

Inventors

FEBRUARY 2019 Volume 35 Issue 02

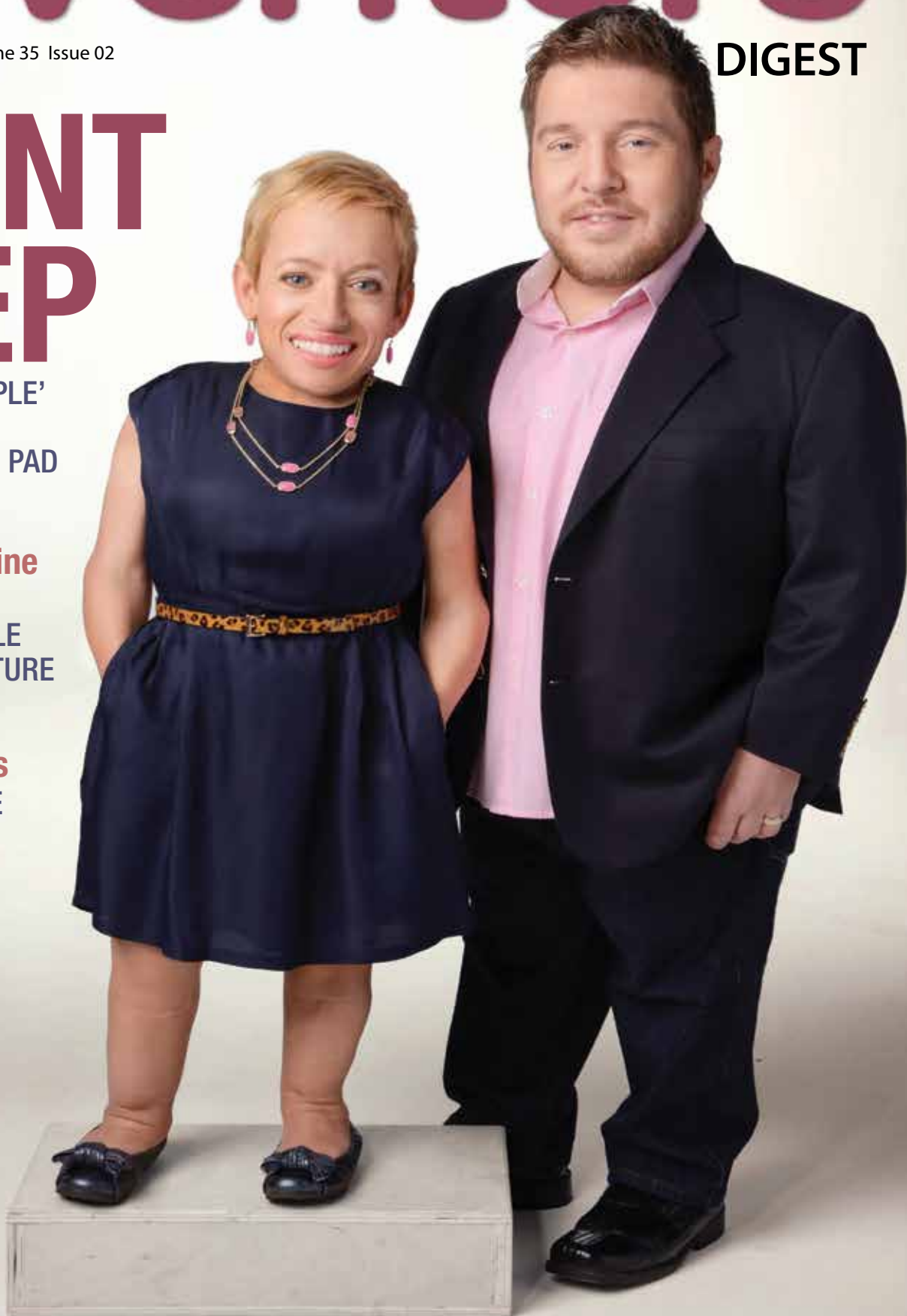
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'THE LITTLE COUPLE'
HAVE BIG HOPES
FOR POP-UP DOG PAD

**Zamboni Machine
Is Cool As Ice**
ORIGINS AND ROLE
IN POPULAR CULTURE

**Good News for
Patent Hopefuls**
USPTO GUIDANCE
ON ELIGIBILITY



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FULTON, MO

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A Call to All Inventor Groups

They gather in venues ranging from generic coffeehouses to five-star resorts. Their visionary members include trendy millennials, middle-age parents and seniors seeking a new adventure.

Inventor groups are an important part of the excitement, inspiration and education associated with the activity that is the lifeblood of this magazine and the U.S. entrepreneurial system. Although *Inventors Digest* has faithfully provided listings of grass-roots and regional organizations throughout America (you can find them under the Resources tab at inventorsdigest.com), there are also popular national organizations such as Inventors Groups of America and United Inventors Association.

The local organizations, especially, are often in flux—adding new members, moving or even disbanding. You'll note that many listings of inventor organizations online include the qualifier that some of their information may be dated, and ID is no different.

We need your group's updated information. Has your address changed? Phone number? Have you added a social media component? Is your group no longer meeting? Perhaps even more important, do you not see your group on our list? If any of these circumstances apply, drop us a line at info@inventorsdigest.com and we will make these changes and adds as soon as possible.

As *Inventors Digest* continues to encourage a dialogue between the magazine and our readers, we also actively support the dialogue and relationships that are integral to these organizations. Along those lines, in the near future we plan to publish a themed issue that focuses on inventor groups. We would love to hear about your groups, and your ideas about what kinds of content you would like to see!

As a means for better publicizing your organization, you can purchase an ad that will run within the editorial text of our themed inventors groups package. Special rates for this issue will be \$1,499 for a full-page color ad; \$360 for a quarter-page color ad; and \$120 for a business card ad. And of course, you can always advertise on the even more affordable inventorsdigest.com, which recently posted its all-time single-month high for page views.

A big part of the excitement of inventing is sharing ideas, successes and failures. This bonds us while fortifying our resolve to create concepts and products that make a difference in the quality of lives. Drop us a line and help us continue to promote this noble mission.

—Reid
(reid.creager@inventorsdigest.com)

American innovation needs to hit the gym



Weakened patent protections have reduced the value of American inventions. To strengthen American innovation, support the STRONGER Patents Act—legislation designed to restore strong Constitutional patent rights, limit unfair patent challenges, and end the diversion of USPTO fees.

Make your voice heard now at
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**SAVE THE
AMERICAN
INVENTOR**



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photo courtesy of TLC

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Focus on the Fun and Fascinating



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CORRESPONDENCE

Letters and emails in reaction to new and older **Inventors Digest** stories you read in print or online (responses may be edited for clarity and brevity):

"Prototyping Tools, Material and Processes" (September 2017):

Thanks for the brief introduction on tools material process. I agree that laser cutting is a technology to cut material with a computer administered process that generates a beam, and then you can use tools as per your material capacity. —**JOHN STOKES**

"Why Do So Many Start-ups Fail?" (April 2018):

Excellent article, John (Rau). I think the evidence makes the case for lean development and prototyping all too well.

If we steal the principles of tech companies and the web into new product development, there are many advantages—especially around issues of cost—but also in maintaining interest and finding the right team members to successfully bring a product to market. —**MORGAN, UK**

"Timing, Marketing Made the Pet Rock Roll" (July 2017):

If you do patent something that is easily replicated but does meet all the utility requirements, will this prevent a big company from duplicating in mass production? —**VERNITA HILTON**

As we have seen via anecdotal evidence in past issues of Inventors Digest, there is no surefire way to prevent a big company from duplicating a patented invention. But you can dramatically reduce the chances of this with the help of a patent attorney who has experience in this area, as well as having an invention with a unique function or feature.—The editor

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BEYONCÉ ISN'T CRAZY IN LOVE OVER FEYONCÉ MERCHANDISE

Is a one-letter disparity enough to prevent consumers from confusing one trademarked entity from another, even if one of those entities is in connection with an iconic pop star? Apparently so, according to a federal judge.

In 2016, **Beyoncé** and her company brought a trademark infringement lawsuit against a Texas company that sells **Feyoncé** merchandise. They claimed Feyoncé founders Andre Maurice and Leana Lopez were illegally profiting from her name and trademark, and confusing Beyoncé fans who might think the star was endorsing the Feyoncé brand.

Beyoncé's trademark for her name was registered in 2004. Both that mark and that of Feyoncé, registered in 2015, cover clothing, among other things.

The Texas company sells items with the "Feyoncé" mark and phrases from Beyoncé's songs, such as "put a ring on it." The items even feature the same colors

and type font used on Beyoncé merchandise.

But in late September, a federal judge denied Beyoncé's motion for a permanent injunction against the company. The judge did opine that the "defendants chose the formation 'FEYONCÉ' in order to capitalize off of the exceedingly famous BEYONCÉ mark." However, she ruled that consumers weren't necessarily likely to confuse the Feyoncé mark with the singer's trademark:

"A rational jury might or might not conclude that the pun here is sufficient to dispel any confusion among the purchasing public."

The judge said that "by replacing the 'B' with an 'F,' Defendants have created a mark that sounds like 'fiancé,' i.e., a person who is engaged to be married. As a result, FEYONCE is a play on words, which could dispel consumer confusion that might

otherwise arise due to its facial similarity to the BEYONCE mark."

That part of the ruling might have played a role in Team Beyoncé's decision to cancel a status conference in a New York court that was planned for late last year. The sides apparently planned to settle out of court.

Rightofpublicity.com—which, along with Reuters, referred to the Feyoncé products as "knockoffs" in headlines—had this reaction: "The need for Right of Publicity as a distinct form of intellectual property, that trademark does not adequately address, is illustrated yet again."



BRIGHT IDEAS

Brite Bite Brushing Stick

DOG TEETH CLEANER

bristly.com

A chew toy that cleans dogs' teeth, Brite Bite was developed to encourage your dog to bite down and scrub his or her own teeth. It is especially good for cleaning hard-to-reach back molars.

Allow your dog to use the brushing stick for 3 minutes at a time under your supervision. You can also pair it with your favorite pet-safe toothpaste or apply peanut butter, coconut oil, or other pet-safe spreadable foods to the exterior to encourage your dog.

Infused with a fresh peppermint scent, the stick is dishwasher safe. The price ranges from \$12.99 to \$19.99, depending on the size.



"What good is an idea if it remains an idea? Try. Experiment. Iterate. Fail. Try again. Change the world." — SIMON SINEK



Wynd Halo +
AIR QUALITY TRACKER
AND PURIFIER
shop.hellowynd.com

Wynd has 10 sensors to monitor the air for allergens, smoke and pollution. Its purifier has two HEPA filters that capture particles as small as 0.3um, or 1/120th the thickness of human air.

The tracker has an innovation called Air ID that classifies the actual pollutants in the air so you can act accordingly. Wynd cleans 1,200 square feet in approximately 30 minutes. The purifier only turns up when Halo triggers it.

The monitor retails for \$139, the purifier \$349, the monitor/purifier bundle \$449. The product will be shipped to early Rewards crowdfunding backers in May.



Snowfeet

SKIS/SKATES COMBINATION

snowfeetstore.com

Snowfeet brings the thrill of skating to the slopes by attaching to your winter shoes or snowboard boots. They fit in a backpack, so you can take them anywhere. One size fits all.

The product is made of highly durable and lightweight fiberglass-reinforced material. Metal ski edges enable easy stopping. The heel brake lets you slow down.

Snowfeet can be used in snowparks, through forest trails, and even for cross-country skiing. The suggested retail price is \$149, with delivery of the first 2,000 pairs to crowdfunding backers to begin this month. The rest will be shipped in May.



Mouse Books: Season 2

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mousebookclub.com

These books provide literature in a curated, beautiful, durable format with no batteries, beeping, buzzing or interruptions found in our phone-dominated world. Subscribe and get a year of books delivered to your door.

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Cool As Ice

ZAMBONI RESURFACING MACHINE ROLLS ON
AS AN ICONIC INVENTION **BY REID CREAGER**

IT'S FITTING that the Zamboni® ice resurfacing machine is so cool. How cool?

It's referenced in songs by the Beastie Boys, They Might Be Giants and even Weird Al Yankovic. Snoopy drove one in the "Peanuts" special, "She's a Good Skate, Charlie Brown"—and his creator, Charles Schulz, had two of them at his home ice rink. It's such an integral part of ice hockey that a hockey-themed version of "Monopoly" contains a token in its shape. It has been in the plot lines of numerous TV shows and movies.

Schulz, via Charlie Brown, paid tribute in humorous irony. "There are three things in life that people like to stare at: a flowing stream, a crackling fire, and a Zamboni clearing the ice."

Actually, ol' Chuck could have said it better, because technically there is no such thing as a Zamboni. But we'll get to that later.

Cold beginnings

Even Frank J. Zamboni's birthplace suggests he was born to be an inventor. He was a year old in 1902 when he and his family moved from Eureka, Utah, to an Idaho farm where he cultivated his vast mechanical skills.

His business association with his brother Lawrence played a key role in his fortunes. Zamboni was 19 when he moved to Southern California with him to join their older brother, George, in his auto repair business. Soon after, Frank and Lawrence opened an electrical service business serving the local dairy industry.

This is where Zamboni was introduced to the refrigeration/cooling business. He and his brother installed

refrigerator units that dairies used to keep their milk cool.

Before long, the produce industry also had a demand for cooling. So the brothers built a plant that made the block ice used by wholesalers to pack their product for rail transport across the country.

But as refrigeration became more prevalent and its technology improved, demand for block ice began to melt. Frank and Lawrence were ready to adapt again.

Ice skating was becoming popular after figure skating became a regular part of the Winter Olympics in 1924. Noting the lack of rinks in Southern California, the brothers and a cousin, Pete, built the 20,000-square-foot Iceland Skating Rink in the Los Angeles County city of Paramount in 1940. (The rink, mere blocks from the Zamboni factory, still exists.)

Smoothing things out

The oft-intense Southern California heat necessitated that the brothers build a dome for the rink. But afterward, there remained the challenge of maintaining a smooth and level ice surface.

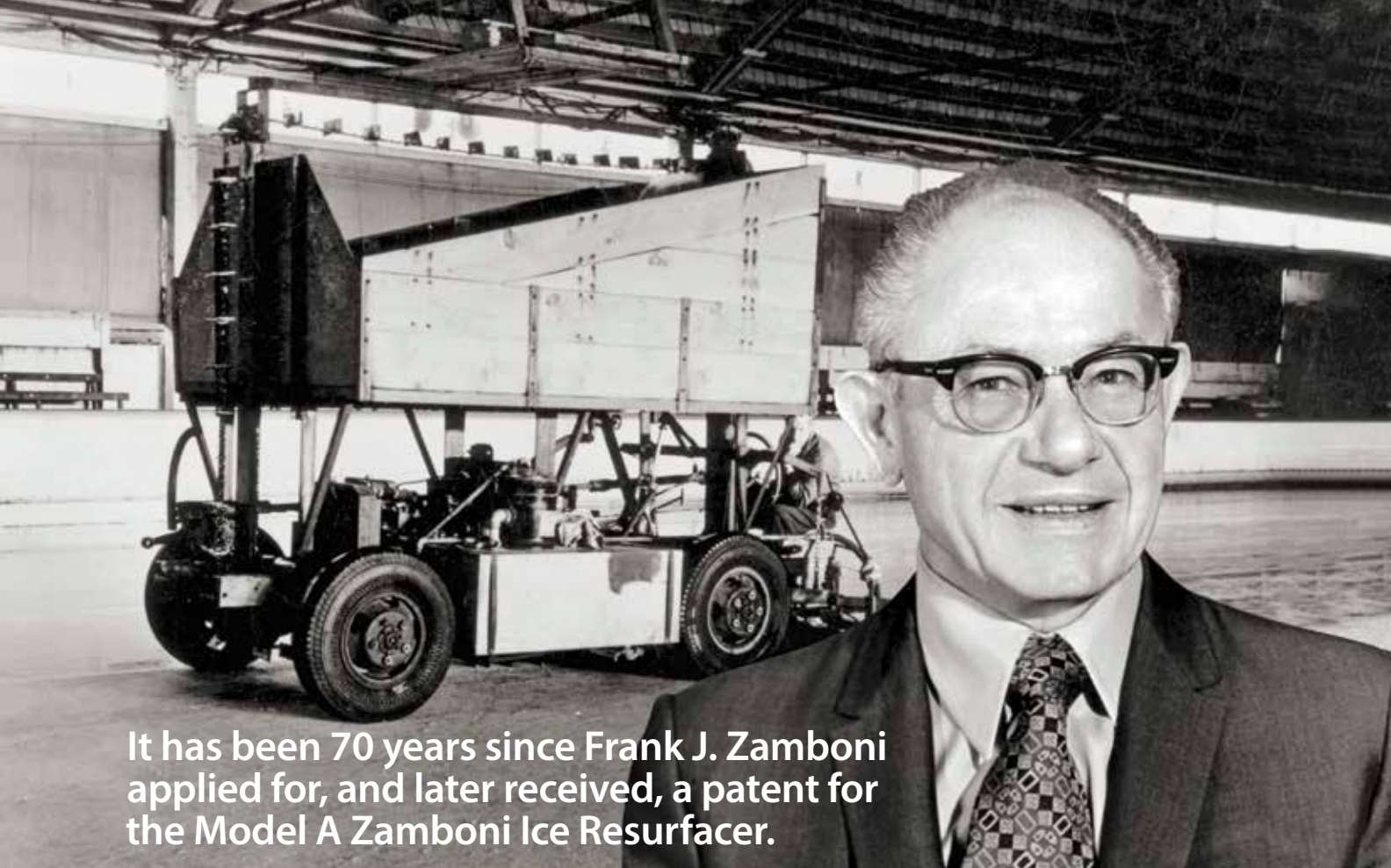
As is often the case with invention, the ultimate answer was the refinement of some previously rudimentary efforts. Initially, workers would pull a scraper behind a tractor, shaving the surface in an attempt at resurfacing. Then, workers would scoop away the shavings, spray the surface with water, squeegee away the dirty water and then apply more water that would be allowed to freeze, after more than an hour.

Frank Zamboni knew there had to be a faster and more efficient way. He began experimenting with a tractor-sled hybrid in the early 1940s, eventually abandoning that due to unsatisfactory results. In 1947, he began working on a machine built on a complete Jeep® that would shave the ice, remove the shavings, wash and squeegee the ice, and hold snow in an elevated tank large enough to last for an entire resurfacing job.

Zamboni had returned to Eureka, if metaphorically. But he was soon reminded that a vision and reality are often two different things. He battled

The Zamboni JR series (1964-1982) were smaller machines built for studio-sized skating surfaces. Their capacities were roughly half that of standard Zamboni machines.





It has been 70 years since Frank J. Zamboni applied for, and later received, a patent for the Model A Zamboni Ice Resurfacer.

The Model A ice resurfacer (above), shown at Paramount Iceland, introduced a system that washed the ice with recirculating water before applying a final coat of ice-making water.

through three experimental prototypes in 1947 and jettisoned the most recent one because the blade was noisy, the snow tank did not carry enough snow, and the two-wheel drive machine couldn't get sufficient traction even with tire chains.

So using some parts from that prototype, he ramped up the technology. Zamboni bought another surplus front steering truck axle; now he would have both four-wheel drive and four-wheel steering. The new machine's adjustable blade could be held firmly in place by the operator. No more loud noise or digging into the ice.

Satisfied with his results by Summer 1949, Zamboni applied for a patent for the Model A Zamboni Ice Resurfacer and received U.S. utility patent No. 93,478 in 1953.

Succeeding models

It didn't take long for the Zamboni ice resurfacer to become cool. Olympic skating star Sonja Henie, practicing at Paramount Iceland in 1950 with her traveling show, told Zamboni she had to have one. He worked day and night to have a newer Model B version ready for her upcoming performance in Chicago.



ZAMBONI FUN FACTS

- In 2001, a Zamboni machine was driven from the east coast of Canada (St. John's, Newfoundland) across to the Pacific coast of British Columbia. At about nine miles per hour, the journey took approximately four months.
- More than 12,000 Zamboni machines have been delivered around the world.
- When a Zamboni machine operator in the Midwest passed away, his funeral procession was led by a Zamboni machine.
- Between 1928 and 1978, Frank J. Zamboni was awarded 15 patents that ranged from refrigeration innovation to ice resurfacing machines.
- The blade on the Zamboni machine is designed especially for ice-resurfacing. It is sharp enough to slice through thick stacks of newsprint, weighs 57 lbs. and is 1/2 inch thick.
- When the machine resurfaces the ice, it is capable of removing close to 2,500 lbs. of compacted snow and can leave behind about 1,500 lbs. of water.



The Zamboni Model 552 (1990) set the standard for electric resurfacing equipment with its quality and reliability.

In all, four Model B machines were built. One of them, bought by the Ice Capades, was restored and has been on display for years at the Hockey Hall of Fame in Eveleth, Minnesota.

Model C (1952) and Model D (1953) featured design improvements. The C elevated the driver's position and lowered the snow tank onto the body in order to allow better visibility and snow capacity. The D re-designed the look of the snow tank but was later scrapped.

The Model E, in 1954, was the first standardized design for Zamboni. The NHL's Boston Bruins and nine other entities bought Model Es that year. The Bruins machine is in the Hockey Hall of Fame in Toronto.

As ice skating continued to gain popularity and more rinks were built, demand grew for machines with more snow and water capacity. Zamboni was ready to adapt again, this time abandoning the full Jeep body in favor of a Jeep chassis and redesigning the resurfacer. This was the basis of 1956's Model F.

Zamboni introduced the world's first electric-powered ice resurfacer in February 1960. As battery technology evolved, the 500 Series included electric-powered production machines.

The HD Series (1964) featured a vertical auger system to convey the snow and a quick-dumping snow tank, still an industry standard and the first production dumping machine not built on a Jeep chassis. The Model 500—circa 1978 and the world's most popular ice resurfacer—introduced a liquid-cooled engine in addition to other improvements in its fuel-powered resurfacers.

The Zamboni Model 552 (1990) set the standard for electric resurfacing equipment in quality and reliability. Among many updates in the 2000s, of most recent interest is last year's unveiling of the Model 450, which uses lithium-ion batteries for a more efficient electric-powered machine.

INVENTOR ARCHIVES: FEBRUARY

February 13, 1979: Forty years ago, **Charles Chidsey** received the first patent ever granted for a baldness remedy, minoxidil. It is sold under the brand name Rogaine.

The patent became part of a long legal battle.

Pharmaceutical manufacturing company Upjohn originally synthesized minoxidil to treat high blood pressure in the early 1960s. Chidsey, a consultant for the company who was working at the University of Colorado's medical school, noticed that the drug stimulated hair growth and went to Dr. Guinter Kahn at the school's dermatology department and his medical assistant, Paul Grant.

Drs. Kahn and Grant eventually developed a topical solution for minoxidil in 1971, according to the Miami Herald.

Patent Yogi reports that on Dec. 29, 1971, Upjohn filed a formal patent application for minoxidil as a hair-growing drug and named Dr. Chidsey as the sole inventor because he was the first to report the growth of hair in conjunction with the drug.

When Drs. Kahn and Grant discovered the patent application

the next year they disputed the patent, which went to interference proceedings at the United States Patent and Trademark Office. A financial settlement was reached, with the three doctors all receiving substantial royalties.

The USPTO added Dr. Kahn's name to the patent in 1986 but not Dr. Grant's. The latter told the Herald, "I'd be much more upset if they took my name off the royalties."

In a 1987 interview with The (London) Daily Mail, Dr. Chidsey accused Drs. Kahn and Grant of pilfering the drugs they had used in their tests, of not getting proper permission from Upjohn and federal regulators, and of putting money ahead of medicine. "It was cheap," he said. "It was tacky."

In 1989, the Intellectual Property Owners Foundation named Drs. Chidsey and Kahn "distinguished inventors."



Preserving exclusivity

Zamboni's status as an ice-surfacing pioneer was frozen in time decades ago. He brought his machines to the 1960 Olympic Winter Games in Squaw Valley, California, and all of the ice-resurfacing machines at the 1994 Olympic Winter Games in Lillehammer, Norway, were made by Zamboni.

Zamboni brand machines were named the "Official Ice Resurfer of the NHL" in 2002. It's little wonder that Zamboni is a member of the United States Figure Skating Association Hall of Fame (2000), the World Figure Skating Hall of Fame (2006), the National Inventors Hall of Fame (2007), the U.S. Hockey Hall of Fame (2009) and the United States Speed Skating Hall of Fame (2013). He died in 1988.

In fact, the Zamboni name is so strongly ingrained in the public's collective consciousness that there is a tendency to assume that every ice resurfacing machine was built by that company. When two Olympia ice resurfacing machines broke down during the 2010 Winter Olympics, some media outlets mistakenly reported that they were Zamboni machines.

The Zamboni Co. is rightfully on guard that its brand does not suffer the same fate as Aspirin, a trademark that became genericized in the United States and elsewhere. Protection of its intellectual property extends to the identification of its product as a Zamboni

machine or Zamboni ice-resurfacing machine, not a Zamboni. This is where Charlie Brown was wrong.

Zamboni Co. engineer Kelly McMillen marvels at how fans at hockey games love to watch the machine—its slow, orderly routine a stark contrast to the often frenetic action during games. "It's amazing to see people mesmerized by the resurfacing process," he says. This is where Charlie Brown was right. 🏒



The Zamboni resurfacing machine is highlighted in a 1957 ad.

Below: A Model G two-man Zamboni is tested in January 1962.



Making Instagram Work for You

MARKETING IS TRICKIER THERE, BUT HERE'S HOW TO MAXIMIZE CONVERSIONS **BY ELIZABETH BREEDLOVE**

INSTAGRAM is one of most popular social networks, with Statista claiming more than 1 billion monthly active users on the platform as of last June. This presents an enormous opportunity for inventors and product creators to market their product to a listening audience.

However, marketing on Instagram presents a unique challenge you won't find on other social networks. Whereas Facebook, Twitter and other social networks allow you to include external links in your post, Instagram does not.

So although Instagram is a great way to get your product in front of potential buyers, it's a bit harder to get them to convert into customers or track their behavior through your sales funnel because it's tricky to get them to your website.

With that in mind, here are some tips for increasing your Instagram conversions.

Increasing conversions for free

Use the link in your bio. There is one place you can use external, clickable links on Instagram: in your bio. Make sure you're taking advantage of this!

There are a few routes you can take here, but you should always use a call to action to direct your followers to check out the link in your bio in the caption of every post.

If you have a simple, easy-to-navigate website that focuses on one or two products, you may just want to include the link to your homepage, or to a "shop" or "product" page. If you have many products to offer, or if your website is rather complicated, you may want to use a service such as Linktree or Link My Photos. These platforms allow you to set up a single page with all of the links to which you'd like to send traffic.

Linktree displays a list of links. Link My Photos shows all of your Instagram posts, with each photo linking to a website.

Bit.ly. If you do want to include a link in the caption, despite it not being clickable, Bit.ly is the way. This link-shortening service lets you create a short, customized link that redirects wherever you'd like it to go.

For example, I could use the service to create a short link to this article, perhaps bit.ly/IDInstagramConversions. Although these links won't be clickable in your Instagram captions, if you create an easy-to-remember, relevant bit.ly link, your followers can easily type it into their own browser.

Swipe-up links. If you use Instagram Stories to market your product (which you should almost certainly do), don't waste the opportunity to direct traffic to your website. If you have 10,000 followers, Instagram will give you the ability to add "swipe-up links" to your Instagram story. This means that you can add a single link, and users can physically swipe up to open it.

If you have this option, definitely take advantage of it. Just make sure you include calls to action in your stories to encourage viewers to swipe up and visit your site.

Paying to get customers

Ads. If you have the budget to spend a bit of money to get conversions from Instagram, consider paid Instagram advertising. Instagram ads are managed through the Facebook Ad platform, so we always recommend working with an experienced Facebook Advertising specialist in order to get the most bang for your buck.

The Facebook Advertising platform allows you to create highly targeted ads that convert well at a low CPA. So if you have an advertising budget, paid ads are a great way to supplement your Instagram posts.

Influencers. An Instagram influencer is a person or account with a very large number of followers who will post about your invention or business in exchange for payment or product.

Working with influencers is a way to reach tens of thousands and even hundreds of thousands of new potential customers. The key is to work with influencers whose followers fit into your target audience.

For example, if your product is geared toward men, you likely wouldn't want to work with a female

fashion blogger or a pet influencer. As you make arrangements with influencers for them to promote your product, make sure they are also including a link to your site where their followers can purchase from you.

Instagram Best Practices

Regardless of what methods used to increase your Instagram conversions, it's important to always follow Instagram Best Practices to get the most out of the platform.

Image quality. Use high-quality imagery that shows off your product well. You'll most likely want to focus on lifestyle photography, with some product shots thrown in. These images should not be blurry but professional. Imagery that looks good will increase viewers' confidence and trust in your product.

Aim for eye-catching posts so that viewers stop scrolling through their feed to see your photo and post.

Hashtags. These are crucial for getting your posts seen by new people on Instagram and gaining new followers. Adding a number of relevant hashtags will ensure that Instagram's algorithm recognizes the topic of your post and puts it in front of users who are likely to be interested in it.

Many hashtag research tools can help you discover new hashtags that will get you in front of new users. Make sure you use hashtags that relate to your post and that those who are likely to buy your product would be following them.

Interact with other users

A great way to build up your followers and get discovered by others is to interact with other accounts similar to yours that your customers are likely to follow. Follow them, and then like their posts and leave comments. Instagram's algorithm will learn more about your account from the people you interact with, ensuring your profile is seen by the right users.

Bottom line: if you follow Instagram Best Practices and take advantage of the options Instagram provides to direct traffic to your site, you're sure to increase your reach, gain new customers and find success on the platform. 📱

Elizabeth Breedlove is content marketing manager at Enventys Partners, a product development, crowdfunding and inbound marketing agency. She has helped start-ups and small businesses launch new products and inventions via social media, blogging, email marketing and more.



Regardless of what methods used to increase your Instagram conversions, it's important to always follow Instagram Best Practices.



Start With the Market

NOVELTY IS NICE, BUT AN INVENTION THAT SOLVES A PROBLEM IS THE MOST IMPORTANT CLAIM **BY JACK LANDER**

MANY INVENTORS have come to me for advice after filing a utility patent, the one that costs the big bucks—often more than \$10,000. Sometimes after reviewing the invention's market potential, I conclude that the feature or features that appear to be patentable may not attract a licensee. Or, if the inventor intends to produce, he or she may not be able to penetrate the existing market.

Of course, I could be wrong. But the inventor would have taken a better first step if he or she had looked into the market before filing for a patent and seen what I saw.

These points should be evaluated:

- Is the feature that provides your invention's major user benefit covered in some other way by another inventor's patent, or by an unpatented product?
- If not, does your feature provide a true economic advantage over other designs, or is it just a different and possibly more clever way of accomplishing the desired effect?
- How many patents exist for the overall purpose of the invention?
- How many product brands exist that substantially accomplish what your invention accomplishes?
- Is your invention more complicated than existing products?
- If your invention has no competition, have you done a market survey to determine that your licensee or you will have demand?

Many times I have seen a patent application claiming several sufficiently novel features, but all claims are not created equal. If you really have a major feature that solves a problem better than what is on the market, that is the feature that must be claimed in legal language to be preserved in the issued patent.

Patent attorneys do not judge marketability. If they did, and they were good at it, they would have to turn away half the patent applications that inventors ask them to prepare. Why do you suppose that only about 5 percent of patents earn more than their cost?

The patent attorney or patent agent's job is to write the application that covers all of the obvious novelty, regardless of whether it is major or trivial. And claims are routinely shot down by the patent examiner. You should always question your attorney about the probability that he or she can succeed in getting issued the most essential claim as it is written in the application.

Opener idea is canned

Different isn't always better. We inventors are often fascinated by our clever solutions to problems we discover. "Clever" wins us points with friends, perhaps. But the bottom line is profit. Our solution must be faster, cheaper, simpler, more ergonomically appealing, more aesthetically elegant, etc., than whatever solution is now being used.

Not long ago, I invented a can opener that would open those cans with the ring that you put your finger into and attempt to peel back the can's lid. I had its prototype components cut out of sheet steel using an abrasive water jet. The assembled result was exciting, and I was all set to file for a provisional patent application. But I decided to do a product search on Amazon.com, and to my amazement I found an opener that looked like the tip of a shepherd's crook—an elegantly simple plastic prying tool which, unlike mine, had no moving parts.

I knew better than to spend a hundred bucks on a prototype first and then do the market research, but I was so sure that my great invention was original that I skipped the obvious first step. How typical.



I had done a patent search and found nothing that opened those peel-back-lid cans, so I convinced myself that the field was mine.

The moral of the story is that the world is full of products that aren't patented. These products are prior art as certain as patents are. In addition to existing products, there are often many more unpatented products that have come and gone—that is, have been superseded by better products. And even though we may not be aware of such products, they still constitute prior art and will prevent us from getting our patent if discovered by the patent examiner. Worse yet, such products can be used as evidence to invalidate a patent if discovered after the patent is issued.

Of mice and cheese

Another impediment to a successful invention is competition from several other patents and/or products. One of the obvious steps a potential licensee will take in evaluating the market is a patent search to see how many similar inventions exist.

I often use the example of the mousetrap. According to Google, there are 4,400 mousetrap patents. It follows that your odds of coming up with something original and practical are not very good. But more to the point, a potential licensee would conclude that the market has already sorted out the best of products. So even if yours seems to be marginally better, the risk of entering this old, old market is too high to justify the required investment.

But let's suppose you invented a mousetrap that has a built-in time delay. You can set the trap without any risk of the first thing it catches being your index finger. You set the trap's mechanism and confidently place it in position. Ten seconds later, you hear a sharp click that means the trap is now armed. A sure winner, right?

The only problem is that what merchants are now selling is selling well. Few people return a mousetrap complaining that it didn't work, or it worked too soon and bruised their finger. Merchants are not inclined to pioneer new products, unless what they presently sell results in customer complaints.

I have one of those cheese graters that consists of a single piece of sheet metal, stamped with a variety of holes that have a raised edge. I slide a block of cheese across the holes, and in no time I have a neat pile of grated cheese. Washing it is easy as long as I don't forget its purpose and grate fingertip or two.

I also have a rotary grater. It's made by a prestigious kitchen gadget maker and does a fine job of grating, but it's a pain in the butt to clean. Some of the cheese ends up sticking inside the grating cylinder, and there is no easy way to get it out.

It also consists of three parts, each of which has to be washed. It takes a minute to wash the simple, one-piece grater, and at least five minutes to wash the rotary. I use the old-fashioned design unless my wife, Mary, beats me to the kitchen drawer.

Simple is usually better. But if your invention is complicated relative to what is already on the market,

The world is full of products that aren't patented. These products are prior art as certain as patents are.

don't invest in a patent until you have objective users try it and give you an honest comparative review.

An original copying idea

One of the less obvious blunders is assuming that because no one else has ever come up with your incredible invention, you'll have the market to yourself and make a fortune.

Sometimes, amazing fortunes have been made. Chester Carlson, the inventor of the Xerox® process, invented the only dry photography process at a time before there was such a thing as a copy machine or any kind of multiple-copy printer other than a printing press. The only process of acceptable quality was Photostat, a wet chemical process that required time and patience—and about 100 times more expensive than what a single copy at Staples costs today. Carlson struggled from 1938 until 1959 before the first Xerox® copier was released to the market.

But more often when we invent a device that will satisfy a market that we or our licensee will have to

ourselves, the invention does not succeed (or only succeeds due to superhuman effort).

One reason is that the need has not been verified and may be being solved in some simple, home-spun way. Another reason may be that the need is too rare to justify the financial investment and marketing effort that would be required to reach the users. This kind of invention should be thoroughly researched before investing. I have been impressed by SurveyMonkey.com, one place to start.

The overall message is to always start with the market. Inventing is very inspiring and intellectually satisfying—marketing, not so much. But if we expect financial rewards from our inventions, they've got to satisfy the market. That isn't always easy. ☞

Jack Lander, a near legend in the inventing community, has been writing for *Inventors Digest* for 23 years. His latest book is *Marketing Your Invention—A Complete Guide to Licensing, Producing and Selling Your Invention*. You can reach him at jack@inventor-mentor.com.



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19 NAMED TO National Inventors Hall of Fame

MAY EVENT WILL HONOR THEIR CONTRIBUTIONS TO SOCIETY



Rebecca Richards-Kortum was honored for inventing medical devices to help in environments that lack adequate resources.

Given the prevalence of digitally themed innovation exhibited each year at the Consumer Electronics Show in Las Vegas, the prestigious event was a fitting site for the National Inventors Hall of Fame Class of 2019 announcement.

The Hall revealed the induction of 19 inventors on January 8. Although inductees' innovations ranged from the UNIX operating system to fluoride toothpaste, technological achievement was a dominant theme.

Inductees and their inventions: **Chieko Asakawa** for the Home Page Reader, the first practical voice browser to provide effective internet access for blind and visually impaired computer users; **Jeff Kodosky** and **James Truchard** for LabVIEW, a virtual programming language; **Rebecca Richards-Kortum**, medical devices for low-resource settings; **Dennis Ritchie** (posthumous) and **Ken Thompson**, the UNIX operating system that still runs machinery from supercomputers to smartphones 50 years after its inception; **Edmund O. Schweitzer III**, digital protective relay; **David Walt**, microwell arrays that analyze thousands of genes simultaneously; and

William J. Warner, the Avid Media Composer digital nonlinear editing system.

"I am honored to be inducted into the National Inventors Hall of Fame," Warner said. "I love how inventions can change the world for the better, and I am thrilled to join this year's class."

Solely posthumous inductees included **John Baer**, **Karl H. Beyer Jr.**, **Frederick Novello** and **James Sprague**, part of the Merck Sharp & Dohme Research Laboratories team that pioneered thiazide diuretics, the first class of drugs to safely and effectively treat hypertension. Others were **S. Duncan Black** and **Alonzo G. Decker**, portable hand-held electric drill; **Andrew Higgins**, landing craft crucial to U.S. military success in World War II; **Joseph Lee**, a son of slaves who was a pioneer in the automation of bread and bread-crumbs making during the late 1800s; and **Joseph Muhler** and **William Nebergall**, who developed stannous fluoride toothpaste.

The hall of fame, in partnership with the United States Patent and Trademark Office, will honor the new inductees in Washington, D.C., on May 1-2. 📍

A Plateful of Pluck

HUSBAND AND WIFE NAVIGATED A MESSY PATH OF OBSTACLES TO GET PRODUCT TO MARKET **BY HOWIE BUSCH**



GREATPLATE™ is one of those products that when you see it, you're instantly mad you didn't think of it.

The product hit its stride in 2018, but it's looking like it will explode this year.

It wasn't an easy road to get to this point. To get this invention created and to market took guts, plenty of mistakes—and mostly, good old-fashioned stick-to-it-iveness.

Thanks to messy teens

The brainchild of Milwaukee-area husband-and-wife team Rick Kellow and Beth Kuehl, GreatPlate came about like many great inventions: They had a problem that needed solving.

The couple were frustrated that after their teenagers had friends over to play video games and watch movies, there were cans, cups and bottles strewn all over their floor. One day in 2010, tired of nagging them about the mess, Kellow sketched out a plate with a raised cavity in the center for a cup.

He and his wife set out for the store to buy those plates, which they were certain already existed. But they couldn't find them anywhere.

Expensive lunch

They had no intention of doing anything with the idea. But a week later, Kellow had lunch with a friend who owned an engineering company. He casually mentioned the idea, just making polite conversation.

A week later, his friend told him he had made a prototype of Kellow's drawing. This could be an idea worth pursuing, the friend said.

The next time they had lunch, his friend showed up with six prototypes—and a bill for \$3,000.

\$3,000!?! He paid the bill and on the way home racked his brain, trying to come up with a way to explain to his wife that he had just spent \$3,000 for six prototypes for a product they had no intention of developing. As such conversations between husband and wife often go, the product was put on the shelf for two years.

In 2012, their video game-playing son took one of the prototypes to college, where he had a tiny efficiency apartment but still often had friends over to play video games and watch movies. So he brought out the plate just about every time his friends came over.

One of their neighbors asked whether the plate could float. In another "Eureka!" moment, they realized that not only could the plate float, it could also be thrown like a Frisbee. They realized there were lots of cool features to this product. The couple's kids kept urging them to do something with the plate.

In 2013, Kellow was speaking with one of his mortgage customers who owned an injection molding company. His customer said the company could make it, but Rick and Beth would need to buy a \$50,000 injection molding tool to make it happen.

The big gamble

If \$3,000 caused the plate to be shelved a few years earlier, what would \$50,000 mean? The couple obviously had a big decision to make. They thought they might have a game-changing product, but how could they be sure?

They went home, discussed it, thought about it and prayed about it. They didn't have a liquid \$50,000 lying around. They went to their accountant, who guided them on how to use their retirement account for the investment.

That's right. They believed in their product so much, they risked their retirement savings to bet on themselves.

Neither Rick nor Beth had any experience with inventing or bringing products to market. But they

Rick Kellow and Beth Kuehl (above right) risked their retirement savings to bet on themselves.





The product's inventors turned the sudden disappearance of their PR person into a new hire that led to even better exposure for them.

The couple oversee quality control at the U.S. GreatPlate factory (top left). They overcame an initial patent rejection by framing the product as a flying disc that could turn over and become a plate. Their invention was designed to reduce clutter after family gatherings.

had faith. They believed in the product, and they believed in themselves.

They spoke to their son's friend who had just become an intellectual property attorney and soon filed a provisional patent application to gain patent-pending status. They also filed and received six design patents.

When they went to file their utility patent based on their PPA, it was quickly rejected. They soon learned that no patents had been issued on plates in years, that plate patents were considered obvious and not novel enough.

Rick and Beth were discouraged because they didn't believe that the design patents would be enough protection against copycats. But then he came up with an idea. Because the plate could also fly like a Frisbee, they framed their response to the patent objection that it was actually a flying disc that could turn over and become a plate.

Crazy as it seems, this subtle distinction got them their utility patent. They were off to the races.

Retail challenges

The couple were excited to get a sizeable order from CVS in late 2014.

But CVS placed GreatPlate on the bottom shelf, and people weren't sure what the product was. It

needed some explanation, and the packaging didn't do a good enough job of that.

Even though GreatPlate sold reasonably well at CVS, there was no re-order forthcoming. In fact, CVS liquidated the remaining inventory, which hurt pricing for other retail and e-commerce opportunities.

Rick and Beth were distraught.

But in early 2015, they received an interesting phone call from a former casting supervisor from "Shark Tank" who left to work on a show at The Food Network called "Food Fortunes." The casting supervisor remembered GreatPlate from Rick and Beth's "Shark Tank" audition tape and asked if they would be interested in being on The Food Network show.

They appeared on the show and actually received a deal, but it was never consummated. However, the fact that the entrepreneurs/investors and the studio audience loved their product gave them the validation they were looking for. They were reinvigorated.

Something else incredible came from that show. One of the viewers of the show went to Bed Bath & Beyond looking for the product. The store manager said he had never heard of it, but he reached out to the regional manager, who reached out to corporate. Soon came a test, followed by a huge order. The product sold very well.

GreatPlate makes it easier to carry food and drinks at the same time.



Lessons about selling

Kellow says one of the couple's biggest mistakes was starting with retail before trying to sell online.

GreatPlate is a disruptive product, but not enough people understood what it was at first. Rick and Beth could have told the story a bit more online, showing the product in use so the consumer would better understand it.

Plus, big orders from big retailers sound great, but those orders come with peril—considerations such as money for inventory, displays, shipping and onerous terms from retailers. Kellow believes they would have been far better off had they first tested the waters online.

When it comes to selling online today, Amazon.com is at or near the top of the list. One of the major strides the couple made with the product last year was getting a handle on the Amazon business.

Additionally, they hired a PR company. They appeared on "Today" and "The Rachael Ray Show," which provided a big boost to sales and credibility.

When their PR agency got them on TV in Minneapolis, they headed there to appear on several news shows. But when they arrived, they couldn't get in touch with their PR person.

"She basically disappeared and stopped answering my phone calls and emails," Kellow says. Those TV appearances never happened.

So he reached out to a rep firm he had heard about in Minneapolis, met with officials and made the hire. That company has not only helped GreatPlate get some terrific retail opportunities, it introduced the couple to an Amazon company that has taken their business with that online behemoth to a level previously unimagined.

All because they made the best out of being stranded in Minneapolis.

Life changes and tips

When Beth and Rick started GreatPlates, they were running a mortgage business. How did they juggle their day-to-day business with their invention/passion project?

They did what they had to do. It often meant long days and nights, but it was worth it ... and they were in it together. Though they still maintain an interest in the mortgage business, they started focusing on GreatPlate full time about two years ago.

Kellow is a big believer in "staying after it if you believe in it. Just don't give up." In fact, he credits his father for his favorite saying, "Failure is not an option."

Contrary to the generally secretive nature of inventors, the couple also believe in sharing their idea with others. Even though they may not have been protected early, without those early conversations with friends and business associates, GreatPlate never would have moved forward.

Kellow is also a big proponent of LinkedIn. A connection there got GreatPlate on QVC last year; the product sold out all three times it appeared.

These connections and the couple's perseverance helped GreatPlate become an overnight success—after eight years. 🍷

Howie Busch is an inventor, entrepreneur and attorney who helps people get products to market through licensing, manufacturing or crowdfunding. Possibly the world's least handy inventor, he has licensed many products, run a successful Kickstarter campaign and appeared on "Shark Tank."





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No Panic, Just Peace

COUPLE'S TERRIFYING INCIDENT LED TO WEARABLE,
CUSTOMIZABLE CHILD TRACKER **BY JEREMY LOSAW**

IT WAS SHEER TERROR for John and Theresa Renaldi.

In 2015, they were in Chicago when their 6-year-old son got lost in a crowded park. A day that was supposed to be full of family fun instantly turned into a nightmare. Fortunately, the boy was found unharmed about 30 minutes later.

"The worst panic of my life," John Renaldi says. "I believe no parent should experience that panic."

The Renaldis' harrowing incident was recalled on the website for Jiobit, a wearable electronic device that can track a child's movement and provide alerts if he or she moves unexpectedly. It features Bluetooth, Wi-Fi, cellular and GPS tracking hardware that can accurately locate a youth in any situation.

Jiobit's modular design allows it to easily be attached to shoes, pants, shirts and backpacks. It has a small footprint—only 50mm tall and weighing just 18 grams—so it is not bothersome for the child to wear. (Jiobit bills itself as the world's smallest cellular

product.) It also has up to a week of battery life and features an accelerometer and a temperature sensor for additional feedback.

The device comes with an app that helps you set up geofences, caregivers and alert conditions to customize to a user's needs. Jiobit requires an \$8.99/month service plan and is available at jiobit.com for \$99 with a two-year contract or \$149 with month-month billing.

Nailing the fusion

Around the time of the Chicago incident, Renaldi was working as an executive at Motorola and was looking for an interesting product that he could develop on his own. He was aware of a concept called sensor fusion, in which multiple sensors are used to perform a task more accurately than a single sensor can.

Renaldi felt that if he used this concept in a tracking device, he may be able to create a product to help

Jiobit's modular design allows it to easily be attached to shoes, pants, shirts and backpacks. The device comes with an app that helps you set up geofences, caregivers and alert conditions to customize to a user's needs.



"I believe no parent should experience that panic."

—JOHN RENALDI, WHO BRIEFLY COULD NOT FIND HIS YOUNG SON IN A CROWDED PARK



parents in similar situations. He relayed the idea to his wife on their anniversary.

"She said, 'This is the first and only one (invention) that I am behind. You can go and spend some of our money on (it) and quit your day job.'"

He felt strongly that he could provide the kind of high-quality device that had been lacking in the marketplace. Previous searches for wearable tracking solutions for kids revealed products that he saw as cumbersome, badly designed, and with poor battery life.

The product he wanted to create was very tech heavy, so he tackled the technical challenges right away. He and his team of developers used powerful but physically large development circuit boards to test the idea of multi-sensor geolocation.

"For any of this to work ... we had to nail this custom system architecture and the sensor fusion technology," Renaldi recalled.

Once they had a good working model to show potential investors, they shifted focus to the mechanical embodiment of the device. They created hundreds of 3D-printed shells and tested with parents and children. The developers were worried about the size but found through research that the kids were more sensitive to weight, so they focused on keeping the device as light and thin as possible.

IP, quality control

The team started the process of securing patents for the technology early in the design process.

Renaldi wanted to create a "house" of IP that would give him optimum coverage. The first provisional filing had enough in it to spin off multiple utility filings as the program progressed.

All of the patents for Jiobit are associated with the software for the device. He felt that the hardware would be too ethereal to bother to protect, but he could have hardware agnostic coverage by focusing on the software instead.

Development continued at a rapid pace, but major issues were on the horizon.

Renaldi brought in experts from Motorola and Google to help ensure that the circuit and radio

designs were sound. His development team built small prototype runs and the device was working well. However,

there was a big issue once the team opened tooling and made housings with the go-to-market materials.

"While it worked ... it just really wasn't the product we could believe in to perform in the field," he says, noting the hundreds of thousands of potential customers who needed a device that was extremely reliable.

Rather than release a Generation 1 version of the product that was subpar, the team decided to spend the time and dollars to make it right. The engineers got back to work and were able to fine-tune the issues within a few months.

Renaldi wanted a high-quality manufactured product and spent a lot of time to find the right manufacturing partner. He focused on factories in China and other Asian countries and sent out many RFPs (request for proposal).

One of his big concerns was having the product knocked off. Once he narrowed the field to just a few, he gave each factory a secret test. He found the means to interview workers at each factory to see how much general information he could get about the details of what they were producing. Most failed the test, but one in Malaysia ultimately won his business.

These are exciting times for Jiobit. Late last year, the company closed a \$6.5 million funding round and sold out of product during the holiday season. A significantly upgraded version is set for release in mid-2019, and Jiobit has been finishing work on a pet tracker version of the product that will be available this year as well. 🐾

Details: Jiobit.com

Jeremy Losaw is a freelance writer and engineering manager for Enventys. He was the 1994 Searles Middle School Geography Bee Champion. He blogs at blog.edisonnation.com/category/prototyping/.





His Latest Role: **INVENTOR**

FAMILY MAN AND 'THE LITTLE COUPLE' STAR BILL KLEIN
DEVELOPS PET TRAINING PAD **BY EDITH G. TOLCHIN**

I **'VE WORKED** with inventors for more than 20 years and have written about them for almost as long. Every so often, I'm privileged to meet an inventor who wears many hats.

I've never been good at balancing my career and home life, though my children are grown and have become kind and accomplished citizens. I have no idea how this happened, but I guess I must have done something right.

I recently had the pleasure of meeting Bill Klein, who is doing many things right. He has a lovely wife, Dr. Jen Arnold, and two great kids: Will and Zoey.

Klein is the epitome of a multi-hat-wearer. He's a successful entrepreneur, a dedicated and truly hands-on dad, an inventor—and oh, did I mention he's one of the stars of TLC's long-running show, "The Little Couple"?

Let's learn about Bill's new pet invention, the Pop-Up Pee Pad, and perhaps we'll be lucky to pick up a bit of his amazing vigor by osmosis.

Edith G. Tolchin (EGT): I recall seeing an episode of your show where you were trying out the Pop-up Pee Pads with your dog Rocky. When did you experience that "aha!" moment?

Bill Klein (BK): It was about nine years ago. Rocky was my and Jen's first dog together. And while he is a cute dog, he single-handedly ruined a number of kitchen chairs, a leather couch and too many area rugs to count. But from that frustration, the Pop-Up Pee Pad was born.

EGT: How did the invention come about?

BK: Rocky had regularly targeted our kitchen chair, and it was almost a daily routine to do a chair-leg check to see if he had relieved himself there. I began

putting pet pads under the chair leg so I wouldn't have to clean the floor, just the chair leg. It worked like a charm. Rocky continued to target the chair leg, and I had one less thing to clean.

While it worked, I was still a bit dissatisfied. After all, I was encouraging him to keep peeing on the chair! So, I began playing with ideas to get him to pee on something I could avoid touching or cleaning altogether... and that's how we started prototyping.

EGT: How exactly does it work?

BK: First, identify a spot where your dog has been having "accidents." Unfold the pad in a location nearby, allowing the hydrant to pop up. Give your dog an opportunity to use the pad.

EGT: Is it better than a real fire hydrant?

BK: The fire department thinks so!

EGT: What are the advantages over pee pads already on the market?

BK: Our pad is a new creation for the pet training pad market. We are the only pet training pad that provides a 3-D target for male dogs. All other pads fall flat.

EGT: On your show, I saw that your brothers recently accompanied you to the Global Pet Expo at the Orlando Convention Center. How as this show beneficial for your product?

BK: GPE has been great for us. We went to the 2017 and 2018 shows.

Our first trip to GPE was to test the waters. I figured it would be a lot cheaper to go to the trade show than it would be to own a container of product no one wants. After an encouraging first showing, we went back to

Dr. Jen Arnold and Bill Klein were dog lovers who had a problem to solve.

PHOTO COURTESY OF TLC; © SERGEY NIVENS AND CHAIST RATTANACHUSRI/SHUTTERSTOCK





The couple's dog, Rocky (front, with Maggie in back), had "single-handedly ruined a number of kitchen chairs, a leather couch and too many area rugs to count," Bill says.

Global in 2018 and this time, we were in production and had inventory to sell.

It's a great way to get out there in front of big resellers. It only takes one to put you on the map!

EGT: I see you are selling on Amazon and on your pet store's website (Rocky and Maggie's). Are you looking to license the product, or do you want to keep this new business in the family?

BK: Starting out, we've had some great meetings with big players in the market. Our relationship with Amazon has been great. They've helped us get our product out to consumers everywhere and along the way, we've learned a lot about logistics, advertising, production forecasting and negotiating with industry giants.

EGT: Have you invented anything else?

BK: No, but I have another product I'm prototyping for a different market. I've definitely caught the inventor bug!

EGT: How did you make your prototypes, and how many did it take before you got the right one?

BK: We went to Petco and purchased a bunch of pads, then to Michaels to pick up some oak tag, and began cutting and gluing. Surprisingly, our first prototype took an hour or so to create. Since

then, we've made a number of enhancements for production, but the first prototype was very close to the finished product.

EGT: Where are you manufacturing? If in China, has the product been affected by the recent tariff increases?

BK: We are manufacturing in China for the time being. Volume will help us with the development of automation equipment, at which point we would like to move some manufacturing to the United States.

So far, the tariffs haven't affected us. We are watching the volatility of the international trade legislation closely and hope we can continue to offer a great product at competitive prices.

EGT: How is the product packaged?

BK: We rolled out the product in three retail package sizes: 10 pads per pack, 25 pads per pack and 50 pads per pack.

EGT: What are the retail pricing and packaging options?

BK: The packaging for the 10-packs is a four-color polybag available for \$14.95 per pack. The 25- and 50-packs come in newly improved, corrugated four-color shippers and are available at \$24.95 per pack and \$44.95 per pack, respectively.

"We are the only pet training pad that provides a 3-D target for male dogs. All other pads fall flat." —BILL KLEIN

EGT: Please tell us about your patent process.

BK: The patent process was pretty straightforward. We met with a patent attorney, who helped draft the patent claims and submitted the patent to the USPTO. We paid for the expedited review so we could keep our momentum going.

Most people don't receive the patent without some changes, and we were no different. We made some augmentations and were granted the utility patent just 15 months from our first filing date.

EGT: What obstacles, if any, have you encountered in product development?

BK: We came up with a great idea and secured the patent, but developing a sellable product was the bigger challenge.

We traveled to China, where most pet training pads are made. We met with four manufacturers in three provinces over two weeks. And while language barriers were present, the primary obstacle was trying to convince the production engineers that it was possible to create the Pop-Up Pee Pad.

EGT: Do you find it difficult developing this new business, managing the pet store and the store's online presence, and filming your TV show?

BK: It's not as scary as it sounds. I've been fortunate to have a great group of people around me on all of my different projects. It doesn't hurt that I enjoy what I do, too. Each project has its own unique challenges and learning opportunities.

EGT: How do you work in family time with all of this? You recently moved from Houston to St. Petersburg, Florida.

BK: Family is what keeps me going. I love spending time with each of them and all of them. And while I tend to have hours that extend long into the night, my favorite hours are any hours I get to spend with them.

In a recent 30-day span I traveled to four cities, had meetings with three top retailers in the pet space, closed a number of deals, shipped thousands of orders, and the 13th season of our show debuted on TLC.

My shining moment was teaching my son to ride a bicycle! Incidentally, he learned to ride a two-wheeler much quicker than me.



In addition to raising their children Zoey and Will, their TV show and many other activities, Dr. Jen Arnold and Bill Klein have produced an inspirational book.

EGT: Do you have any spare time for hobbies, as well as plans to increase your product line?

BK: I've heard about these "hobbies." I want to get one, and it's on my to-do list for 2023.

As for production growth, indeed we are planning for growth. We are working with our customers and our manufacturing partners to ensure we can meet the needs of our expanding market.

EGT: Any encouragement for novice inventors?

BK: The world is starving for more creative people to solve problems, improve something or make life a little easier. Thank you in advance for making the world a better place. 🍀

Details: rockyandmaggies.com/products/pop-up-pee-pad

Books by **Edie Tolchin** (egt@edietolchin.com) include "Fanny on Fire" (fannyonfire.com) and "Secrets of Successful Inventing." She has written for *Inventors Digest* since 2000. Edie has owned EGT Global Trading since 1997, assisting inventors with product safety issues and China manufacturing.





A Wake-up Call for Schools

U.S. NEEDS MORE 21ST CENTURY-RELEVANT STEM OFFERINGS, ORGANIZED IP AWARENESS **BY MANNY SCHECTER**

THE FUTURE of the American economy and our national security depend upon continued innovation. We need a work force skilled in science, technology, engineering, and mathematics (STEM) to enable the initiation of innovation required to drive the U.S. economy, and skilled in the role of intellectual property in promoting innovation.

Although awareness of the need for STEM skills is growing, STEM education may still need improvement. And we lack recognition of IP's fundamental importance.

Re-focus the curriculum

STEM skills are in high demand in the American work force, so jobs requiring those skills are often high paying. Yet despite numerous initiatives that attempt to attract students to STEM education, we have a dearth of workers with STEM skills.

More important, STEM educational offerings in high school and college may not be focused on the right areas. For example, a recent editorial in the *Wall Street Journal* (James Markarian, "Who Needs Calculus? Not High-Schoolers," May 15, 2018) argued that the high school curriculum should now emphasize statistics more than calculus.

Although calculus underpins physics and chemistry, today's computer analytics and artificial intelligence depend on statistics and data science, not calculus. So STEM education may need to evolve in

recognition of disruptive technologies that are starting to drive our economy.

It would be a monumental step in the right direction if our high school curriculum were to pivot to encompass a more optimal mix of math and science needed to sustain innovation. But even that would not be enough.

The curriculum should also include education on how to prevent the loss of hard-fought value through IP protection, and—crucial for the future of our society—to drive capital investment and further innovation. As *Inventors Digest* readers know, IP includes patents, trademarks, copyrights and trade secrets—intangible assets that promote innovation.

The importance of IP is clear. The portion of a company's value attributed to intangible assets has grown considerably in recent decades and now exceeds 80 percent. IP is frequently leveraged to secure start-up venture capital, both on Wall Street and on the television show "Shark Tank." Young companies with patents are better protected and far more apt to survive and thrive.

Unfortunately, the share of patents granted to small companies has been decreasing, and the rate of start-up formation in the United States has been declining.

Step up IP education

If we want to secure America's future, promote our innovation economy and create jobs for our children, we need to educate young people about IP.

We need a more optimal mix of math and science to sustain innovation, as well as education about IP's crucial role in driving capital investment and further innovation.

And given the stiff international competition, we must act now.

Fear not: We do not need to prepare our high school students to be lawyers, nor do we need to teach IP concepts in high school with the same rigor and to the same depth as in law schools. But we do need to teach something about IP.

Just as education about math and science progresses through primary, secondary, undergraduate and graduate schools to prepare students for their eventual careers, so must there be progression in education about IP.

Grade schools have science fairs and invention conventions, and teach students about famous inventors and their inventions. Why not introduce education about how successful inventors protected those inventions (or the consequences they suffered from having not done so)?

Organizations such as the United States Patent and Trademark Office (part of the Department of Commerce), the Global Innovation Policy Center of the U.S. Chamber of Commerce and many others have extracurricular programs to promote IP education and awareness. Despite the best efforts of these organizations, education about IP is lacking in our schools.

Uncoordinated extracurricular programs are not enough. The efforts of a modest number of teachers, professors and guest lecturers will not get the job done.

We must act in an organized and purposeful way, quickly and deliberately, because our future and the future of our country depend on innovation by our children. The time has come for our colleges, the U.S. Department of Education, state and local school boards, and others that determine school curricula to take the next step in STEM education and work with the IP community to establish appropriate curricula that promote innovation. ☐

Manny Schecter is chief patent counsel at IBM. He helped IBM generate more than \$20 billion of income from IP while maintaining its position as the top annual U.S. patentee for the past 26 years. He is active in intellectual property policy matters.



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Who Will Win the *Alice* Race?

USPTO, CONGRESS OR COURTS COULD BE FIRST TO ABOLISH 'ABSTRACT IDEA' DOCTRINE **BY LOUIS CARBONNEAU**

A BELATED HAPPY NEW YEAR to all of you! As I reflect on this column, which has gone through various permutations over the past seven years, I am amazed how readership has grown organically via the Tangible IP website from a dozen (including several family members) to more than 15,000 professionals in the IP and business communities.

I must admit, this baby is a real time investment. But every time I think of retiring it, someone new tells me that he or she actually reads it and even enjoys it. Go figure!

Since November 2017, we have also been published monthly through the always informative *Inventors Digest* magazine. I feel strongly that the inventor community needs to understand how the market operates so that they can set expectations accordingly.

The big recent IP news is the United States Patent and Trademark Office's release of revised guidelines for examiners and judges on patent subject matter eligibility in early January. (For specifics on the guidelines, see Page 40.)

So the race is on as to who will get rid of the infamous *Alice* (aka "abstract idea") doctrine first: the USPTO, Congress or the courts? The new guidelines are to help examiners respond and treat patent applications that would normally have triggered *Alice*-based rejections. The new test should provide much-needed clarity and increase the number of allowed patents by cutting rejections on the basis of patentable subject matter, especially as it pertains to software patents.

USPTO Director Andrei Iancu was also successful in convincing the Patent Trial and Appeal Board to give deference to these guidelines when reviewing challenges to issued patents. This should help reduce the patent invalidation rate that has remained fairly high over the years. It is never easy to put the genie back in the bottle, and this is precisely what Director Iancu has been doing of late—and rather successfully, I might add.

The problem we are now facing is that the courts (especially the U.S. Court of Appeals for the Federal Circuit, which hears all patent cases under appeal) has yet to embrace this new simplified approach and has no obligation to do so. The USPTO is limited to rule making, whereas a change in law must pass through Congress.

Similarly, Congress has several bills on the table that attempt to address this matter, including the recently filed STRONGER Patent Acts, but none of these is likely to see any momentum during this new Congress as the House and the Senate will be dealing with more pressing issues that should be obvious to anyone reading the news. Some have also posited that the new guidelines published by the USPTO may actually remove some of the impetus for Congress to do anything, on the premise the problem has now been fixed.

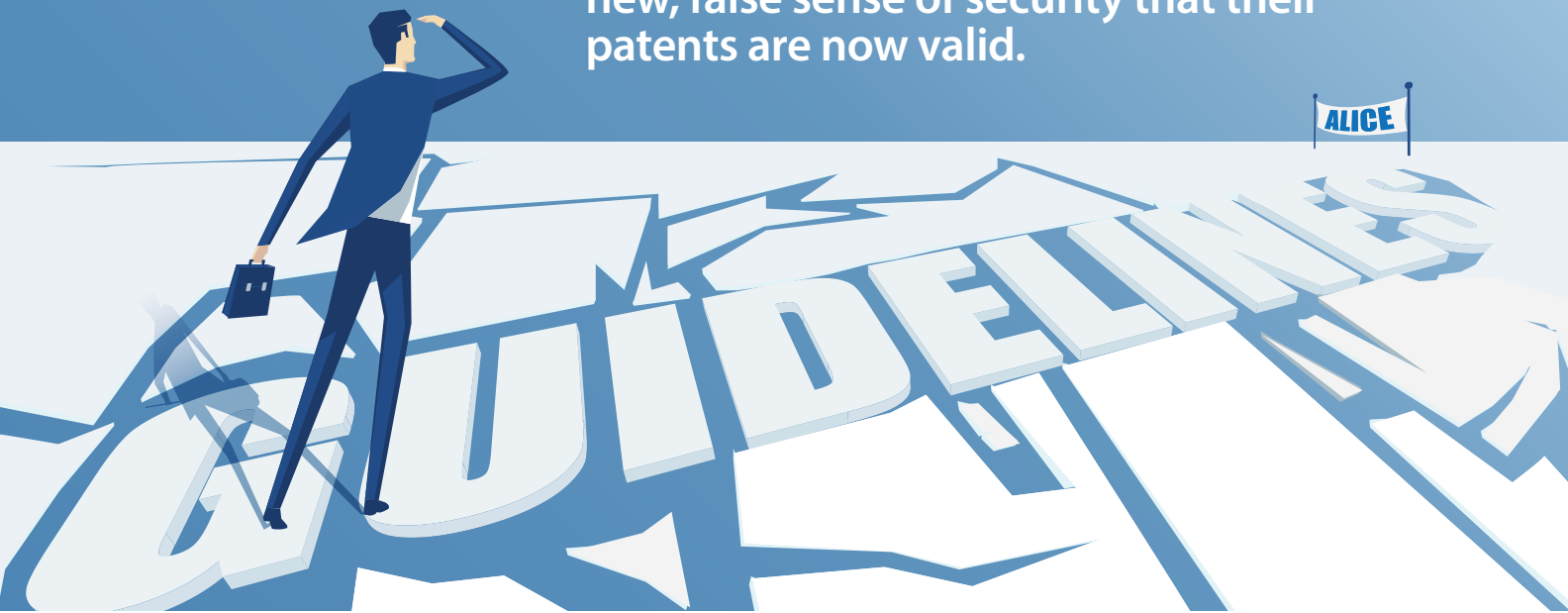
This could leave inventors with a new false sense of security that their patents are now valid in spite of *Alice*, only to discover years later that the courts never agreed to the USPTO approach and declared their patents invalid under the *Alice* doctrine.

Bites at the Apple

Apple and **Qualcomm** have continued their recent all-out patent war on several international fronts, with varied success emblematic of the legal patent environment in place in different countries. At its essence, Qualcomm is suing Apple for non-payment of royalties due to its chipsets that go into Apple products, while the Cupertino company is pushing back on payments on the basis that the rates are unreasonable and has filed a formal complaint with the U.S. antitrust division.

Last fall, Qualcomm had the International Trade Commission (the U.S. competition watchdog) declare that its patents were valid and indeed infringed by Apple, only to see it refuse to issue an exclusion order—the only remedy one can hope to receive from the ITC

Revised guidelines on subject matter eligibility could leave inventors with a new, false sense of security that their patents are now valid.



as it cannot address any award in damages. Meanwhile, Qualcomm took its case to China and Germany, respectively, where it quickly obtained injunctive orders preventing Apple from shipping several of its products out of China or selling them in Germany.

In other words, Qualcomm had no choice but to resort to forum shopping to find a friendlier jurisdiction. Except that instead of going to the Eastern District of Texas, as used to be the default mode, it filed suit in Asia and Europe because no other jurisdiction is currently harder on patent owners than the U.S. court system. You have heard me often state this, but this is a perfect example of how policy affects business decisions.

If you are considering starting or investing in a start-up whose IP is key to its future success and growth (and honestly, when is this not the case?), where are you more likely to place the company, all other things being equal?

Buyers and sellers

It was reported that **North**, the company behind the Focals AR glasses, acquired the “technology portfolio” behind **Intel**’s Vant AR glasses. Basically, North just got its hands on 230 of Intel’s patents to help propel its Focals AR glasses into the future. ...

Facebook purchased 107 U.S. patent assets in the third quarter of 2018, after a two-year hiatus from buying in the brokered market. The patents it bought in July mostly related to wireless communications and web security. ...

According to RPX, which tracks all patent assignments with the USPTO, **Sovereign Peak Ventures, LLC** (SPV), an affiliate of Texas monetization firm Dominion Harbor Enterprises LLC, received more than 500 assets from **Panasonic** in October 2018. USPTO records also identified roughly 65 U.S. patents assigned from **Entropic Communications**, a subsidiary of MaxLinear, to **Dynamic Data Technologies, LLC** (DDT). Those patents are part of a larger acquisition effort by DDT which, in October, began an international litigation campaign asserting a subset of the acquired portfolio. ...

Also, since it announced that it was no longer purchasing assets in April 2018, former powerhouse **Intellectual Ventures** has accelerated the sale of patents from its portfolio, including transfers to a number of particularly prominent non-practicing entities (NPEs)—in some cases, retaining a financial interest in the assertion of its divestitures. ...

Finally, although companies such as **Uber**, **Lyft**, **Pinterest** and **Slack** are among companies planning or actively considering IPOs this year, in comparison to the past, such unicorns are acquiring far fewer patents in the run-up to listing. This reflects a more general trend that U.S.-based companies receive less bang for their buck from patents than in the past.

Winners and losers

One recent big loser was undoubtedly **Wi-LAN**, the Ottawa-based public NPE that saw its \$145 million award against **Apple** melt like Canadian slush to a



HANDSHAKES

In what is a first for **RPX**, it announced a large licensing deal with Italian-based NPE and patent pool **Sisvel** involving approximately 700 Wi-Fi Standard Essential Patents. As a result, all of RPX members (a few hundred companies) will now be licensed under those patents. The patents in play belong to Orange S.A., Fraunhofer IIS, Koninklijke KPN N.V., Columbia University, Hera Wireless S.A., Enact IP S.A., and Aegis 11 S.A. In addition to the existing patent owners, **Mitsubishi Electric** joined this transaction and will now become a patent owner in the Sisvel Wi-Fi Joint Licensing Program. ...

Also, on the eve of the cross-patent licensing agreement it renewed a few months ago, **Microsoft** and **LG** recently announced a tentative agreement to develop automotive technologies. Under the agreement, LG will take advantage of Microsoft's Azure cloud and AI tech to develop its digital platform for the vehicle industry, a market that LG says is key.

paltry \$10 million after a judge ruled that the wrong basis for the initial award had been used. Should Wi-LAN accept that revised award, it would probably barely cover its legal fees after what was a lengthy trial. And remember, it won! ...

In the biotech space, we witnessed several decisions affecting important drugs. But the most important one came from the Indian Supreme Court that saw Bayer-owned **Monsanto** prevail in a closely watched Indian Supreme Court case where the top court upheld the patentability of novel genetically lab-engineered chemical entities such as the company's blockbuster Bt cotton variety. This is expected to have a major impact on the industry. ...

In the U.S., **Amgen** lost its bid at the U.S. Supreme Court to overturn a ruling that kept the **Regeneron Pharmaceuticals Inc.** and **Sanofi S.A.** cholesterol-lowering drug Praluent on the market. American pharmaceutical firm Hospira was not so lucky; a U.S. district court invalidated two of its patents in a victory for German health care company **Fresenius Kabi**. ...

For those tracking the tribulations of **Allegan** since it had the clever idea (back then, at least) to sell some of its blockbuster drug patents to the Saint Regis Mohawk Tribe in order to bypass the PTAB, which did not work, the company has recently appealed to the U.S. Supreme Court so that the sovereign immunity of the tribe can be confirmed. ...

In the high-tech world, **Ericsson** scored a major victory when a Texas federal judge ruled in a major blow to **HTC**—which has accused the company of trying to overcharge on royalties to license cellular

and wireless network SEPs—that Ericsson isn't automatically required to license its standard-essential patents at the much cheaper component level. ...

Last but not least, a tip of the hat to **IBM**, which earned a record 9,100 new patents in the United States in 2018—marking the company's 26th consecutive year of U.S. patent leadership. IBM led the industry in the number of artificial intelligence (AI), cloud computing, security and quantum computing-related patent grants.

On the legislative front

As the U.S. Congress is poised for another two years of gridlock on anything substantive, some argue that this is a perfect opportunity to legislate in a bipartisan way around the needs to reinvigorate patent rights that support innovation. But I wouldn't hold your breath on this one!

Around the world

The irony was not lost on anyone that U.S. and European companies are filing patents in record numbers—in **China**, which received more than 1.5 million new patent applications in total in 2018. The Chinese government also stated that the country's top court will now rule on intellectual property cases for the first time from January 1, elevating the handling of an issue that has become a key complaint in the trade war with the United States.

Remember that last year, China created a specialized court for handling all IP matters. The government now directly controls the judiciary agenda at all levels for dealing with IP disputes, so do not be surprised to see foreign companies fare worse and worse in the future when asserting their patents against China-based companies.

Nevertheless, China is marching on to sell its vision of a market respectful of IP rights, and just released draft guidelines to boost fines fivefold for IP violators. This is meant to address the often-repeated complaint that damage awards in patent cases are too low and do not do enough to deter infringers. ☞

Louis Carbonneau is the founder & CEO of Tangible IP, a leading IP strategic advisory and patent brokerage firm, with more than 2,500 patents sold. He is also an attorney who has been voted as one of the world's leading IP strategists for the past seven years. He writes a regular column read by more than 12,000 IP professionals.



Doing the Math

4 STEPS TO DETERMINE PROFITABLE PRICING FOR YOUR INVENTION PRODUCT BY DON DEBELAK

ONE OF THE earlier steps in your invention process, especially if you plan on making your product yourself, should be to determine whether your product can make money. To be profitable on most products, you should be making the product for 20 percent to 25 percent of the expected retail price.

The 20-25 percentage may sound low to most inventors. But in most cases you will need to sell your products at a 50 percent discount to retailers, and at a 60 percent discount if you sell through distributors.

This leaves you with only 40 percent to 50 percent of the suggested retail price—and you will not make money if the production cost is 35 percent to 40 percent or more of your expected retail price.

Tooling cost is key

The issue most inventors struggle with is determining their projected manufacturing cost. Often, they only have quotes for prototypes and small production runs, quotes where the unit costs can be very high.

Inventors also typically don't understand the impact of the tooling cost (a cost that is charged for the engineering and/or fabrication of the tool that will be used to make your product) on their final production cost, which can be 25 percent to 40 percent of the final production costs. To get a better understanding of expected manufacturing costs, I recommend inventors follow four steps.

1. Find two to three products that are, in your eyes, very similar to your product. If you look at the price of that product and divide it by five, you will probably be somewhat close to that product's manufacturing costs. That should be the starting point for the cost of an inventor's product.
2. Take the products to a prototype builder or manufacturer or someone with manufacturing experience, and have him or her explain whether there are any major differences between your product and the ones you have chosen that could result in a higher or lower price for your product.
3. Estimate the impact of the tooling cost. One component of the product costs that can throw you off is that tooling costs are amortized over time and put in the product costs. If tooling costs for a product are \$50,000 and that tooling will

make 100,000 units, the manufacturer will add \$0.50 to each unit cost to cover tooling costs.

Inventors often go for a lower tooling cost to save money. A large manufacturer with a successful product might make a six-cavity mold (each cavity will make

one part, so a six-cavity mold makes six products with each stamping) for \$100,000, while maybe you can only afford a two-cavity mold for \$25,000 that will make only 35,000 units—so your amortized tooling cost is close to \$0.71 per unit.

If you are going with a cheaper mold, which is advisable until you're sure your product will sell, you need to add a 25 percent premium to your production cost. The example below is for a \$20 product:

Similar product's retail price.....	\$20
Estimated production costs	\$4
Adjusting for impact of a six-cavity.....	\$1
mold versus a two-cavity mold	
Your expected production costs	\$5

4. Multiply your predicted production cost by five and then compare it to your projected retail price. If your perceived value is about the same as production costs multiplied by five, or if it is higher, you are in great shape to make money on your invention.

I know this seems like a torturous exercise. But far too often inventors, with strong, salable products, continue on the invention path and spend money at every step—only to end up with a product they can never make money on because product production costs are too high for the product's perceived value.

Early on is the time to discover this. Then you have time to correct, either by adding features or redesigning your product to cut costs. 🛠️

Don Debelak is the founder of One Stop Invention Shop, which offers marketing and patenting assistance to inventors. He is also the author of several marketing books, including Entrepreneur magazine's *Bringing Your Product to Market*. Debelak can be reached at (612) 414-4118 or dondebelak34@msn.com.



Peace and Prosperity's Promise

FIRSTHAND LOOK AT VIETNAM'S RAW INNOVATION SHOWS A COUNTRY ON THE RISE **BY JEREMY LOSAW**



RAVAGED BY WAR and the ensuing economic collapse, Vietnam suffered mightily during the second half of the 20th century.

Now this beautiful nation is on the rise. With a few decades of peace, a growing manufacturing sector, a culture that values hard work and an energetic youth generation, Vietnam is poised for massive growth in the coming decades.

So it was with great enthusiasm that I visited Vietnam last fall to check it out firsthand. Ken Burns's epic documentary "The Vietnam War" ignited my interest in traveling there, but I also have personal ties that added extra intrigue.

My dad served in the Army in the 1st Logistical Command at the height of the war in 1968. He was tasked primarily with repairing vehicles and heavy equipment. It was war with plenty of awful moments, but he had a pet monkey for a sidekick, was largely away from the daily fighting of the GIs, and even got to see a Bob Hope performance. Most important, he made it back.

My travels began in Ho Chi Minh City (formerly Saigon) in the south. My partner Kerry and I trekked north to Hoi An and Hue in the center of the country, with our final stop in the capital city of Hanoi in the north.

Along the way, I met some interesting people and saw just how innovative and hard working they are. I kept my eye open for innovation and saw these highlights.

The tunnels

War brings out the worst in humanity, but it is also a breeding ground for innovation.

The Viet Cong and North Vietnamese soldiers who fought against the Americans used guerilla techniques that were very effective against the heavily armed and multitudinous U.S. forces. This required a great deal of innovation to keep their forces prepared and hidden from the enemy, and my trip to the Củ Chi tunnel complex just north of Ho Chi Minh City showed how clever they were.

The complex was a safe haven for soldiers to rest, eat and receive medical care. However, it was very close to where American forces were stationed, and they took great measures to not be caught. They tended to only cook in the early morning when the fog would be dense enough to camouflage the smoke, and their chimneys were built long and horizontally to allow the gases time to cool and lose their odor before they left the ground.

To mask human scent from American K9s, the Viet Cong would drag sacks of hot pepper or clothes commandeered from U.S. troops to confuse the dogs. If that wasn't enough, they made sandals from worn-out tires and cut the soles such that they were narrow in the toe and wide in the heel area, the reverse from a normal shoe. So if they happened to make tracks in the dirt, it would look as though they had walked in the opposite direction.

Top: Leslie Losaw, Jeremy Losaw's father, served in Vietnam in 1968-69.

Below: Kerry Burch drops into a narrow opening in the Cu Chi tunnel complex.



When life gives you a river ...

The Mekong river provides millions of Vietnamese with nutrient-rich water for farming and daily use. With the multitude of waterways in the delta, many people take residence on boats.

It was fascinating to see the details of how families set up their houseboats with everyday conveniences. My favorite: With seemingly no place to have a pleasure garden, families instead built container gardens at the bow of their boats with bonsai trees or small herb gardens.

As the lifeblood of the community, the river is used for everything. I watched a woman who lived in a house on the bank of the river use a rope and bucket to retrieve water from the river from her porch without having to walk down to the bank.



Above: A woman uses a bucket on a rope to extract water from the river.

My travels began in Ho Chi Minh City (formerly Saigon) in the south. My partner Kerry and I trekked north to Hoi An and Hue in the center of the country, with our final stop in the capital city of Hanoi in the north.

Below: The picturesque limestone cliffs that dot Ha Long bay are one of many natural wonders that draw visitors to Vietnam.





Many sights are evidence of the country's knack for innovating.

Recycled fishing

Top: A lagoon south of Hue is littered with used motorbike tires that are used to farm for shellfish.

Above: Motorbike ponchos with a clear panel in the front for the headlight are common throughout the country.

The entire eastern border of Vietnam is on the coast of the South China Sea, and seafood is a big part of the diet. While driving from Hue to Hoi An in the narrow central part of the country, you can see many lagoons that are farmed by the locals for shellfish such as mussels and clams.

We stopped at the bank of one of these pools and noticed that the farmers had a unique technique for farming the shellfish. They slit used motorbike tires along the circumference, stack them up and stake them in the water with wooden posts. The shellfish take up residence on the tires and can then be easily harvested by boatmen. With the millions of motorbikes that are ubiquitous throughout the nation, there is no shortage of raw materials for this technique.

Bike in the rain

Vietnam has a lot of motorbikes as well as rain. Because the streets are often narrow and there is no infrastructure to support large vehicles—and there are huge taxes on cars—most of the population uses motorbikes to get around.

But Vietnam's tropical monsoon climate means that some areas can have constant rain for months, which can wreak havoc for motorbike commuters. Innovation to the rescue.

Vietnamese riders use a sort of motorbike poncho that keeps the rider dry and makes the bike into what looks like a motorized tent. It even has a very clever transparent panel in the front that matches up perfectly with the headlight to keep people safe while riding in the rain at night. ☺



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New Guidance, New Hope

REVISED DIRECTION BY USPTO SEEKS TO CLARIFY
PATENT SUBJECT MATTER ELIGIBILITY **BY GENE QUINN**

THE UNITED STATES Patent and Trademark Office has announced revised guidance for examiners and administrative patent judges on subject matter eligibility, which has been a cloudy issue in patent and IP circles for several years.

Also on January 4, the USPTO announced guidance on the application of U.S. patent code Section 112 to computer-implemented inventions. The documents took effect on January 7.

“These guidance documents aim to improve the clarity, consistency, and predictability of actions across the USPTO,” said Under Secretary of Commerce for Intellectual Property and USPTO Director Andrei Iancu. “The USPTO will provide training to examiners and administrative patent judges on both documents to ensure that guidance is being properly administered.”

The clearer guidelines seem patentee friendly, although some potential obstacles remain.

The guidance explains that courts have been comparing patent claims considered to those previously determined to be directed to abstract ideas, as the United States Court of Appeals for the Federal Circuit explicitly explained in *Enfish LLC v. Microsoft Corp.* in 2016.

“While that approach was effective soon after *Alice* was decided, it has since become impractical,” the Federal Register Notice reads, referring to the landmark 2014 Supreme Court ruling that had a major effect on the viability of software patents. “The Federal Circuit has now issued numerous decisions identifying subject matter as abstract or non-abstract in the context of specific cases, and that number is continuously growing.

“In addition, similar subject matter has been described both as abstract and not abstract in different cases. The growing body of precedent has become increasingly more difficult for examiners to apply in a predictable manner, and concerns have been raised that different examiners within and between technology centers may reach inconsistent results.”

2 primary changes

The “2019 Revised Patent Subject Matter Eligibility Guidance” makes two primary changes to how patent examiners apply the first step of the U.S. Supreme Court’s *Alice/Mayo* test, which determines whether a claim is “directed to” a judicial exception.

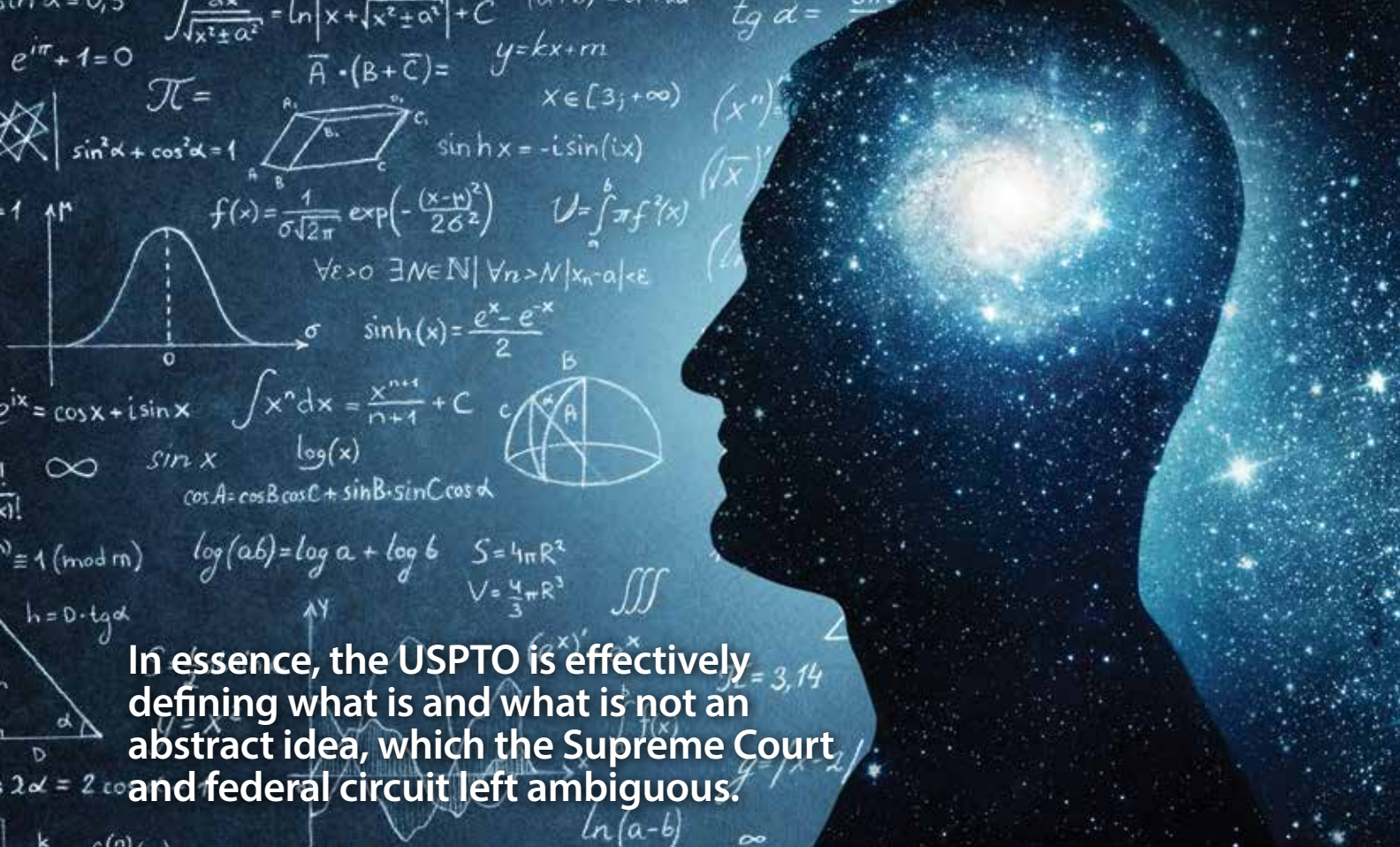
First, in accordance with judicial precedent and in an effort to improve certainty and reliability, the revised guidance extracts and synthesizes key concepts identified by the courts as abstract ideas to explain that the abstract idea exception includes certain groupings of subject matter: mathematical concepts, certain methods of organizing human activity, and mental processes.

Claims that do not fall within one of these enumerated groupings cannot be characterized as reciting an abstract idea unless approved by the Technology Center director, with approval indicated on the record in the file, and with a provided “justification for why such claim limitation is being treated as reciting an abstract idea.”

In essence, by narrowly identifying certain subject matter groups as being those that properly qualify for characterization as “abstract ideas,” the USPTO is effectively defining what is and what is not an abstract idea—thereby filling a void intentionally left ambiguous by the Supreme Court and the federal circuit.

It has been frustrating, to say the least, that courts have refused to define the term “abstract idea” despite that being the key term in the Supreme Court’s extra-statutory patent-eligibility test. Without a definition for that term, rulings have been nothing short of subjective—some would even say arbitrary and capricious.

The revised guidance also includes a two-prong inquiry for whether a claim is “directed to” a judicial exception. In the first prong, examiners will evaluate whether the claim recites a judicial exception and if so, proceed to the second prong. In the second prong, examiners evaluate whether the claim recites



additional elements that integrate the identified judicial exception into a practical application.


Possible speed bump

Whether the federal circuit will agree with this analysis remains to be seen. Perhaps the analysis is different with respect to data-gathering steps, but the federal circuit has ruled that no matter how innovative, no matter how much of an advance a technique

for analyzing, displaying and disseminating financial information using resampled statistical methods may be, such claims are simply ineligible for patenting.

Thus, there are apparently still many innovations that are unique at their core that the federal circuit is not prepared to find patent eligible, even if the USPTO will issue those patents.

The Section 112 guidance emphasizes various issues, specifically as it relates to computer-implemented inventions. The guidance describes proper application of means-plus-function principles under Section 112, as well as definiteness under Section 112(b) and written description and enablement under Section 112(a).

The USPTO seeks public comment on all issues addressed by the two guidance documents. Additionally, the USPTO invites the public to submit suggestions to address future guidance supplements as part of their comments. Please submit written comments on these issues to Eligibility2019@uspto.gov on or before March 8, 2019. 

Gene Quinn is a patent attorney, founder of IPWatchdog.com and a principal lecturer in the top patent bar review course in the nation. Strategic patent consulting, patent application drafting and patent prosecution are his specialties. Quinn also works with independent inventors and start-up businesses in the technology field.



PTAB Order a Good Sign

BOARD GRANTS ADDITIONAL BRIEFING TO CONSIDER REVISED GUIDANCE'S IMPACT



Shortly after the new patent subject matter eligibility guidance was announced by the USPTO, evidence surfaced that the Patent Trial and Appeal Board was making an effort to help the office, in Director Andrei Iancu's words, "speak with one voice."

On January 10, the board entered an order granting additional briefing in a series of covered business method review proceedings challenging patents owned by Mirror Imaging, LLC. The order followed a teleconference between the PTAB, Mirror Imaging and petitioner Fidelity Information Services to discuss the effects of the revised subject matter eligibility guidance published a few days earlier in the Federal Register.

This is potentially big news. "It has always seemed illogical and unfortunate to me to suggest that the PTO should have differing Section 101 standards depending on whether you are on the Patent Office side or the PTAB," said Todd Dickinson, former USPTO director and senior partner at Polsinelli.

"The agency should speak with one voice, to avoid confusion at a minimum, and that would be the new guidelines."

Chain of events

Without diving into the merits of the CBM review, this series of events began with a teleconference.

Patent owner Mirror Imaging suggested that each party file a brief addressing the revised guidance on subject matter eligibility and its impact on the pending CBM proceedings, with briefing not to exceed five pages. Not surprisingly, the petitioner, Fidelity, argued that additional briefing was unnecessary.

After that teleconference, the order issued by the PTAB granted Mirror Imaging's request that a five-page brief be entered in advance of the hearing but also added that parties may submit one brief for each of the four CBM review proceedings that were petitioned by Fidelity. The PTAB's order further granted an extra 15 minutes of argument time to address issues raised by the additional briefings in the case. The parties' presentations must be limited to those arguments and evidence raised in the briefs submitted.

The revised guidelines relate to the procedures used by the office—including those employed by the PTAB—to determine whether a patent claim is directed to judicial exceptions, such as laws of nature, natural phenomena or abstract ideas.

"The guidelines are generally considered more favorable to inventors and should result in more patent grants. A welcome change," said Russ Slifer, former deputy director of the USPTO and current principal with at Schwegman Lundberg & Woessner.

"The panel decision to extend briefing may provide the federal circuit an opportunity to address the guidelines before too many patents are issued in reliance on them."

Bob Stoll, former commissioner for patents and current co-chair of the Drinker Biddle IP Department, echoed Slifer's comments, applauding the new guidance and saying it is a step in the right direction—but that it is unclear how courts will interpret the guidance once given a chance.

"An early decision on these matters will add needed certainty to the patent system," Stoll told IPWatchdog. "And all parts of the office should be bound by guidance from the director of the office!"

Groundbreaking?

In an email sent to IPWatchdog.com, Holland & Hart attorney Dick Schulze added: "I have a feeling that this is groundbreaking as far as the PTAB is concerned. I hope this is the beginning of a more USPTO team-oriented,

proactive, and forward-looking PTAB under the guidance of Director Iancu," said Schulze, recently selected to serve as chair of the Intellectual Property Law Section of the State Bar of Nevada.

It does seem as if this could be a pivotal moment in the history of the PTAB specifically, and the USPTO more generally. If Director Iancu can achieve the goal of having the patent office speak with one voice, with patent examiners and the PTAB all following the same law and guidance, he will have achieved a united patent office that has been elusive but desperately needed. —Gene Quinn



"The guidelines are generally considered more favorable to inventors and should result in more patent grants. A welcome change."

—RUSS SLIFER,
FORMER USPTO DEPUTY DIRECTOR



Action Sought on Iconic Jordan Photo

PHOTOGRAPHER WANTS SCOTUS TO TAKE UP HIS CASE AGAINST NIKE **BY STEVE BRACHMANN**

AWARD-WINNING photojournalist Jacobus Rentmeester recently filed a petition for writ of certiorari, asking the United States Supreme Court to take up his case against athletic apparel maker Nike Inc. on appeal from the Court of Appeals from the Ninth Circuit.

In the petition, filed in early December, Rentmeester asked the nation's highest court to answer the question of whether copyright protection for a photograph is limited solely to the photographer's selection and arrangement of unprotected elements—or, rather, that such protection also covers elements of the photograph that express original creative judgments of the photographer.

At issue in this case is an iconic image of basketball superstar Michael Jordan captured by Rentmeester in a 1984 photograph shot for *Life* magazine. The image, which features Jordan in mid-air and flying toward a basketball hoop with his left arm and both legs outstretched, was ranked by Time magazine as one of the most influential images of all time.

Case background

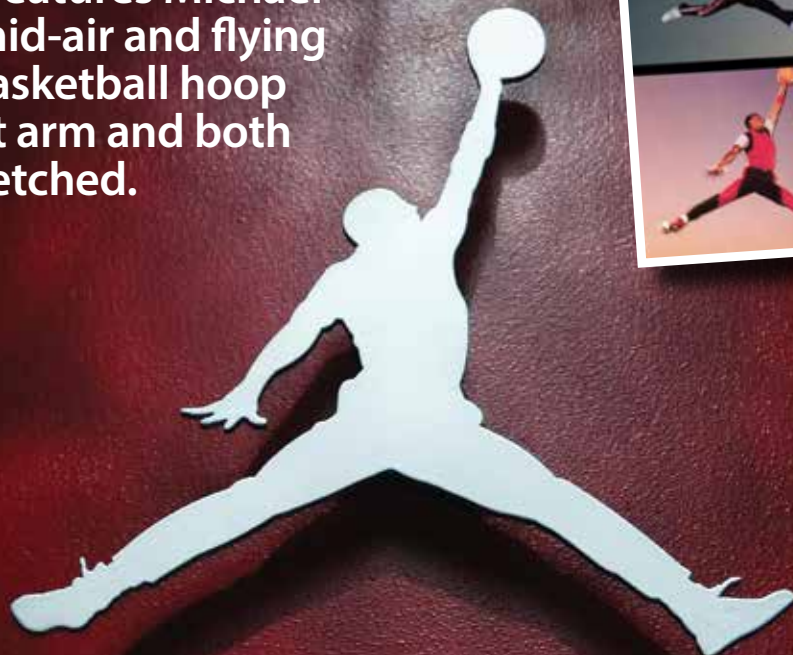
Many of the visual elements of the photograph were orchestrated by Rentmeester, including an artificial dunk pose inspired by ballet from a previous Rentmeester shoot with Mikhail Baryshnikov and the placement of the basketball in Jordan's left hand (Jordan was a right-handed dunker).

Rentmeester's photo of Jordan was one of many career highlights—which included a photograph of an American tank commander in Vietnam that in 1967 became the first color photo to win World Press Photo of the Year, and the well-known photo of the Black September terrorist during the Israeli national team hostage crisis at the 1972 Munich Olympics.

Nike entered into a sponsorship deal with Jordan around the same time that *Life* published Rentmeester's photograph. Nike's creative director, Peter Moore, requested a license for Rentmeester's work and Nike quickly violated the license agreement by ordering another photographer to produce

Jacobus Rentmeester's photo was shot in 1984 for *Life* magazine.

The image features Michael Jordan in mid-air and flying toward a basketball hoop with his left arm and both legs outstretched.





a derivative of Rentmeester's work, which Nike used on posters and billboards. Rentmeester complained to Nike, and the apparel company entered into a second license agreement permitting the use of the derivative photo on posters and billboards in North America only for two years.

Rentmeester's copyright infringement case was filed in 2015 after Nike continued to violate the terms of the second license agreement by reproducing the Jordan photo in a variety of forms. The district court granted Nike's motion to dismiss, reasoning that "ideas—even very creative ideas—are not granted copyright protection" and then finding that the photograph expressed the "idea" of Jordan dunking in a ballet-inspired pose.

The district court was affirmed by a divided Ninth Circuit panel, most of which likened photographs to "factual compilations" such as phonebooks, which are protected only in their arrangement of unprotected materials. On the pleadings alone, the majority panel found that the photographs aren't substantially similar because the details of the former photograph weren't replicated by the latter photograph.

The Ninth Circuit also denied a rehearing en banc (before all judges of a court) despite a dissenting opinion in the case.

Citing precedent

Rentmeester argues in his petition that the Ninth Circuit's decision conflicts with the Supreme Court's own recognition of the artistry involved in carefully staged photographs leading to copyright protection from more than a century ago.

In 1884, SCOTUS decided *Burrow-Giles Lithographic Co. v. Sarony*, which extended copyright protection to photography. In finding that Burrow-Giles had violated Sarony's copyright by making unlicensed prints of a Sarony photo depicting Oscar Wilde, the Supreme Court held that Sarony's photo was a "product of plaintiff's intellectual invention" rising to the level of a work of art.

The Ninth Circuit's decision also represents a conflict with various other circuit courts, Rentmeester argues. This includes the Second Circuit, which along with the Ninth Circuit is a major forum where copyright cases are decided.

In *Rogers v. Koons* (1992), the Second Circuit determined that artist Jeff Koons infringed upon Art Rogers's copyright when Koons produced a sculpture depicting many elements of Rogers' photograph of eight German Shepherd puppies being held by two people sitting on a bench. The Second Circuit found that individual elements selected by the photographer, including a subject's pose, lighting and camera angle, were protectable elements—directly conflicting with

the Ninth Circuit's decision on such elements being unprotectable.

The Second Circuit also denied summary judgment in *Mannion v. Coors Brewing Co.* (2006), holding that a Coors billboard may have infringed Jonathon Mannion's copyright in a photo of basketball star Kevin Garnett in which elements of Mannion's photograph were identified as protectable, including the composition, angle and lighting.

"Ultimately, the decision below treats even highly original, carefully-staged elements in a photograph as the equivalent of phone numbers—a pile of preexisting, unchanged facts that can be elevated into creativity only through clever selection and arrangement," Rentmeester's petition reads.

The Jordan photo, Rentmeester argues, is not "a cliché shot of a basketball player" but, rather, an original work of art that was meticulously created and then pirated by Nike. "At the very least, since reasonable minds could disagree, this question cannot be resolved in Nike's favor at the pleading stage." ☞

Steve Brachmann is a freelance writer located in Buffalo, N.Y., and is a consistent contributor to the intellectual property law blog IPWatchdog. He has also covered local government in the Western New York region for The Buffalo News and The Hamburg Sun.



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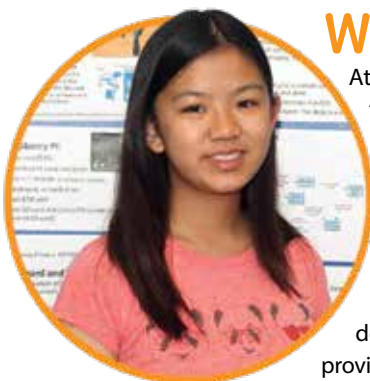
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IoT Corner

Intel recently announced its new **Intel® Connected Logistics Platform**. Developed with the Google Cloud platform, it can provide near-real time conditions of a shipment and can create an alert if there is a sudden change to the shipment.

The system can sense temperature, humidity and shock, and can even tell if a shipment has been stolen. Freight is tracked with low-cost, single-use sensors; data are transmitted via a proprietary wireless protocol that is backed up by gateways installed in cargo containers and freight trailers. In areas of a shipment journey with poor cellular network coverage, the gateways have enough edge computing power to create alerts without having to send the data to the cloud for analysis.

Connected Logistics aims to help increase profits for logistics firms and help purchasers ensure that their products arrive safely without costly returns.—*Jeremy Losaw*



Wunderkinds

At 14, **Katherine Wu** was too young to have a driver's license in 2015. But when her family drove home to Maryland from a vacation in Florida, she noticed her dad had trouble staying alert behind the wheel. Her "Driver's Companion" uses EEG waves and eye blinks to determine driver drowsiness, then provides audio and visual signals to warn the driver if he or she is too tired to be on the road.

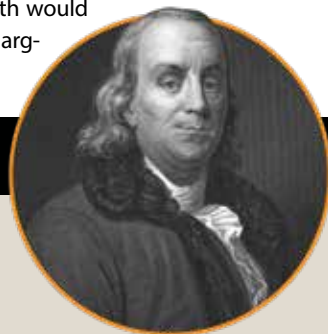
The user wears a mindwave mobile headset, which sends data about the driver's brainwaves to a device about the size of a credit card that the driver can place on the vehicle dashboard.



What IS that?

It's a wearable robot for runners called the **Tomatan**, from Japanese inventor Maiwa Denki. The runner pulls on a lever in the robot's foot, which causes a tomato to pass from the dispensing chute into the robot's hands. Its arms then rotate forward, bringing the fruit to the runner's mouth. The good news is that this is a good nutrient boost; the bad news is that the device weighs about 17.5 lbs. and can only carry six tomatoes.

17.8% Projected 2019 growth for the **SaaS (software as a service) market**, according to global advisory firm Gartner. The market's total worth would be \$85.1 billion. SaaS makes up the largest segment of the cloud market.



WHAT DO YOU KNOW?

- 1** From an IP perspective, what do Mariah Carey, Paul Simon, Queen and Johnny Rivers have in common?
 - A)** All have been accused in plagiarism suits
 - B)** All have their names as copyright owner on their recordings
 - C)** All have sued bootleg copiers
 - D)** None of the above

- 2** **True or false:** You must create a prototype for your invention before filing a patent.

- 3** **True or false:** Ben Franklin is a member of the International Swimming Hall of Fame.
- 4** Which uplifting invention was patented first: the electric elevator, or the electric escalator?
- 5** Which former star NFL wide receiver invented a water-free toilet?
 - A)** Isaac Bruce
 - B)** Fred Biletnikoff
 - C)** Paul Warfield
 - D)** Calvin Johnson

ANSWERS: 1. B. They are among a small number of performers with this distinction; most records list the recording company as the owner of the recording. 2. False. It is not legally required but often strongly suggested. 3. True. He was a proponent of swimming instruction. 4. The elevator was first patented by Alexander Miles in 1887, the escalator in 1892 by Jesse Wilford Reno. 5. D. Johnson invented his toilet while attending Georgia Tech. It was designed for South American populations that didn't have access to clean water or sanitation.

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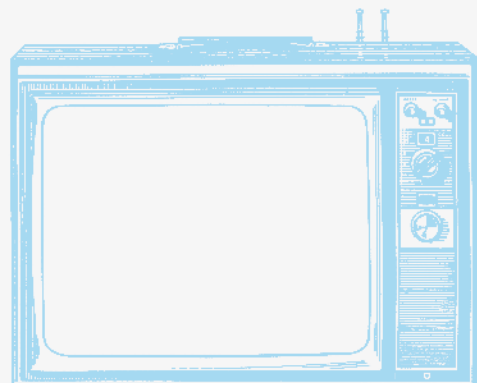
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