The Answer Factory: Fast, Disposable, and Profitable as Hell

By Daniel Roth - October 19, 2009

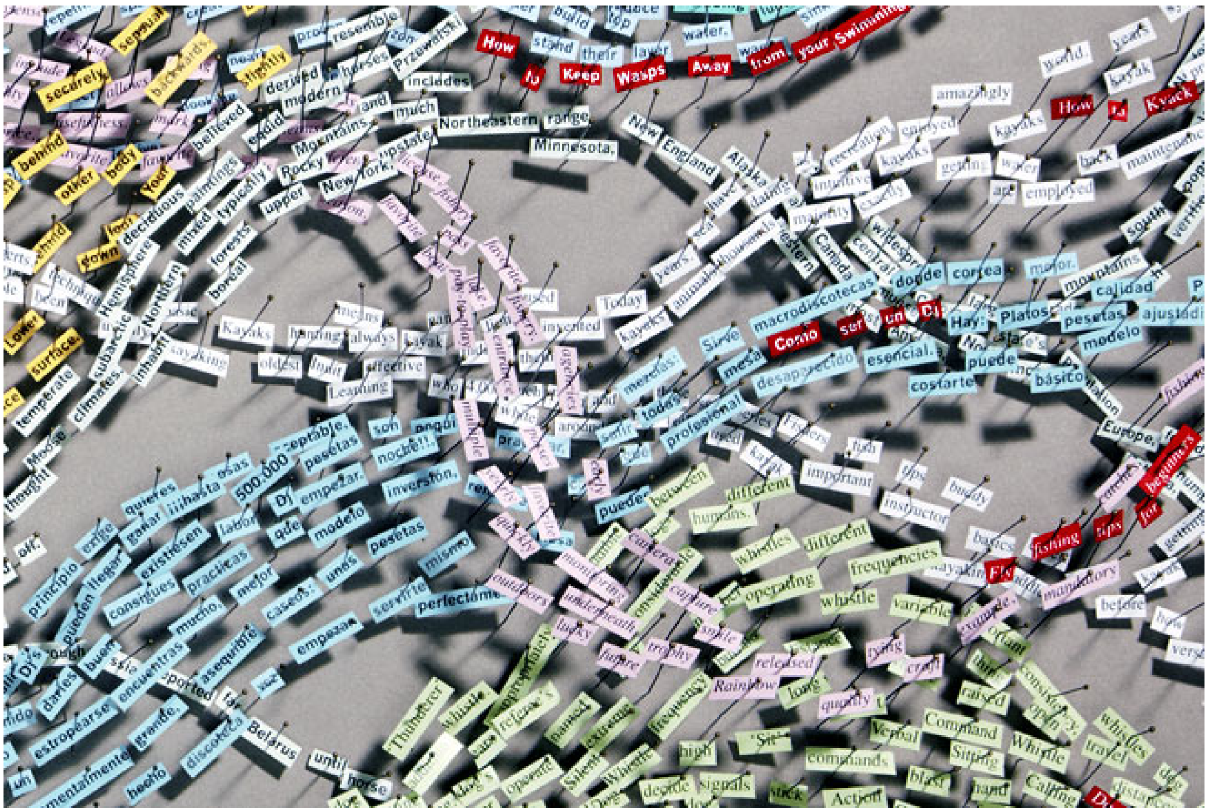

Illustration: Stephen Doyle

Christian Muñoz-Donoso is going to make this job pay, he’s got to move quickly. He has a list of 10 videos to shoot on this warm June morning, for which he’ll earn just $200. To get anything close to his usual rate, he’ll have to do it all in two hours. As he sets up his three video cameras on the rocky shore of a man-made lake in Huntington, Massachusetts, he thinks about the way things used to be. He once spent two weeks in a bird blind in his native Chile to capture striking footage of a rarely seen Andean condor. But those jobs are almost as endangered as that bird. Now he trades finesse for speed.

Today’s topic is kayaking. Muñoz-Donoso has enlisted a local instructor to meet him and to bring along four of his boats. Every five minutes, Muñoz-Donoso’s assistant shouts a new subject — “Kayak basics!” “Paddling tips!” — and the expert, sitting in one of his rigs in the bourbon-colored water, riffs off the top of his head. Muñoz-Donoso gets most of his shots in one take. But conditions are working against him. Shifting winds and changing light require him to adjust his setup. The instructor keeps switching kayaks and gear. Finally, the entire shoot has to be put on hold as three bearded fishermen loudly and slowly drag their boats into the lake, directly into the frame. Muñoz-Donoso hoped to finish his shoot by 11, but it's already 12:45 when he crams his equipment into the back of his SUV and speeds back to his office, 20 mile away.

He climbs a flight of stairs to his studio above a strip mall, unloads his gear, and keeps up his breakneck pace. As he opens his files in Final Cut Pro, he winces. "Normally I'd eliminate the wind or the kid screaming in the background," he says. "But in this case we don't do any of that." He points out that the focus is off: The rippling water is sharp while the kayaking instructor is slightly blurred. But the company he's working for won't care, he says, so why should he — especially for $20 a clip? Within a few hours, he has uploaded his work to Demand Media, his employer for the day. It isn't Scorsese, but it's fast, cheap, and good enough.

Thousands of other filmmakers and writers around the country are operating with the same loose standards, racing to produce the 4,000 videos and articles that Demand Media publishes every day. The company's ambitions are so enormous as to be almost surreal: to predict any question anyone might ask and generate an answer that will show up at the top of Google's search results. To get there, Demand is using an army of Muñoz- Donosos to feverishly crank out articles and videos. They shoot slapdash instructional videos with titles like "How To Draw a Greek Helmet" and "Dog Whistle Training Techniques." They write guides about lunch meat safety and nonprofit administration. They pump out an endless stream of bulleted lists and tutorials about the most esoteric of subjects.

Plenty of other companies — About.com, Mahalo, Answers.com — have tried to corner the market in arcane online advice. But none has gone about it as aggressively, scientifically, and single-mindedly as Demand. Pieces are not dreamed up by trained editors nor commissioned based on submitted questions. Instead they are assigned by an algorithm, which mines nearly a terabyte of search data, Internet traffic patterns, and keyword rates to determine what users want to know and how much advertisers will pay to appear next to the answers.

The process is automatic, random, and endless, a Stirling engine fueled by the world's unceasing desire to know how to grow avocado trees from pits or how to throw an Atlanta Braves-themed birthday party. It is a database of human needs, and if you haven't stumbled on a Demand video or article yet, you soon will. By next summer, according to founder and CEO Richard Rosenblatt, Demand will be publishing 1 million items a month, the equivalent of four English-language Wikipedias a year. Demand is already one of the largest suppliers of content to YouTube, where its 170,000 videos make up more than twice the content of CBS, the Associated Press, Al Jazeera English, Universal Music Group, CollegeHumor, and Soulja Boy combined. Demand also posts its material to its network of 45 B-list sites — ranging from eHow and Livestrong.com to the little-known doggy-photo site TheDailyPuppy.com — that manage to pull in more traffic than ESPN, NBC Universal, and Time Warner's online properties (excluding AOL) put together. To appreciate the impact Demand is poised to have on the Web, imagine a classroom where one kid raises his hand after every question and screams out the answer. He may not be smart or even right, but he makes it difficult to hear anybody else.

The result is a factory stamping out moneymaking content. "I call them the Henry Ford of online video," says Jordan Hoffner, director of content partnerships at YouTube. Media companies like The Atlanta Journal-Constitution, AOL, and USA Today have either hired Demand or studied its innovations. This year, the privately held Demand is expected to bring in about $200 million in revenue; its most recent round of financing by blue-chip investors valued the company at $1 billion.

In this industrial model of content creation, Muñoz-Donoso is working the conveyor belt — being paid very little for cranking out an endless supply of material. He admits that the results are not particularly rewarding, but work is work, and Demand's is steady and pays on time. Plus, he says, "this is the future." He has shot more than 40,000 videos for Demand, filming yo-yo whizzes, pole dancers, and fly fishermen. But ask him to pick a favorite and he's stumped. "I can't really remember most of them," he says.

In an era overwhelmed by FlickrYouTubeWikipedia-BloggerFacebookTwitter-borne logorrhea, it's hard to argue that the world needs another massive online content company. But what Demand has realized is that the Internet gets only half of the simplest economic formula right: It has the supply part down but ignores demand. Give a million monkeys a million WordPress accounts and you still might never get a seven-point tutorial on how to keep wasps away from a swimming pool. Yet that's what people want to know. Ask Byron Reese.

Reese is a tall Texan who serves as Demand's chief innovation officer and who created the idea-spawning algorithm that lies at the heart of Demand's process. To determine what articles to assign, his formula analyzes three chunks of information. First, to find out what terms users are searching for, it parses bulk data purchased from search engines, ISPs, and Internet marketing firms (as well as Demand's own traffic logs). Then the algorithm crunches keyword rates to calculate how much advertisers will pay to appear on pages that include those terms. (A portion of Demand's revenue comes from Google, which allows businesses to bid on phrases that they would like to advertise against.) Third, the formula checks to see how many Web pages already include those terms. It doesn't make sense to commission an article that will be buried on the fifth page of Google results. Finally, the algorithm, like a drunken prophet, starts spitting out phrase after phrase: "butterfly cake," "shin splints," "Harley-Davidson belt buckles."

But that's just the start. Armed with those key words, another algorithm, called the Knowledge Engine, dives back into the data to figure out exactly what people want to know about the term. If the original algorithm divines "2009 Chevy Corvette" as a profitable title, the Knowledge Engine will return with "cost of 2009 Corvette"; for "shin splint" it might come back with "equine treatment shin splints." The second algorithm also looks at how well past titles with similar words have performed in terms of ad revenue. Demand has learned, for instance, that "best" and "how to" bring in traffic or high clickthrough rates, while "history of" is ad poison. At the end of the process, the company has a topic and a dollar amount — the term's "lifetime value," or LTV — that Demand expects to generate from any resulting content.

The focus on LTV keeps Demand away from any kind of breaking news coverage or investigative work, neither of which tends to hold its value. It does, however, produce the kind of evergreen stories typically seen in newspaper features sections. The Atlanta Journal-Constitution recently commissioned Demand to produce some travel articles that ran online and in print.

The algorithm's endless ramblings — a collection of cacophonous phrases and esoteric subjects — seem haphazard and chaotic. But Reese knows there is logic at work. When asked for the most valuable topic in Demand's arsenal, he replies instantly: "'Where can I donate a car in Dallas?' One, you have a certain number of people searching for it. Two, the bid term 'donate a car' is in the double-digit dollars, like $15 or $20 per click. People have a propensity — 17 percent — to click on an ad when they see the word car. There's very little competition. And the article will retain its value for a long time." So why Dallas? He has no idea: "Dallas just happens to be the location where we know people are searching for how to donate a car."

That's not to say there isn't any room for humans in Demand's process. They just aren't worth very much. First, a crowdsourced team of freelance "title proofers" turn the algorithm's often awkward or nonsensical phrases into something people will understand: "How to make a church-pew breakfast nook," for example, becomes "How to make a breakfast nook out of a church pew." Approved headlines get fed into a password-protected section of Demand's Web site called Demand Studios, where any Demand freelancer can see what jobs are available. It's the online equivalent of day laborers waiting in front of Home Depot. Writers can typically select 10 articles at a time; videographers can hoard 40.

Nearly every freelancer scrambles to load their assignment queue with titles they can produce quickly and with the least amount of effort — because pay for individual stories is so lousy, only a high-speed, high-volume approach will work. The average writer earns $15 per article for pieces that top out at a few hundred words, and the average filmmaker about $20 per clip, paid weekly via PayPal. Demand also offers revenue sharing on some articles, though it can take months to reach even $15 in such payments. Other freelancers sign up for the chance to copyedit ($2.50 an article), fact-check ($1 an article), approve the quality of a film (25 to 50 cents a video), transcribe ($1 to $2 per video), or offer up their expertise to be quoted or filmed (free). Title proofers get 8 cents a headline. Coming soon: photographers and photo editors. So far, the company has paid out more than $17 million to Demand Studios workers; if the enterprise reaches Rosenblatt's goal of producing 1 million pieces of content a month, the payouts could easily hit $200 million a year, less than a third of what The New York Times shells out in wages and benefits to produce its roughly 5,000 articles a month.

Before Reese came up with his formula, Demand Media operated in the traditional way. Contributors suggested articles or videos they wanted to create. Editors, trained in the ways of search engine optimization, would approve or deny each while also coming up with their own ideas. The process worked fine. But once it was automated, every algorithm-generated piece of content produced 4.9 times the revenue of the human-created ideas. So Rosenblatt got rid of the editors. Suddenly, profit on each piece was 20 to 25 times what it had been. It turned out that gut instinct and experience were less effective at predicting what readers and viewers wanted — and worse for the company — than a formula.

The humans also couldn't produce ideas at the scale of the algorithm. On a recent day, Demand Studios had nearly 62,000 freelance assignments ready to be filled; coming up with that many ideas takes more than a white board and a conference room jammed with editors. And to Demand, scale is essential. One outside search engine marketer estimates that Demand earns a mere 15 to 60 cents per ad clicked. It takes millions of clicks to build a real business out of that.

Volume is also crucial to Demand's top distribution partner, Google. The search engine has struggled to make money from the 19 billion videos on YouTube, only about 10 percent of which carry ads. Advertisers don't want to pay to appear next to videos that hijack copyrighted material or that contain swear words, but YouTube doesn't have the personnel to comb through every user-generated clip. Last year, though, YouTube executives noticed that Demand was uploading hundreds of videos every day — pre-scrubbed by Demand's own editors, explicitly designed to appeal to advertisers, and cheap enough to benefit from Google's revenue-sharing business model. YouTube executives approached Demand, asked the company to join its revenue-sharing program, and encouraged it to produce as many videos as possible.

Since then, the two companies have grown even closer. When YouTube's sales team bemoaned the tiny supply of Spanish-language videos for it to run advertisements against, YouTube's

Hoffner called up Demand. Within weeks, Demand Studios started issuing Spanish-language assignments. Soon it had uploaded a few hundred clips to YouTube — everything from how to be “un buen DJ” to how to fix a bathroom towel bar. “I know we do deals with the ESPNs and ABCs of the world, but Demand is incredibly important to us,” says Hoffner (who is married to wired’s executive director of communications). “They fill up a lot of content across the site.”

And they do it by taking what used to be a deeply human and intuitive endeavor and turning it into a purely mathematical and rational one. This, Reese says, is the ultimate promise of his algorithm: “You can take something that is thought of as a creative process and turn it into a manufacturing process.”

Richard Rosenblatt was born and raised in Southern California’s San Fernando Valley and has rarely ventured far from Hollywood’s orbit in spirit or in geography. He is 40 and wiry, with carefully tousled brown hair, a bright-white, ever-present smile, and a long, pinched nose. One day this spring, Rosenblatt was in the foyer of Demand’s Santa Monica, California, headquarters, casually chatting with Brooke Burke — the bikini model, former TV host, and Dancing With the Stars winner — and her fiancè, a Baywatch actor. Rosenblatt is also friends with cyclist (and Demand investor) Lance Armstrong, a fact that he mentions frequently. (”I’m supposed to go to France Wednesday with Lance, but I just can’t,” he confided, sighing. “It’s a lot of travel.”) He is particularly fond of the exhortation “Go big or go home,” a phrase that he includes in his email signature and has commemorated in the naming of Demand’s Go Big conference room. Numerous executives told me that when they first met Rosenblatt, they were immediately repulsed: He was too slick and seemed to be missing the geek edge. “Then in five minutes you’re like, ‘Holy cow, this guy has it all to back it up,’” says Quincy Smith, CEO of CBS Interactive.

Demand is just the latest of Rosenblatt’s run of startups, nearly all of which hewed to his “go big” mantra. After graduating from USC law school in 1994, he saw that companies were growing curious about the Internet, so he set up a company that offered a $3,000 Web-design seminar that came with a custom-built Web site. The startup, which was later called iMall, went public at $18 a share, shot up to $112, then plummeted when the Federal Trade Commission investigated the firm’s claim that its clients’ sites were earning $11,000 a month. They weren’t, it turned out. Rosenblatt was forced to kill the seminar division, losing 95 percent of his company’s $16 million in annual revenue. He quickly refocused on iMall’s other business of providing an ecommerce platform for small and medium-sized companies and sold the company in 1999 to Excite@Home for $565 million in stock. Rosenblatt bought a Ferrari. Excite@Home soon went bust.

In 2000, Rosenblatt took over the ailing drkoop.com, an online site tied to C. Everett Koop. Where others saw just another ad- dependent disease-information site, Rosenblatt saw a chance to turn the bearded former surgeon general into a brand, the next “Martha Stewart or Walt Disney — but for health,” as he told BusinessWeek at the time. He created a line of Dr. Koop Men’s Prostate Formula pills. The company went under.

Perhaps weary of going big, Rosenblatt went home, where he derived some comfort from the millions he had earned. He bought and sold a domain registrar company. He started a site called Superdudes, where users could create superhero-like avatars. He invested in a nightclub in San Diego.

But with the birth of Web 2.0, big was back. In 2004 a group of investors tapped Rosenblatt to run eUniverse (later renamed Intermix Media), a struggling Internet conglomerate that happened to own MySpace. Soon after Rosenblatt started, New York attorney general Eliot Spitzer charged Intermix with bundling adware and spyware with its free games and screensavers. Rosenblatt settled almost immediately, handing over $7.5 million — the entire cash holdings of Intermix. “It was the worst, most miserable time in my life,” he says. Still, he could be consoled by the fact that his company had survived and still had MySpace, which was exploding into the Internet’s dominant social media site. AOL, Viacom, and News Corp. were all sniffing around, and Rosenblatt began to play them off each other. Not long after settling with Spitzer, he sold Intermix to News Corp. for $650 million, of which he earned $23 million. Then he left the company.

Although Rosenblatt had been at MySpace for only 18 months, he had seen enough to come up with a theory: The social network was doing it wrong. It had built a supersite, aggregating millions of users and encouraging them to root around. But they had difficulty finding information about specific subjects. “I kept thinking about gardening,” he says. “People wanted to talk about gardening, but they didn’t want to do it on MySpace.” Instead they went to Google, which was its own kind of aggregator, collecting everyone who searched for specific terms and directing them to appropriate sites. If he could collect enough tiny sites and sell Google ads against them, he could potentially build a more successful business than he could with one supersite.

On the strength of this plan, Rosenblatt raised $355 million from funders like Goldman Sachs, Oak Investment Partners, and legendary investor Gordon Crawford. Then he went looking for acquisitions. He bought eNom, one of the largest domain registrars, and Pluck, a company that handles commenting and social networks for Web sites, along with dozens of amateur-content sites that could catch lowly keyword ads. Among them: eHow, Trails.com, GolfLink.com, and Cracked .com. Rosenblatt now had three revenue sources: domain sales; services; and video, banner, and Google ads.

Demand Media was born. But it wasn’t until 2007, when the company bought ExpertVillage.com, Byron Reese’s how-to site (reportedly for roughly $20 million), that it began to realize its potential. Reese and Rosenblatt soon began working on an idea that Reese had long struggled with: Millions of visitors were coming to ExpertVillage and generating reams of data, but his editors didn’t do anything with it. What if they used that information to determine what content to create?

Here is the thing that Rosenblatt has since discovered: Online content is not worth very much. This may be a truism, but Rosenblatt has the hard, mathematical proof. It’s right there in black and white, in the Demand Media database — the lifetime value of every story, algorithmically derived, and very, very small. Most media companies are trying hard to increase those numbers, to boost the value of their online content until it matches the amount of money it costs to produce. But Rosenblatt thinks they have it exactly backward. Instead of trying to raise the market value of online content to match the cost of producing it — perhaps an impossible proposition — the secret is to cut costs until they match the market value.

Not everybody agrees with him. Howcast, one of Demand’s largest competitors, also produces explainer videos and how-tos. Unlike Demand, the company employs a staff of editors and writers and gets freelance voice-over pros. Filmmakers can earn a couple thousand dollars shooting the videos, and the difference is noticeable. (Howcast’s “How to Make Friends at a New School” includes such useful tidbits as “sit in the middle of the classroom to surround yourself with as many potential new friends as possible.” Demand-owned eHow’s “How to Be

Popular in School" video, in contrast, offers such vague guidance as "be nice to everybody.") "We believe that quality holds long-term value," Howcast CEO Jason Liebman says. He emphasizes that his team comes up with titles the old-fashioned way: deciding what people want to learn based on their own instincts, what holidays and events are coming up, and from general research. Yet Howcast pulls a tiny — and getting tinier — fraction of the traffic that eHow does, and Liebman hesitantly acknowledges that he's working on an algorithm to compete with Demand.

Liebman isn't the only one ready to mimic Demand's approach. CBS Interactive — which owns CNET, UrbanBaby, GameSpot, and other sites — also deploys an algorithm that helps guide what its sites cover. AOL is working on one as well. Smaller sites like Helium and Associated Content are trying to bring their own flood of freelancer-written work to the Net, using many of the same contributors as Demand.

The fact is, the Demand way may be inescapable. A senior executive at a major media company likened Demand's algorithmic-based content-creation factory to what he saw in the advertising industry in the past decade. Experience, relationships, and gut checks started losing out to raw data. "To customers, advertising may not look that different, but the systems to deliver the right ads to the right consumer at the right time have changed dramatically," he says. "The content systems are going through the early, early stages of that right now."

Still, Rosenblatt says he is trying to place a new emphasis on quality. "There's a constant debate internally," he says. "This might sound crazy, but I'd rather spend more and put more quality into the process. Long term, we'll make more money by increasing quality."

But when he gets into the details, it's clear that he's not moving far from his Henry Ford model. "We're not talking about $1,000 videos, so a couple dollars here or there can make a serious difference. For instance, pay an extra dollar for fact-checking."

How can anyone survive on that? Good question. Google it. If the answer isn't out there, it soon will be.

Senior writer Daniel Roth (daniel_roth@wired.com) *wrote about Netflix's streaming video service in issue 17.10.*