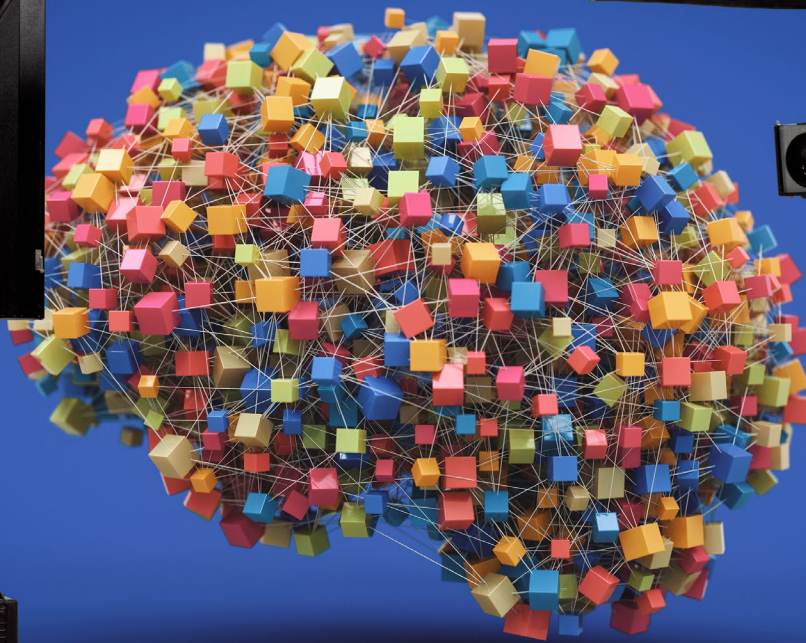


Generative AI and CGI for brand imagery

A Quad Insights
white paper

Now with an advanced 3D scanning update



A guide for marketers

Quad 

Introduction

Over the past few years, generative AI (artificial intelligence) has provoked plenty of very real — and very human — reactions and emotions, including:

- Continuing wonder at the current capabilities of the technology — and astonishment at the possibilities (see, for instance, text-to-video generators including OpenAI’s Sora and Luma AI’s Dream Machine).
- Rising unease, particularly among members of the creative community — many of whom see generative AI as a job-destroyer — and a general public that is increasingly seeing disturbing uses of the technology (see pages 6–7).
- Growing consumer and workplace acceptance at a basic level, as generative AI tools have increasingly been incorporated into mainstream products and platforms, including those from Adobe, Apple, Google, Meta and Microsoft.
- Continuing concerns about the legal issues surrounding the intellectual property (IP) on which generative AI platforms are trained (see page 5).
- A sort of giddy “gold rush” sensibility among tech investors, who poured almost \$50 billion into AI-related startups in 2023, [according to Crunchbase](#).

All of those realities have combined to create a feeling of whiplash among marketers, who are expected to somehow both continue to embrace this emerging technology while also exercising extreme caution. What’s the right balance for brands?

To help answer that question, we’ve put together this white paper. As a marketing experience (MX) company that works with more than 2,100 brands across every conceivable vertical (from retail

and CPG to fashion and healthcare), Quad has been deploying AI technologies across marketing applications — including data analytics and offer optimization — for years.

This report, though, specifically focuses on the visual side of the generative AI equation. Deploying generative AI for marketing image creation in a responsible manner means that marketers need a clear-eyed view of both the possibilities and the pitfalls. Toward that end, this report includes:

- Big-picture guidance in the form of a rundown of the six most important considerations for marketers who are using, or plan to use, generative AI to create brand/marketing imagery.
- An interview with Jimmy Richardson, Group VP, Studio & Creative at Quad, an expert on the use of generative AI and related computer-generated technologies for marketing imagery.
- A section covering the use of next-gen 3D scanning technology.



1. First, ask how deploying generative AI might — or might not — serve your brand values

The fact that the user interfaces of both verbal and visual generative AI platforms are typically simple to start using means that anyone can quickly derive some value — or at least the *illusion* of value — from them.

We say *illusion* because, remember, the “A” in “AI” stands for “Artificial” — generative AI platforms are merely mimicking human intelligence and imagination.

In the visual realm, generative AI platforms are good at appearing to be creative or artistic, which of course is different from *actually* being creative or artistic. Essentially, they’re channeling and remixing creativity — creative assets — that already exist on the internet. (More on that on page 5.)

Now, consider the extent to which brands everywhere have been touting their “authenticity,” and it’s not hard to imagine marketers facing a collision course if they rush into deploying tools that are, by definition, faking it.

In a post headlined [“5 brands restricting AI in their marketing,”](#) Ad Age’s Asa Hiken writes about how “brands in fashion, cosmetics and entertainment have drawn lines in the sand,” including L’Oréal, which is “prohibiting using AI to depict human hair or skin tones,” and Unilever’s Dove, which has “pledged to ‘never’ use the technology to depict real humans in its advertising because of the unrealistic ways in which AI tends to portray beauty.” (The other brands covered in the story are Lego, H&M and Thinx. Keep reading [here](#).)

Gartner saw this coming. The tech research firm [declared](#), “By 2027, 20% of brands will lean into positioning and differentiation based on the absence of AI in their business and products.”

As Emily Weiss, Senior Principal Researcher in the Gartner Marketing Practice, put it: “Mistrust and lack of confidence in AI’s abilities will drive



Generative AI platforms are good at appearing to be creative or artistic, which is different from actually being creative or artistic.

some consumers to seek out AI-free brands and interactions. A subsection of brands will shun AI and prioritize more human positioning. This ‘acoustic’ concept will be leveraged to distance brands from perceptions of AI-powered businesses as impersonal and homogeneous.”

For those brands that are continuing to explore and use AI, though, a key goal is surely about saving money — it is, after all, an automation tool — but that desired outcome must be balanced with an unwavering commitment to the core brand mission.

“Intentional control of the brand image is what great brands understand,” says Quad’s Richardson. “It’s a crapshoot with generative AI — you’re looking for a reduction of costs by having a hit-or-miss scenario in place. What big brands and retailers want is consistency and brand control. Because that’s what they’re built on.”

2. Make sure your image-creation strategies are clearly aligned with your marketing goals

When it comes to generating visual assets for brands, reducing costs and automating workflow are worthy and achievable goals.

In fact, helping brands achieve those goals is the primary mission of Quad's MX: Creative offering — a central part of the overall Quad suite of solutions.

Quad has studio locations across the U.S. and the world — from Sussex, Wisconsin to Dallas to Hong Kong. Each of those locations is staffed with teams of photographers, videographers, CGI artists and audio and lighting technicians who collectively produce visual assets for hundreds of marketing clients.

Quad's CGI work — including model creation from next-generation 3D scanning equipment rather than conventional digital photography equipment — has been opening up new possibilities for marketers.

By creating versatile CGI assets in the place of traditional product photography, for instance, brands are able to achieve some of the key objectives of deploying generative AI — including workflow automation and cost savings — while also maintaining full creative control.

To learn more, check out our in-depth conversation with Jimmy Richardson starting on page 10, as well as the section covering the use of next-gen 3D scanning technology starting on page 12.



By creating versatile CGI assets, brands are able to achieve some of the key objectives of deploying generative AI — including workflow automation and cost savings.

3. To understand the copyright complications surrounding generative AI, start here

Every day it seems there is fresh media coverage related to the copyright and intellectual property (IP) implications of content produced using generative AI. The legal landscape can be bewildering, but the key to understanding what's going on involves focusing on the core concept of authorship.

On March 16, 2023, the Copyright Office of the Library of Congress issued a statement of policy titled [“Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence.”](#)

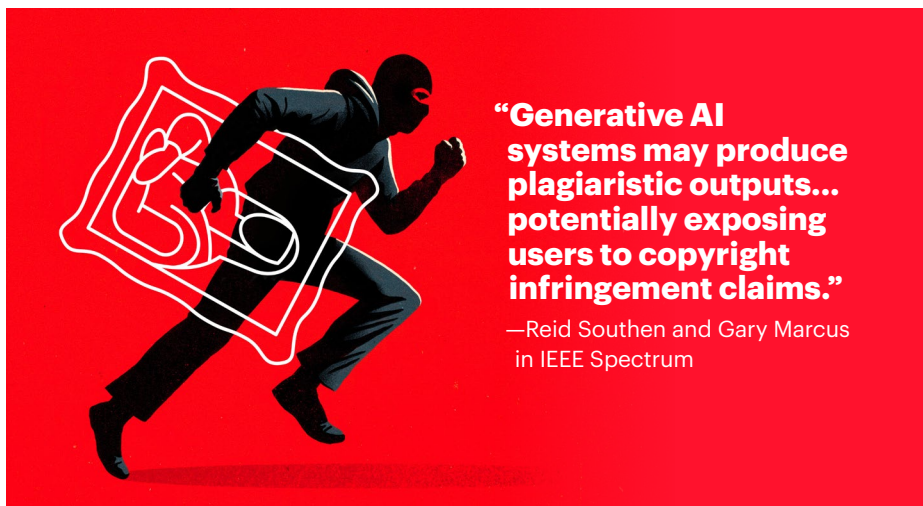
The statement runs a rather dense 24 paragraphs, but the key passage reads, “In the Office’s view, it is well-established that copyright can protect only material that is the product of human creativity. Most fundamentally, the term ‘author,’ which is used in both the Constitution and the Copyright Act, excludes non-humans. The Office’s registration policies and regulations reflect statutory and judicial guidance on this issue.”

It’s become increasingly clear that the “non-humans” have been leaning heavily on us humans for their “creations.”

For instance, in January 2024, The New York Times published a story by tech reporter Stuart A. Thompson headlined [“We Asked A.I. to Create the Joker. It Generated a Copyrighted Image.”](#) The image in question was of intellectual property owned by Warner Bros.

And the Joker image was just the tip of the iceberg. The Times was successfully able to get generative AI platforms to “create” various copyright-infringing images while replicating a series of tests first executed by Reid Southen, a movie concept artist, and Gary Marcus, a New York University-based A.I. expert.

Marcus, Thompson writes, “collaborated with Mr. Southen to run [various] prompts. Mr. Marcus



suggested removing specific copyrighted references. ‘Videogame hedgehog’ returned Sonic, Sega’s wisecracking protagonist. ‘Animated toys’ created a tableau featuring Woody, Buzz and other characters from Pixar’s ‘Toy Story.’ When Mr. Southen and Mr. Marcus tried ‘popular movie screencap,’ out popped Iron Man, the Marvel character, in a familiar pose.”

Those particular characters were output by AI image generator [Midjourney](#). Separately, the Times tasked ChatGPT with “creating” an image of SpongeBob SquarePants. “The chatbot said the image only resembled the copyrighted work,” Thompson reports, but in fact it looked “remarkably similar to the cartoon.”

In addition to garnering Times coverage, Southen and Marcus published their findings in a guest post for IEEE Spectrum, the magazine of the Institute of Electrical and Electronics Engineers, headlined [“Generative AI Has a Visual Plagiarism Problem.”](#)

As the authors put it, “These results provide powerful evidence... that at least some generative AI systems may produce plagiaristic outputs, even when not directly asked to do so, potentially exposing users to copyright infringement claims.”

4. Brands are experimenting with deploying AI-inflected campaigns and assets — and some have faced blowback

In a January 2024 post headlined [“Artists are making creative companies apologize for using AI,”](#) The Verge’s Jess Weatherbed reports that “drawing tablet manufacturer Wacom is the latest target being slammed by the digital art community after appearing to use AI-generated images in ads.” Members of the community had posted on X (formerly Twitter) and TikTok that they’d noticed “Wacom was promoting its Intuos pen tablet with a dragon illustration that showed telltale marks of AI-generated images — such as questionable scale designs and fur blending unnaturally into other sections of the image,” Weatherbed writes.

Wacom ended up responding with “a message from the Wacom Team” posted to social media that read, in part, “We want to assure you that using AI generated images in these assets was not our intent” — adding that it had purchased the images “through a third-party vendor where it was indicated that they were not AI generated. We vetted the images through a few popular online tools that also indicated that they were not AI generated. However, given the community’s feedback, we are now not sure how the images were created.”

Wacom said it pulled the images in question and was in the process of “reviewing and updating our processes so that we can avoid this happening again,” adding that, “As a partner for artists around the world, Wacom supports human creativity and strives to serve the community with integrity.”

In another cautionary tale, in April 2024, the Washington State Lottery pulled “a promotional AI-powered web app after a local mother reported that the site generated an image with her face on the body of a topless woman,” [Ars Technica’s Kyle Orland reports](#). Lottery officials issued a statement saying that they’d “worked closely

with the developers of the AI platform to establish strict parameters to govern image creation,” but that somehow “a single user of the AI platform was purportedly provided an image that did not adhere to those guidelines.”

Even successful campaigns with no unintended assets or outputs can generate controversy when generative AI is brought into the mix. See, for instance, a March 2024 report by Ad Age’s Tim Nudd and Arvelisse Bonilla Ramos, [“Under Armour’s AI-driven ad unnerves production community already on edge,”](#) as well as an August 2024 post by Vox’s Rebecca Jennings, [“Those Olympics AI ads feel bad for a reason: It’s not just Google’s ‘Dear Sydney’ commercial that feels soulless and strange.”](#)

“What’s happening in the marketing and creative communities is a real-time reconsideration of the notion of ‘authorship,’” says Erik Spooner, Marketing Creative Director at Quad. “There is going to be a continuing level of anxiety about the exact role of human creatives in the final product when generative AI is brought into the process. After all, flesh-and-blood creatives have egos, pride in their work, a sense of personal vision — and AI has none of those things.”

Even successful campaigns with no unintended assets or outputs can generate controversy when generative AI is brought into the mix.

“When researchers talk about generative AI models ‘training’ on content, they’re essentially saying that AI is absorbing and extrapolating from existing material that was created over time by humans,” says Garon Benner, Marketing Director of Owned Platforms and Technology at Quad. “Yes, it’s generative, but it’s also derivative by design. I see human creativity being similarly derivative, but we’ve never had to quantify it in a new way.”

As marketers experiment with generative AI, it’s important to monitor the larger dialogue in the culture about the technology among consumers and the media. In April 2024, for instance, The Washington Post published a report by Pranshu Verma and Cat Zakrzewski headlined [“AI deepfakes threaten to upend global elections. No one can stop them.”](#)

The growing awareness of how AI technologies are being used in sinister ways in the context of election interference comes at a time when consumers are increasingly seeing disturbing AI-generated images go viral.

For instance, when explicit AI-generated images of Taylor Swift went viral on X, attracting over 45 million views before the originating account was suspended. The bottom line: Generative AI got a fresh black eye with this nightmare scenario for the global pop superstar — and now millions of so-called Swifties (devoted fans of Taylor Swift) have a new, deeply personal reason to think of the technology as downright creepy.



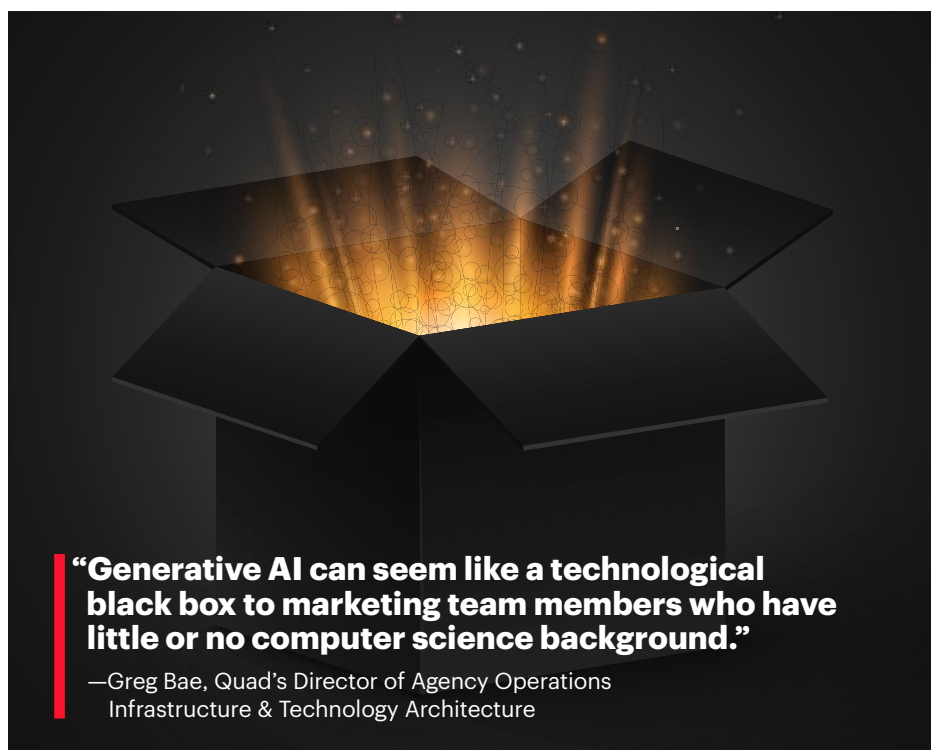
It’s important to monitor the larger dialogue in the culture about generative AI among consumers and the media.

5. It may be time to update your internal AI training protocols and policies

Beyond explicitly stating goals and establishing broad guidelines for generative AI projects, marketing organizations need to build out educational and policy infrastructure. Employees at all levels of organizations continue to dive into generative AI experimentation, often with no formal training, which adds another layer of unpredictability to an already wildly unpredictable toolset.

A few things to keep in mind for your company's evolving educational and policy infrastructure surrounding AI:

- **Don't hesitate to explain the basics to your team.** "Generative AI can seem like a technological black box to marketing team members who have little or no computer science background," says Greg Bae, Quad's Director of Agency Operations Infrastructure & Technology Architecture. "So, a bit of foundational, 101-level education on the basics of the technology can make a big difference."
- **Generative AI is rapidly changing — so make sure your internal guidelines and guardrails are keeping pace.** Written policies surrounding the use of generative AI tools should be reexamined and updated, as necessary, on a regular basis. "One thing creative organizations and marketing departments should be looking at closely is making sure an asset management process is in place that covers clearance and credits, and clearly documents the origin of visual assets that may factor into a generative AI activation now or in the future," says Quad's Richardson.



- **Remember that visual assets are a form of data that needs to be protected.** Marketing teams routinely traffic in trade secrets — sharing closely guarded brand materials related to precisely timed product and campaign launches. Even in the course of "informal" generative AI experimentation, the disposition and manipulation of those materials in the cloud demands careful consideration.

For marketing teams looking to level up their learning, Quad has been advising clients on defining goals for generative AI experimentation/deployment and involving select brands in generative AI and CGI pilot testing.

6. Know that the ‘statutory and judicial guidance’ surrounding generative AI is evolving

The U.S. Copyright Office’s statement about AI cited in section 3 above sounds rather definitive — but at the end of its full policy declaration, there’s a telling sentence: “The Office continues to monitor new factual and legal developments involving AI and copyright and may issue additional guidance in the future related to registration or the other copyright issues implicated by this technology.”

While the Office has offered no suggestion of a timeline for that potential “additional guidance,” lawsuits surrounding the use of generative AI continue to wind their way through the U.S. legal system.

As James Grimmelman, Professor of Digital and Information Law at Cornell, [told Megan Morrone of Axios](#): “Copyright owners have been lining up to take whacks at generative AI like a giant piñata woven out of their works.”

Meanwhile, in April 2024, Sen. Maria Cantwell (D-Wash.) and Rep. Cathy McMorris Rodgers (R-Wash.) introduced their proposal for the American Privacy Rights Act (APRA), [which AdExchanger’s Allison Schiff calls](#) “the first serious attempt at a compromise to pass national privacy legislation since the American Data Privacy and Protection Act (ADPPA) failed to advance last year.” The wide-ranging legislation could affect everything from ad-targeting to, yes, the data used to train generative AI systems.

Stay tuned.



“Copyright owners have been lining up to take whacks at generative AI like a giant piñata woven out of their works.”

—Cornell Professor James Grimmelman in an interview with Axios

An interview with generative AI and CGI expert Jimmy Richardson

As Group VP, Studio & Creative at Quad, Jimmy Richardson leads a team of photographers, videographers, CGI artists and audio and lighting technicians who produce visual assets for hundreds of Quad clients. Based in Dallas, he oversees studio locations across the U.S. and collaborates with Quad's global locations — from Sussex, Wisconsin, to San Antonio, Texas; Mooresville, North Carolina, to Manipal, India; and Minneapolis to Hong Kong.

Richardson is an expert on the creation of computer-generated imagery — from 3D scanning tech to generative AI and beyond — for marketing applications. In this interview, he shares his thoughts on the present and future of creative asset automation for brands.

In the past we've spoken about the barriers to generative AI becoming a universally useful, reliable tool for the creation of brand imagery. What's your thinking these days?

Richardson: Quality control and legal concerns surrounding intellectual property are still the big issues.

As much as the technology has been advancing, those are still the big red flags for marketers?

Richardson: Right, and they're not going away any time soon.

Let's talk about how marketers can move forward in creating digital visual assets at scale. I know your team has been exploring the intersection between generative AI and next-generation 3D scanning technology, which seems to be a way to keep much tighter control of all the variables. First, give us the elevator pitch on what you're doing with scanning.

Richardson: By using leading-edge scanning technology, we create a single digital asset — of, for instance, a product such as a sneaker or a backpack — and unleash its potential to generate a diverse array of marketing assets.

Like what, for instance?

Richardson: Photorealistic still renders, 360° interactive spins, full-motion video, AR/VR experiences such as virtual try-ons, social media posts and so on.

This sort of next-gen scanning replaces traditional digital photography and captures a lot more information surrounding a given object, right?

Richardson: Right. It really is game-changing technology. In the scanning process, we're capturing not only all the information that makes up the object's form, but the lighting, the textures, the colors — all of that is mapped and included in the asset.



A Quad Studios facility in Sussex, Wisconsin

The shorthand for those of us who are not computer scientists is basically that you're creating a sort of three-dimensional digital twin of a product — and that asset is incredibly versatile and can be used in a massive number of different marketing applications.

Richardson: Exactly. And unlike generative AI, which can “make” a shoe, this is *your* shoe — a completely accurate, true-to-life capture of your brand's shoe that can then be used in countless different ways.

Is that where this new 3D asset can be combined with generative AI? The shoe is reality-based — true-to-life, true-to-brand — but the environments you put that shoe in don't necessarily have to be?

Richardson: Right. For instance, you have this scan of a particular model of your brand's shoe. You can put that shoe on, say, a beach — or in a forest. If you don't care too much about the exact type of leaves on the plants in the forest, then great, we can generate the forest through AI — but when it comes to the product level, you want your exact product represented there. So that way it's a combination of approaches — putting real-world objects in a generated world.

There are so many channel initiatives with brands nowadays that it's impossible to look at it like you did 20 years ago where you'd say, “Here are our

video assets that we need for broadcast — for a TV commercial. Here are our still photography assets — for a print ad or for a catalog.” And so on.

Our approach at Quad is to help marketers evolve from thinking of assets for each channel as separate things that are produced separately. We're helping you solve across multiple channels with asset creation — in the process amplifying your brand's impact while simplifying your workflow and saving time and money.



Once a wireframe model is created, it can be retextured and recolored for line extensions.

6 things marketers need to know about using next-gen 3D scanning technology for brand imagery

Internet sleuths have been spending a lot of time trying to discern if certain seemingly real photos were actually created by generative AI.

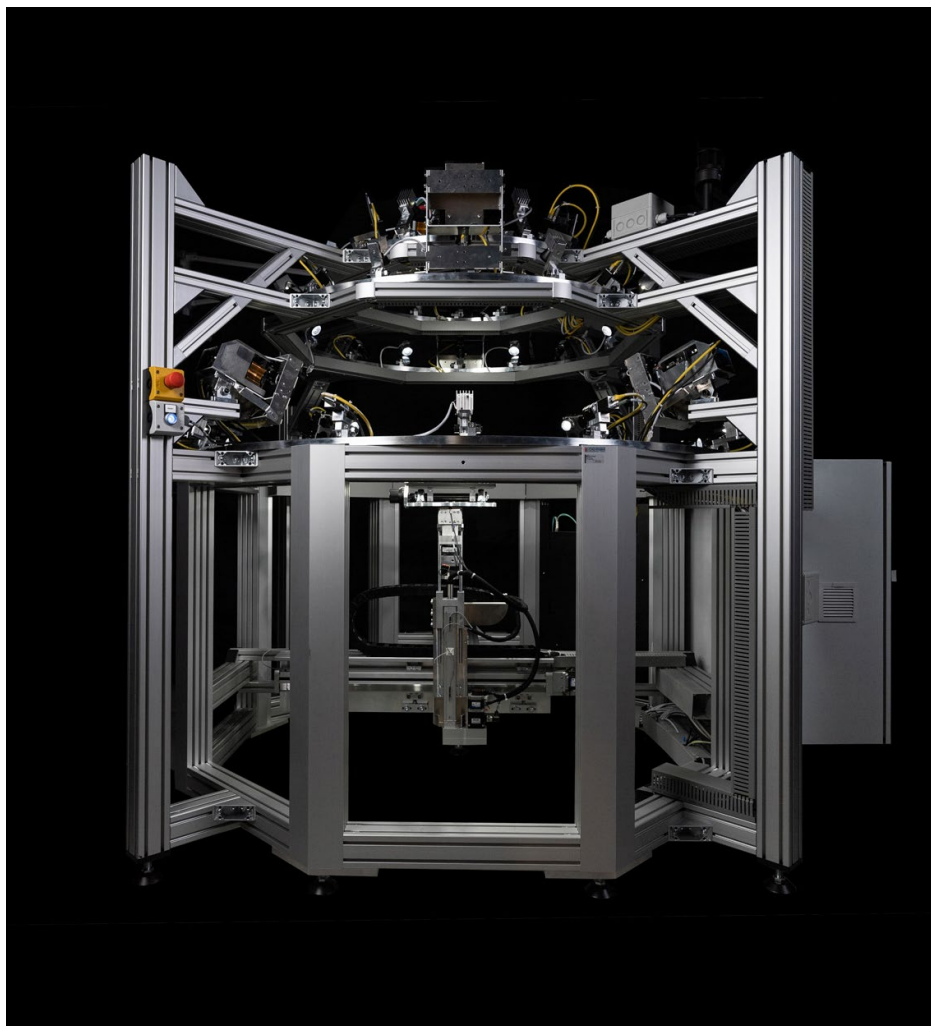
For now, there are often “tells” — such as weird digital artifacts or a certain surreal, uncanny “off” quality — that can signal the synthetic origins of a given image. We’re all getting used to the idea that when it comes to digital images, reality is increasingly not always what it seems — which can be problematic for marketers, as we’ve noted elsewhere in this guide (see pages 6-7), when those same dogged sleuths descend on AI-created brand imagery.

But for marketers, there’s another path to creating brand imagery at scale that doesn’t carry the “caught faking it” risk of generative AI. That path is next-generation 3D scanning. Here’s what you need to know:

Next-gen 3D scanning is “reality-grade”

Unlike generative AI tools that attempt to *approximate* reality, 3D scanning technology is reality. At Quad, we’ve partnered with ALLSIDES to install the first 3D-Twin scanner for client-facing projects in North America.

The installation, at our Mooresville (Charlotte), North Carolina studio, marks the launch of 3D Commerce by Quad, our new scalable, automated solution for creating “digital twins” with omnichannel applications for brands. The ALLSIDES system comprises a series of 30 cameras in a spherical array for mass-production scanning without the need for extensive manual post-production work. Using technology that runs on AI learning to improve the quality of the 3D models, the system maps the defining features, characteristics, lighting, textures and colors of an object to create a digital asset that is unique to a brand.



The ALLSIDES 3D-Twin scanner is at the core of the 3D Commerce by Quad offering.

It's about versatility

The “digital twin” that results is essentially a photorealistic 3D model that is repositionable and relightable and can be used across multiple marketing applications, including virtual 2D photography for e-commerce and print (images can be output at any angle from a single scan), product videos (from web and broadcast spots to 360° videos) and AR/VR and virtual try-on (VTO) technologies for mobile apps and websites.

It streamlines content creation workflow

A digital twin 3D asset allows for a single project to achieve results that currently require multiple workflows and budgets (photography, video, print, etc.).

It optimizes the creation of visual content at scale

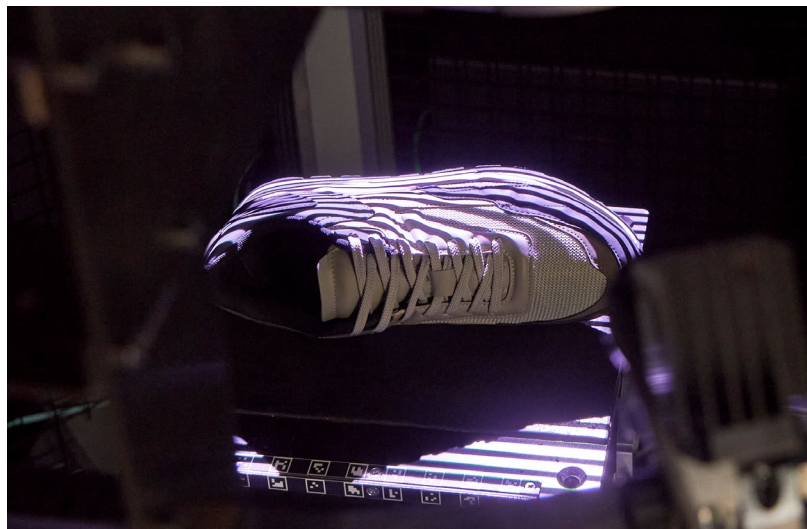
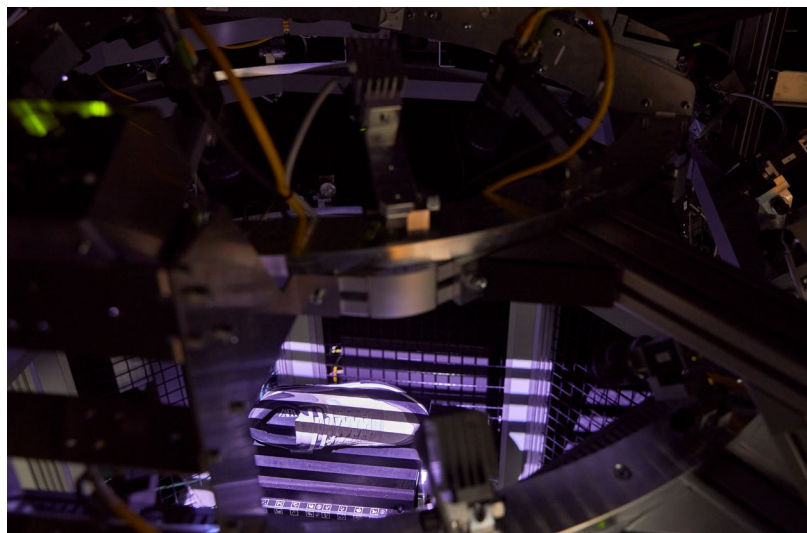
The combination of unprecedented asset versatility and streamlined production workflow means that marketers can create visual content at scale within previously unimaginable timeframes.

It's ideal for brands and retailers with “holdable” products

3D Commerce by Quad is suitable for scanning rigid products including footwear, small handbags/accessories, toys, tools and sporting goods (hats, gloves, balls, etc.) with a maximum object size of 15.75” x 15.75” x 19.7” (40 cm x 40 cm x 50 cm).

It can help bridge the gap between reality and generative AI

3D Commerce by Quad allows for the addition of reality-grade 3D image assets to generative AI databases. For instance, a digital twin can allow your product to be shown exactly as it exists IRL, but integrated into an AI-generated environment.



The features, characteristics, lighting, textures and colors of a sneaker are captured using the ALLSIDES 3D-Twin scanner.

The combination of unprecedented asset versatility and streamlined production workflow means that marketers can create visual content at scale within previously unimaginable timeframes.

About Quad

Quad (NYSE: QUAD) is a marketing experience, or MX, company that helps brands make direct consumer connections, from household to in-store to online. The company does this through its MX Solutions Suite, a comprehensive range of marketing and print services that seamlessly integrate creative, production and media solutions across online and offline channels. Supported by state-of-the-art technology and data-driven intelligence, Quad simplifies the complexities of marketing by removing friction wherever it occurs along the marketing journey. The company tailors its uniquely flexible, scalable and connected solutions to each clients' objectives, driving cost efficiencies, improving speed-to-market, strengthening marketing effectiveness and delivering value on client investments.

Quad employs more than 11,000 people in 11 countries and serves approximately 2,100 clients including industry leading blue-chip companies that serve both businesses and consumers in multiple industry verticals, with a particular focus on commerce, including retail, consumer packaged goods, and direct-to-consumer; financial services; and health. Quad is ranked among the largest agency companies in the U.S. by Ad Age, buoyed by its full-service media agency, Rise, and creative agency, Betty. Quad is also one of the largest commercial printers in North America, according to Printing Impressions.

For more information about Quad, including its commitment to operating responsibly, intentional innovation and values-driven culture, visit quad.com.

Connect with us
1 (888) 782-3226
Quad.com

© 2024 Quad/Graphics, Inc. All rights reserved. | 08/24

