



The State

COLUMBIA • SOUTH CAROLINA

# SUNDAY BUSINESS

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ON PAGE TWO

BOOKS-A-MILLION: Retailer reports a strong holiday season.

## A PATENT Q&A

Some questions and answers about patents and the process it takes to receive one.

**WHAT IS A PATENT?** It is a "grant of property rights" for an invention, issued by the U.S. Patent and Trademark Office. Utility and plant patents last for up to 20 years. Design patents last up to 14 years.

**CAN I PATENT AN IDEA?** No.

**WHAT GOOD IS A PATENT?** It gives you the right to stop others from making or selling your invention. It does not give you right to make or sell your own invention.

**WHERE CAN I FIND MORE INFORMATION?** Go to the agency's Web site at [www.pto.gov](http://www.pto.gov).

## THE PATENT PROCESS

The process generally works like this, according to S.C. attorneys, inventors and the Patent Office:

- HAVE A GREAT IDEA.** More importantly: have a new idea, because originality is a key to obtaining a patent.
- PERFORM A BASIC SEARCH.** Go to the U.S. Patent and Trademark Office's Web site to see if what you are seeking to patent already has been done. Doing it yourself will save time and money.
- OPEN YOUR CHECKBOOK.** You can try to handle the application process for yourself, but the agency recommends hiring an attorney registered with the agency. This will include a more complete search. You also must pay fees to the agency. All told, expect to sink at least \$5,000 into the process.
- DO THE PAPERWORK.** Included are text and drawings to show what you are declaring to be patentable, what has come before, what it looks like, and what it does.
- WAIT.** It takes from 18 months to three years to receive a patent, depending on what you are seeking to patent. In the meantime, you will receive a "patent pending" that gives you some limited protection.
- DEFEND.** Examiners usually reject a patent the first time, which means you must address the shortcomings if you want to continue the process.
- WIN OR LOSE.** The government eventually will accept or reject your application.

# PATENT PENDING

## HOME-GROWN IDEAS

Here are some of the more interesting (or at least understandable) of the 700-plus patents awarded to S.C. inventors during 2004.

### LASER-OPERATED SECURITY MAILBOX:

A Mount Pleasant man is one of two people awarded patent No. 6,827,255 — a mailbox with a remote control. Can be used to protect yourself against bombs or gag gifts. Includes an alarm.

### PERSONAL SHOE TRACKING SYSTEM:

A low-power transmitter in the shoe sends data to help a user find the wearer's location. Eworld-Track Inc. of Anderson received patent No. 6,819,258, which it says will be useful to track children.

### MOBILE CREMATORIUM:

An enclosed chamber that can reach 1,000 degrees Fahrenheit. It is attached to two wheels and has a trailer hitch. Patent No. 6,729,247 was awarded to two Greenville residents in May.

**ACTIVITY BRA:** A James Island man received patent No. 6,688,942 for a bra that has an adjustable shield that can compress the breasts.

### INSECT BARRIER GARMENT:

Milliken & Co. of Spartanburg's garment keeps bugs and small animals away from the skin. Patent No. 6,728,969 has a spacer layer to separate the biter from the wearer.



RICH GLICKSTEIN/THE STATE

Scott and Nola Kjellaard have a patent on the PenPal, a device that makes it easy to find the markers while making presentations.

## S.C. inventors find getting patent easier than marketing product

By CHRIS ROBERTS  
Staff Writer

Scott Kjellaard's 1 percent inspiration came as his hand cramped from holding bunches of dry-erase markers while writing on a white board.

His 99 percent perspiration led to U.S. Patent No. 6,745,907 — the PenPal Marker Palette.

The June 8 patent made Kjellaard, who with his wife, Nola, owns Kinetic Energies Inc. in Lexington, one of the 757 S.C. residents who received a patent last year.

Preliminary data from the U.S. Patent and Trademark Office suggest it was the most patents ever earned by state residents.

"I wish I could tell you that the idea for the PenPal was a whiz-bang, eureka moment," said Kjellaard, who moved to South Carolina in 1996 after 19 years as a NASA engineer. "It wasn't."

The genius of the PenPal is its simplicity: a 7-by-5-inch sheet of molded plastic, shaped like a painter's palette, with holes that fit the tips of dry erase

markers. To add a new color to your presentation (on a white board the Kjellaards hope you will buy or rent from their company, by the way), just pick another of the eight markers stuck in the easel.

Kjellaard received his first patent after 23 months. During that time he hired a lawyer, spent thousands of dollars, and went back-and-forth with an examiner from the U.S. Patent and Trademark Office.

"All of a sudden, one day a packet showed up in the mail with a gold seal on it," he said. "It was a good feeling." But 100 percent genius is sometimes not enough. The \$12.95 PenPal can be purchased only at the company's Web site, proof that building a better mousetrap does not necessarily mean the world will beat a path to your door.

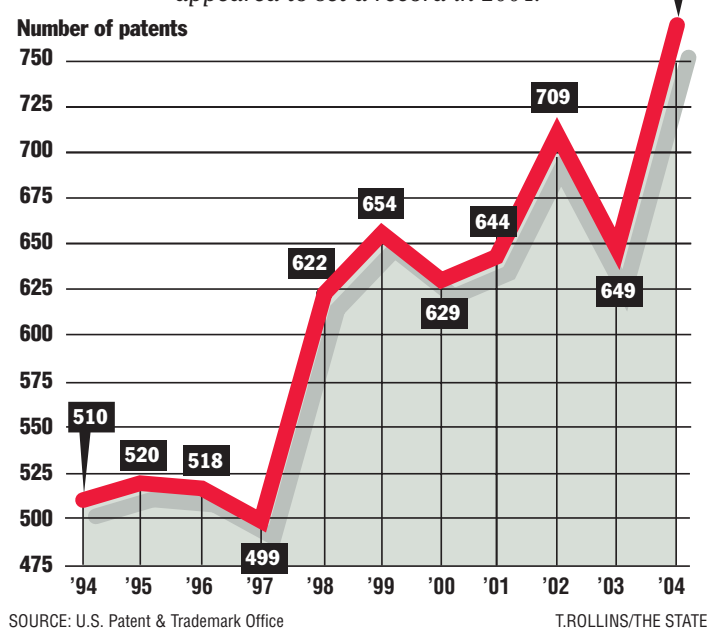
"Going beyond the patent process and trying to market what you've made — that's when it gets scary," Kjellaard said.

Patent attorney Joseph T. Guy says

SEE PATENTS PAGE F3

## PALMETTO PATENTS

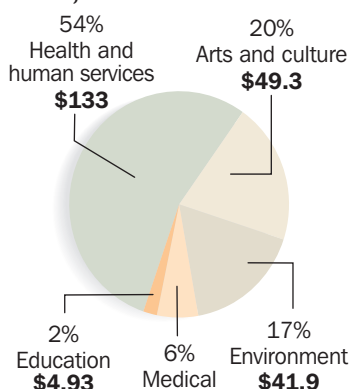
The number of patents awarded to S.C. residents appeared to set a record in 2004.



# Rock music, rockets fuel Allen's life after Microsoft

## GIVING GENEROUSLY

The Paul G. Allen Family foundation donated \$246.3 million to charities from 1997 to 2004.



NOTE: Numbers wii not add up to 100 because of rounding  
SOURCES: The Chronicle of Philanthropy; Paul G. Allen Family foundation  
THE ASSOCIATED PRESS

By ALLISON LINN  
The Associated Press

**SEATTLE** — Most kids discard dreams of becoming an astronaut as fast as they abandon childhood toys. But when the kid is Paul Allen, and he grows from geek to one of the richest men in the world, dreams become reality.

Decades after his space-traveling fantasies were derailed by nearsightedness, Allen spent \$20 million to help launch SpaceShipOne, which last year became the first privately manned rocket to make it into space.

It's one of many ways in which the co-founder of Microsoft Corp. has seen his youthful wonders and hobbies writ large by his vast wealth — estimated at \$20 billion — since retiring from Microsoft in 1983 after being treated for Hodgkin's disease.

His love of Jimi Hendrix is immortalized in the \$240 million Experience Music Project, a shrine built in his Seattle hometown to



FILE PHOTOGRAPH/THE ASSOCIATED PRESS

Microsoft co-founders Bill Gates, left, and Paul Allen talk at a basketball game in March 2003. Among his other pursuits, Allen owns the NBA's Portland Trail Blazers.

Hendrix and all things rock 'n' roll.

His lifetime devotion to science fiction is brought to life at the Science Fiction Museum and Hall of Fame, a haven for people who wonder what Captain Kirk's chair

looks like up close.

His childhood fascination with building model airplanes is behind a collection of meticulously restored World War II fighter planes — real ones, not miniatures —

housed in a nondescript hangar in rural Arlington.

Whether buying professional sports teams or putting \$100 million into brain research, Allen, a college dropout who started Mi-

crosoft with his childhood friend Bill Gates, describes his approach as personal.

Many of his ventures, he says, sprang from a simple question: "What do I love?"

"I have a very broad set of interests, from music to philanthropy to technology to aerospace-related things, and that's been true going back to my childhood," he says, noting that his parents, a librarian and a teacher, encouraged his curiosity. "I'm in the fortunate position of being able to explore my different interests."

### NEW LIFE AT 30

Allen was 30 when he left Microsoft. His brush with life-threatening cancer at first spurred a desire to simply live life.

"I kind of said, 'Well, I need to take a step back here and do some things I haven't done before that I've always wanted to do,'" he said.

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## PATENTS

FROM PAGE **F1**

many people confuse a patent with a product.

"A patent is a title to a piece of property, which indicates what it is that you own," said Guy, who works in the Greenville office of the Nexsen Pruet law firm. "That title gives you rights against trespassing. It's not a right to take a product to market; it's only to stop someone else.

"If I have a Velcro patent and you patent shoes with Velcro straps instead of shoelaces, that may be OK. But you cannot sell shoes with Velcro straps, since I have the Velcro patent. You have to license from me first."

### ALL OVER THE BOARD

Patents were issued to S.C. residents in 2004 for items that range from computer software to tire treads, chemical compounds to a mobile crematorium. ("I think there's a market for farmers who have to dispose of dead animals out in the field," said Guy, who worked on the crematorium patent for two Greenville residents.)

Michelin, Milliken and Intel are among companies that received patents for products developed by employees who live in South Carolina. The companies have staffs of engineers working to keep and expand their competitive edge.

Among the full-time engineers employed by companies is former Columbia resident Jeremy Grayson, who received a patent in August for a fish handling tool and weigh scale. The \$69 device, built to handle fish with lots of teeth, belongs to his employer, Normark Corp. of Minnesota.

It marked the ninth patent for Grayson, who lived in Columbia for five years before moving to the company's corporate offices near Minneapolis. "It's nice to know that you're recognized for having a unique idea," he said. "But you have to remember that it belongs to the company."

That is not the case for part-time inventors, who make up a fair numbers of S.C. residents who receive patents.

"It's a little of both," said Columbia attorney Craig Killen, of Nelson Mullins Riley and Scarborough. "There aren't that many patent attorneys around (149 in South Carolina), so we see a mix of business."

### HARD TO MARKET

Most of the patents are improvements to products and procedures already in use. Many will never end up for sale.

"A relatively low percentage of patented things become commercial successes," Killen said, "but that's not to discourage anyone from trying."

Bill Brent, who has two patents for ladder improvements, said manufacturing and marketing a product is even harder than earning a patent.

"I never really got into the marketing," said Brent, an Upstate resident who retired a decade ago from the clothing business. "Production got to be too much for me, and I made the usual errors in marketing. To make something profitable — it's hard."

Brent is treasurer of the Carolina Investors Council, a group that assists inventors in the patenting and marketing process. His group often hears from inventors who have responded to — or are thinking about responding to — ads from companies that promise to help inventors market their product.

"There are a lot of scammers out there on TV who say they will take care of you," he said. "They just take care of your money."

Patent attorneys say would-be inventors should ask about the success rate of companies that offer marketing services.

"I would be very sure to check a group out before signing with them," Guy said.

Other private inventors fear that their ideas will be stolen by companies. (Several inventors contacted for this story would not discuss their patents, even



RICH GLICKSTEIN/THE STATE

**The PenPal Market Palette received a patent in June 2004. It was designed by a Lexington man to hold up to eight pens.**

though the information is free and easily available at the Patent Office's Web site.)

Idea theft may or may not be a common occurrence, but lawsuits over patents are rare. Court records show about 100 patent-law cases filed in the state since 1998, and most of those cases ended quickly.

"It's extremely expensive," Guy said. "You are talking millions of dollars to defend yourself or to prosecute a case. Most companies settle and cross-license a product instead of spending all that money on lawyers."

### LICENSE TO STEAL

Given the high odds against patents becoming big-selling products, Killen said most inventors should not worry about having their ideas stolen.

"In general, if you've already got the patent, you need to do all you can to get people interested in marketing it," he said. "People might try to engineer around you, but it's a risk that I think people ought to take."

Kjelgaard has been reluctant to take his PenPal palette to companies that might be interested in marketing it, saying "they could just go in and reject your product and make one just like it and tie you up in the legal world."

PenPal sales have been "in the low hundreds," he said, slowed by manufacturing concerns and health issues. He was diagnosed with cancer last year.

His focus is on chemotherapy and his primary main business, Kinetic Energies, which makes, sells and rents white boards and other "collaborative design space" equipment.

Still, he sees a world where teachers and people making white-board presentations would have an easier time on the job if they could hold the eight pens on his palette.

"This has definitely been a learning experience," Kjelgaard said.

And that helps explain why his second patent is pending.

*The PenPal is available at  
www.kineticenergies.com.  
Contact Chris Roberts at (803) 771-8585  
or mcroberts@thestate.com*

## ALLEN

FROM PAGE **F1**

He went skiing and scuba diving and traveled through Europe, but eventually decided to dabble again in technology and other pursuits.

The new chapter of his life soon absorbed him.

"Once I dive into something, I tend to dive in, I guess, head first," Allen says.

He describes his investments since then as a mix of luck and curiosity; they are also a mix of for-profit and charitable. And some are just for himself, his family and friends.

Allen owns a 413-foot yacht called the Octopus, believed to be the world's largest one in private hands; an impressive collection of airplanes, including two Boeing 757s; and a 7.7-acre compound he shares with his mother and sister outside of Seattle that's valued at \$121 million.

But he tends to shun media attention and the spotlight — especially about his his personal life.

Allen, No. 3 on Forbes magazine's list of the world's wealthiest people, was ranked No. 9 on Business Week's annual list of the 50 most generous philanthropists.

His Paul G. Allen Family Foundation has given around \$246 million in the past seven years, including about \$30 million last year. Between the foundation and his personal donations, he has given more than \$800 million to date.

The causes vary widely, from a \$500,000 gift to the nonprofit Plymouth Housing Group in Seattle, which seeks to provide low-income housing to the homeless, to \$10,000 to replace a dance floor at the University of Idaho.

Stacy Palmer, editor of The Chronicle of Philanthropy, said Allen's penchant to pursue a vast variety of quirky projects — like the trip to space or the music museum — gives many nonprofits hope that he will fund projects that might otherwise go ignored.

"I think people at nonprofits are frustrated that there isn't more opportunity to do things like that," Palmer said.

### WIDE INVESTMENTS

Allen also has invested heavily in cultural icons that aren't traditional philanthropies. An avid sports fan, he owns basketball's Portland Trail Blazers, the NFL's Seattle Seahawks and The Sporting News.

A movie buff, he has his own production company, was a major backer of DreamWorks Animation and rehabilitated a favorite theater in his hometown.

Marita Sturken, a University of Southern California associate professor who studies American culture, compares Allen's range of investments to those of past tycoons and says, "He's projecting a new version of what our culture values (are), which is much more ... about a kind of embrace of things popular."

"It's about gaining cultural capital," Sturken says.

Like any good businessman, Allen seizes on opportunity. He contributed \$100 million to develop the Allen Institute for Brain Science because he believes technology can be used to cull through the vast amount of data needed to better understand how the brain works. "I'm trying to do some things now with the Brain Institute and understanding the genetics of the brain. I'm not sure where that's going to lead but it could lead to some real breakthroughs in the understanding of the brain," he said. "Who knows?"

### WINNERS AND LOSERS

When he decides to fund other projects, Allen says he looks for the untested method, or the promising idea that no one seems particularly eager to back.

Allen has also invested billions in business pursuits, many centered on the idea of a "wired world," which would meld tasks like computing, accessing the Internet, making phone calls and watching television. But the

grandiose vision hasn't spawned the next Microsoft.

His investment record is dotted with notable disappointments, including the controlling stake in troubled cable company Charter Communications Inc.

Some analysts estimate that Allen may have poured as much as \$8 billion into the company, which has seen its stock plunge amid an ongoing federal investigation into questionable accounting practices. Charter is continuing to deal with the fallout from the investigation.

"I think there's a perception that he has never been particularly successful with his investments," said analyst Matthew Harrigan, who follows Charter Communications for Janco Partners.

Less common are Allen's successes, such as profitable investments in Ticketmaster, CNET and USA Networks, all of which he has sold. His investment company won't disclose how much he made on those deals.

### STILL IN HIGH-TECH

The billionaire has continued to put his money toward some technological pet projects. Last year, he unveiled the FlipStart, which weighs less than 1 pound and promises to be the world's smallest Windows XP computer. But the FlipStart has yet to hit store shelves, weighed down by technological hurdles and concerns about how best to market the gadget.

In his defense, Allen says when you invest on the scale that he did during the boom years you can expect your share of failures.

But he also has more recently turned to more conservative investments, and he says he's learned from his earlier investment mistakes.

Allen says he isn't just investing to make money.

"I want to see good financial returns, but also to me there's the extra psychic return of having my creativity and technological vision bear fruit and change the world in a positive way," he says.

### OF MUTUAL INTEREST

## Some investors avoid the middle

By MEG RICHARDS  
*The Associated Press*

**NEW YORK** — Large-cap funds have long served as core holdings for individual investors, and several years of outstanding performance have put small-cap funds in the spotlight. But you rarely hear about the benefits of owning stocks in the middle market.

That might seem surprising when you consider that mid-caps have performed exceptionally well in recent years. For example, if you had invested in the Vanguard Mid Capitalization Index five years ago, you would have earned annualized returns of about 9 percent. In contrast, the Vanguard Small Cap Index earned annualized returns of slightly more than 6 percent, while the large-cap Vanguard 500 lost an average of 2.6 percent each year.

For people looking for broad exposure to all the cap sizes, one solution might be a total stock market index fund, such as one that tracks the Wilshire 5000 — a basket of virtually every publicly traded company on the domestic market.

Some money managers think the best way to build a diversified equity portfolio is to skip mid-caps and focus on the edges of the market, where stocks are most likely to outperform. It's not that mid-caps perform poorly; in fact, they're usually quite consistent. But their lack of big highs doesn't add much pizzazz, said Richard Buck, managing editor of FundAdvice.com, a publication of Merriman Capital Management in Seattle. The real key to a diversified investment strategy is holding securities that behave differently from one another.

Small stocks, which have market caps of \$2 billion or less, and large stocks, which have market caps of \$10 billion or more, tend to perform quite differently from each other during various market cycles. If you hold them both, you'll generally see strong returns from one or the other, and as long as you re-

### BIGGEST MUTUAL FUNDS

Through Jan. 14	Assets (\$Mlns)	4-wk	Total return/rank	5-yr	Pct Load
Name			12-mo		
Vanguard Idx Fds: 500 n	84,167	-1.4	+6.5/A	-13.1/A	NL
Amer. Funds A: InvCoAA p	64,879	-1.0	+6.0/D	+14.9/C	5.75
Fidelity Invest: Magellan n	63,295	-1.0	+4.2/C	-18.9/C	NL
Amer. Funds A: WshMutA p	63,079	-1.4	+6.3/D	+27.4/B	5.75
Amer. Funds A: GwthFdA p	60,323	-0.8	+5.8/B	+5.0/A	5.75
PIMCO Instl PIMS: TotRet n	45,790	0.0	+3.8/A	+51.2/A	NL
Fidelity Invest: Contra n	44,484	-0.1	+11.6/A	+6.5/A	NL
Dodge&Cox: Stock	43,266	-0.8	+13.1/A	+73.6/A	NL
Amer. Funds A: IncoFdA p	42,535	-0.6	+9.1/A	+53.8/A	5.75
Amer. Funds A: EupacA p	36,919	+2.1	+13.2/B	-0.1/B	5.75
Fidelity Invest: LowPr m	35,976	-0.3	+16.1/B	+135.8/A	NL
Vanguard Instl Fds: Instldx n	34,989	-1.4	+6.6/A	-12.6/A	NL
Amer. Funds A: NewPerA p	33,735	-0.3	+7.8/D	+8.6/B	5.75
Amer. Funds A: CapInBIA p	32,504	+0.2	+13.7/A	+66.9/A	5.75
Fidelity Invest: Grolnc	32,106	-1.2	+6.9/A	-6.5/A	NL
Vanguard Idx Fds: TotStk n	31,718	-1.5	+7.3/B	-9.3/D	NL
Amer. Funds A: BalA p	29,162	-0.8	+5.8/B	+55.4/A	5.75
Vanguard Fds: Wndsl	29,015	-0.3	+14.6/A	+41.7/A	NL
Vanguard Fds: Welltn n	28,328	-0.7	+7.9/A	+40.6/A	NL
Amer. Funds A: CapWGrA p	26,905	+0.8	+13.8/A	+46.9/A	5.75

balance carefully — taking profits from the one that's outperforming and reinvesting in the one that lags — you're likely to come out ahead over the long term. Rebalancing is essential when it comes to buying low and selling high.

"We just think, dollar for dollar, our investors will get more return per unit of risk if they skip the mid-caps and stick with the large- and small-caps," said Buck. "If you had a perfectly balanced portfolio, mid-caps aren't going to give you anything extra. They're just going to give you more of the middle."

## WAKE FOREST MBA

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Sara Lee Branded Apparel  
Corning Cable Systems  
Mountain States Health Alliance  
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Standard Register  
Avery Dennison  
Sara Lee Branded Apparel  
BellSouth Telecommunications  
BB&T  
Wachovia Securities  
RR Donnelley  
Stolle Technology Inc.  
Consultant  
Targetbase  
IBM  
Deere & Company  
Banner Pharmacaps  
National Gypsum Company  
Corning Cable Systems  
Amarr Garage Doors  
Michelin North America  
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Wake Forest University School of Medicine  
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