcement: The Bertillon system, started in the 1870s, recorded criminals' attributes such as the size of their skulls, length of their fingers, and the dimensions of other body parts, on index

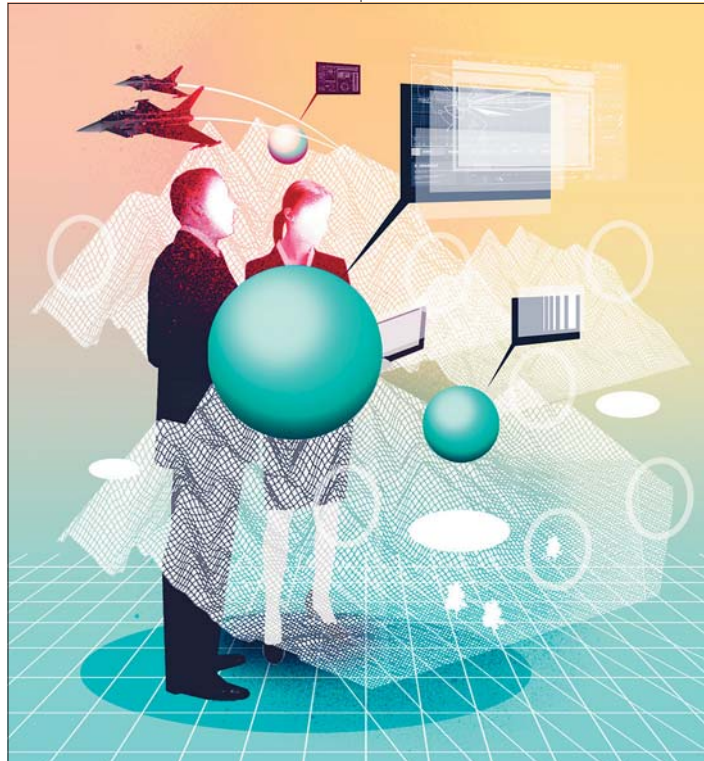
cards. At its core, biometrics is simply detecting and measuring biological information in individuals, such as faces, heartbeats, irises, etc. as a way to track and identify them.

Now harnessing the power of computer technology (the first iris-recognition algorithm was patented in 1994), governments and companies are using biometrics not just to track criminals but also to monitor consumers with a host of devices that can read and record your face, speech, fingerprints, palm prints, handwriting, retinas, irises, keystrokes/typing patterns,

walk, DNA, personal scent, and even posterior. Shigeomi Koshimizu at the Advanced Institute of Industrial Technology in Tokyo believes an individual's so-called "butt fingerprints" are so unique that your car's seats could be programmed to allow only someone with your cheeks' chassis to start the engine.

How fast is it growing?

The worldwide biometrics market will grow to \$15 billion in 2015 from its estimated value of \$7 billion in 2012, according to the Biometrics Research Group Inc. Similarly, research from Global Industry Analysts Inc. suggests that by 2017, the domestic and international market for biometrics will expand to nearly \$17 billion. Those potential billions explain the presence of major corporate players rushing into the biometrics arena, a roster that includes 3M Corp., Safran SA, Fujitsu Ltd., and Hitachi Ltd.



With the kinks mostly worked out, biometric devices are rolling out quickly in the communications, financial services, health-care, gaming, retail, and transportation sectors. Apple Inc.'s Touch ID technology lets users securely access the iPhone 6 as well as use the device's digital wallet with their fingerprints authenticating their identities in lieu of a password. Speaking of financial transactions, in 2015, Barclays PLC will unveil a vein-scanning service where customers will plug a biometric reader into their computers at home. Likened to a "Star Wars" storm trooper's helmet, the British bank's reader identifies unique vein patterns in a customer's finger established during a setup process.

When customers want to access their account, they'll slide a finger into the reader instead of having to log in with easily forgettable (or, for hackers, easily guessed) PINs or passwords, after which the reader will verify their identity.

Look for another big impact that will come from Nymi Inc., whose wristband identifies the features of your electrocardiogram (ECG), which is as singular as veins and fingerprints. Once it records your ECG, the plastic wristband allows you to access connected machines such as car locks via a Bluetooth connection.

"Biometrics provide an opportunity for experiences that are truly personal," says event designer and futurist Joe English. "Imagine being able to customize an experience down to the level of the individual guest. As attendees walk through an exhibit, biometrics could be used to identify the attendee, keep a record of his or her interests, and allow exhibitors to tailor the experience to the attendee's likes, desires, and needs."

How are marketers using it?

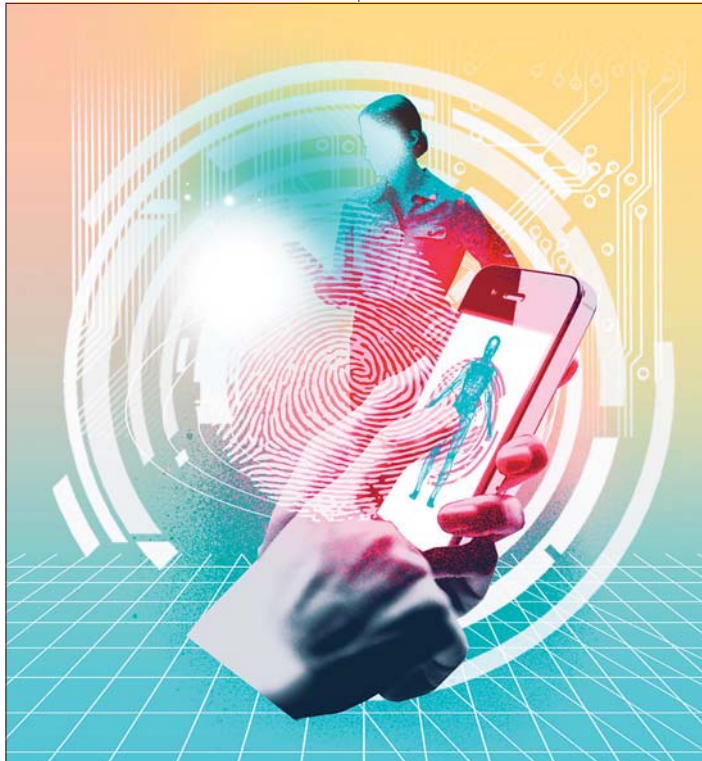
Beating 100,000 times every day, the human heart was the root of happiness for the Chinese, the hub of the spirit for the Greeks, and the crux of intellect to the Egyptians. To Intel Corp. and SMS Audio LLC, the vital organ was also the key to connecting with their respective customers. When the technology giant and the headphone maker planned to debut their BioSport In-Ear headphones that track your

heart rate, they wanted to reach a bevy of consumers who are as much athletic as they are artistic. They also wanted to communicate the deeply personal — and even highly poetic — aspect of tracking your singular heartbeat, a thrum and throb rhythm so unique to each individual it can actually act as a password.

Joining with creative-services agency Sid Lee USA Inc., the companies realized that to demonstrate a biometric device in a meaningful way, you needed another biometric device. The companies decided they would show the very cardiac rhythm that the earbuds observe with the implacable eye of computer technology. But instead of a

contraption that just coldly displayed an ECG-like graphic plotting the vascular data with all the warmth and sexiness of a pacemaker, they would render the data in a manner more like a Picasso than a programmer. Inspired by Plotclock, a drawing robot, and Hektor, a portable spray-paint device for computers, the companies fabricated the Heart Bot, a robotic automaton that would detect users' heartbeats, then draw out a representation of the rhythm in real time.

When the event kicked off last August at the New Museum of Contemporary



Art in New York, 60 guests (members of the press and other influencers it targeted) made their way into the museum's austere Sky Room. Set against a wooden wall was the 12-by-10-foot Heart Bot. Consisting of a snow-white vertical surface with a pedestal placed in front of it, the biometric artist handily pulled in attendees. As if swearing an oath on a cybernetic Bible, attendees placed their palm on a rectangular panel atop the pedestal for roughly 30 seconds. Once the sensor in the panel detected a pulse, it conveyed the data to the robotic arm on the Heart Bot's surface, which then skittered over it like a metal insect, etching a sphere of intersecting lines as thin as gossamer.

When a drawing was done, another guest stepped up to the pedestal and placed his or her hand on it, ready to have their ECG translated into a web of ornamental lines. The Heart Bot layered each new drawing over the previous ones,

creating a complex and compelling latticework resembling a medieval cartographer's map of the cosmos.

With biometrics still in its commercial — and marketing — infancy, most companies might have opted for a literal use of it, falling back on using a Fitbit or similar fitness trackers to record the number of steps guests walked, or the amount of calories consumed, during the event. That, however, would have been as intimate as reciting the periodical table of elements on a first date. Instead, the Heart Bot's diagrams showed each person what the earbuds were recording but could not show: a unique physiological response that implied each participant's singularity, as individual as a fingerprint or a soul. By tweaking the idea of biometrics to create an experience that owed more to art than marketing, Intel and SMS Audio elevated a product launch event to something as purposeful as it was intrinsically playful.

Like Intel and SMS Audio, OoVoo LLC incorporated a biometric element to attract attention and communicate its offerings' unique differentiators. To promote Intelligent Video — a social video-chat product that can detect and track expressions to gauge users' emotions — at the 2015 International Consumer Electronics Show (CES), OoVoo built a 16-by-30-foot wall fronting its 2,500-square-foot booth that read attendees' emotional states with an accuracy that suggested genuine empathy instead of mere electronics.

Made up of 74,088 plastic-coated and magnetized "flip dots" about half an inch tall, the wall resembled those used years ago in train stations and airports, where hundreds of tiles would flip back and forth, depicting a constant flow of arrivals and departures. But when attendees stopped to look at the OoVoo wall, however, they explored not where they were traveling but what they were feeling. Visitors walking by the booth would first see the wall emblazoned with a welcoming invitation such as "Step right up" and "Don't be shy/We won't bite."

Once visitors came within 3 to 4 feet of the structure, cameras at seven locations captured and processed their facial expressions through Affdex, a program from Affectiva

Inc. (which the company has an exclusive license to use in its chat programs) that can gauge emotional states. Analyzing each frame of video, Affdex's "emotion engine" responded via the wall to attendees' expressions. If booth visitors looked ready to have a blues song written about them, the wall projected consoling messages such as "Looks like you have a case of the Mondays." If guests seemed to beam like a big sunflower, they might get a response like "WOW, Your smile lights up the room!" accompanied by a flurry of animated hearts.

Before the end of CES, Time magazine highlighted the exhibit as one of "The 20 Most Eye-Catching Booths at CES 2015," and Adweek praised it as one of "7 Technologies That Marketers Must See at CES."

3-D Printing

What is it?

A staple of science fiction ever since Captain Kirk used the USS Enterprise's food synthesizer to form a meal out of molecules, the idea of a machine that creates an infinite variety of matter on demand has captured our imagination. Science fiction became science fact in 1986, when engineer Chuck Hull, co-founder of 3D Systems Inc., was issued the first 3-D-printing patent for Apparatus for Production of Three-Dimensional Objects by Stereolithography. At the time, the 3-D printing process was mostly limited to creating one-offs of prototypes whose mass manufacture would be handled by traditional production facilities.

The types of 3-D printers can vary almost as much as the objects they can

produce. Some are analogous to mundane inkjet printers, with nozzles that spray multiple layers of waxes or plastic polymers, while others employ metal or glass. No matter what the specific type of 3-D printer you have, however, the procedure it uses to form raw materials into finished projects is roughly the same. The user creates a 3-D model employing computer-aided design software, which is converted to a special file format, such as standard tessellation language. Once the design and instructions are set, the machine uses a material to form the object by layering the

Where can you find out more?

With even Amazon selling hand- and face-recognition devices for a variety of purposes, it's easy to find several good guides to this burgeoning field, such as "Biometrics For Dummies" by Peter Gregory and Michael Simon and "Our Biometric Future: Facial Recognition Technology and the Culture of Surveillance" by Kelly Gates.

Online, Motorola's Inc.'s "An Introduction to Biometrics" is a quick yet data-rich source of knowledge, while BiometricUpdate.com supplies daily news and opinions, including the Biometric Explainers, a series of essays on the role of biometrics in health care, law enforcement, banking, and other areas. The Biometrics Resource Center is the federal government's ground zero for all things biometric. Here you'll find links to Biometrics.gov, where you'll discover a timeline of historical tidbits that will bump you up from amateur to adept.

You can also explore the Biometric Consortium, where you'll find a helpful glossary, an FAQ section, and even a Department of Defense tutorial for those who want to be in the know on the burgeoning field of biometrics. Finally, for a sense of what keeps the industry's proponents in government and industry awake at night, log on to the Secure Identity & Biometrics Association, a major trade association.

raw material in successive sheets, often about 0.1 millimeters thick, hundreds or even thousands of times. The layers of material then dry to form a solid object.

How fast is it growing?

What Johannes Gutenberg's invention of movable-type printing did for the written word in the 15th century, 3-D printing is doing for manufacturing in the 21st. "3-D printing likely will take more time to work into the trade show world,

but it has the potential to disrupt portions of the exhibition industry," says technology consultant Corbin Ball, CMP, and author of "The Ultimate Technology Guide for Meeting Professionals." "Imagine the ability to print out a scale model or actual version of your product on the fly at a show, circumventing traditional costs for shipping, drayage, and booth space." Three-dimensional printing might also prove to be the "cybercavalry" coming to the rescue at the last minute for exhibitors who could print emergency replacement parts for anything from props to pop-up displays.

With the increase in computers' processing power, and the ability of 3-D printers to use higher-quality plastics, as well as ceramic materials, titanium, stainless steel, and even human cartilage, market research firm Canalys.com Ltd. predicts the global market for 3-D printers and services will mushroom at an annual growth rate of 45.7 percent through 2018. And McKinsey Global Institute Research, the business and economics research wing of McKinsey & Co. Inc., believes 3-D printing will have the kind of impact associated with meteors strafing the Earth — \$550 billion by 2025, a figure greater than the current gross domestic product of the United Arab Emirates.

Three-dimensional printing's fast advance has been welcomed in industries as diverse as artificial limbs and aerospace. The applications are, to quote Alexander Dumas, as "varied as humanity" itself: Bespoke Innovations Inc., for example, uses 3-D printing to create coverings for prosthetic limbs that can be enhanced with materials including leather and chrome plating. One of the toasts of last year's CES

was 3D Systems' ChefJet 3D printer, which uses sugar and cocoa butter, rather than metal and plastics, to create sugared confections, and can print in flavors such as vanilla and cherry. And Local Motors Inc. rolled out the world's first 3-D printed car at the 2014 International Manufacturing Technology Show in Chicago. Taking 44 hours to produce, the 1,500-pound two-seater car comprised the same carbon-fiber-infused plastic pellets used to make Legos.

Where can you find out more?

To get up to speed on 3-D printing, start with books such as "3D Printing For Dummies" by Kalani Kirk Hausman and Richard Horne, and "3D Printers: A Beginner's Guide" by Oliver Bothmann. Then follow up those appetizers with a main course of "Makers: The New Industrial Revolution" by Chris Anderson, "3D Printing: The Next Industrial Revolution" by Christopher Barnatt, "Fabricated: The New World of 3D Printing" by Hod Lipson and Melba Kurman, and "Make: Ultimate Guide to 3D Printing 2014" by Mark Frauenfelder.

If you prefer to learn about 21st century technology in a 21st century fashion, check Element14, an online community for engineers, which offers a series of free 3-D printing courses called 3D Printing 101. Led by Kalani Kirk Hausman, the co-author of "3D Printing for Dummies," the interactive webinars are free (once you register at the site) and will teach you everything from basic terminology to fundamental components of 3-D printing. To go from theory to practice, Shapeways Inc.'s "3D Modeling for 3D Printing Tutorial for Beginners" helps you transform your doodle into an actual 3-D design.

To find the 3-D printer that works best for your needs, pore over the 2015 3D Printer Guide where the informed opinions of nearly 2,300 3-D printer owners are arranged into five categories, such as Enthusiast Printers, Budget Printers, and Plug-n-Play Printers.

How are marketers using it?

For the 2014 Gastech Conference and Exhibition in Seoul, South Korea, Excelerate Energy L.P. fueled its customers' knowledge of the company's vast geological services with the aid with 3-D models that turned the tangled into the tangible. The Woodlands, TX-based importer and marketer of liquefied natural gas wanted to illustrate for its audience of government officials, dignitaries, and other energy professionals its process of onboard liquefaction and regasification. The particular procedure starts with liquefaction, which involves extracting dust, helium, water, and other adulterants from the natural gas, condensing it into a liquid by chilling it to a nippy 260 degrees below zero, and loading it on to tankers. After that, the frosty cargo is delivered to a regasification terminal, where it's converted back into a gas. Unless you're a geology geek or Bill Nye the Science Guy, though, the operation can be as deadly dull as reading a software program's end-user agreement.

Partnering with GES, Excelerate Energy decided to demonstrate its cutting-edge technology using 3-D printing. In the place of listless literature and stodgy spiels that rival tryptophan for their ability to induce drowsiness, it would use a variety of physical 3-D models of its ships and production facilities to depict the complex and protracted process.

About three weeks before the show opened last March, the company 3-D printed 28 hard-plastic models of its docks, shoreline, buoys, and ships. The scale models included the liquid natural gas carrier (LNGC), the floating storage and regasification unit (FSRU), and the floating

liquefaction storage and offloading unit (FSLO). The models, including the LNGC — which in real life can extend nearly 1,200 feet long — appeared as if the facilities, gargantuan in reality, had been reduced with a science-fiction shrink ray. Once the models were set on top of screens in the booth, attendees were able to wield the FSRU and FSLO to activate various educational animations.

When attendees entered the company's 51-by-30-foot booth, they encountered two 55-inch touchscreens laid flat like a table, positioned horizontally to mimic the vast blue plane the ships traverse in bearing energy to the world. While staff gathered contact information, visitors moved quickly

to the tables, one of which illustrated Excelebrate's regasification methods and another that depicted liquefaction offerings. On the right half of each touchscreen were 3-D-printed models of the shoreline, docks, buoys, and LNGCs. The models, except for the regasification and liquefaction vessels, were adhered to the surface of the screens.

Guests began by picking up the 6-inch-long, half-pound carrier and placing it on a digital icon, such as the one near the model of the off-shore dock. When a visitor set the ship on the icon, the screen came alive with animations explaining the offshore loading process, while placing the model on a regasification icon activated another animation explaining the intricacies of that process. Further, when guests dragged a digital slider bar built into the screen's interface back and forth, other icons appeared that they could touch and explore, like those highlighting the company's offshore and dockside facilities. In all, there were 15 different 3-D animations running from 15 to 30 seconds long that illustrated the company's processes.

Excelebrate Energy exploited the key strengths of 3-D printing: Prototypes could be printed in hours, with little lead time, refined, and then printed again until the designs were perfected, and at a fraction of what more traditional model making might have cost. Plus, the company transformed what could have been a dull experience into one where attendees wanted to explore with boundless curiosity.



Three-dimensional printing can rule the road every bit as much as it did the seas. For many people, Peterbilt Motors Co. and Mack Trucks Inc. hog the highway when it comes to commercial vehicles. It might feel like there's not much room for lesser-known companies such as UD Trucks Corp., despite its 80-year history of building the same types of vehicles. But when the Ageo, Japan, truck maker (owned by Sweden's AB Volvo Group) wanted to debut its new Quester models for the emerging Asian market, it went into high gear with a launch event that used 3-D-printed props.

Working with Valentin&Byhr, a marketing agency in Goteborg, Sweden, UD Trucks hosted its Quester launch

event in Bangkok's Centre Point Convention Center. Here, the company needed a simple but compelling way to tout the heavy-duty Quester line's new features to 1,800 buyers and journalists hailing from Asia, Africa, and the Middle East. So UD Trucks used seven 3-D-printed items to represent the capabilities of the new Quester trucks.

Measuring 8-by-4-inches, and weighing 7 to 11 ounces, the icons included an ice-cream treat (symbolizing food transport) and even a rock (signifying the construction industry). The models also came equipped with an RFID chip in the bottom. When an attendee lifted one of the nylon/plastic models from a podium, a custom-built application read the RFID chip and changed to the corresponding truck variation on a 50-inch screen in the back of the podium, which came alive with images of the vehicles. By merging 3-D printing with motion-control and gesture-recognition technology, UD Trucks created a whimsical experience for guests. Yet the playful aspects never passed by the commercial needs, driving attendees to order 300 trucks during the event. **E**

In the next two installments of "Back to the Future," we'll cover additional disruptive technologies — wearables, geofencing, projection mapping, immersive reality, and more — that are turning the trade show world upside down and inside out.

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