

# Eureka Moments

Some of Florida's more prominent inventors — and resources for budding innovators.

Outside the halls and laboratories of its universities, Florida is home to a thriving community of inventors working to turn their ideas into commercial success. The creations of some, such as Ronald Sargent, who lives in Fort Lauderdale, are high-profile: Sargent invented both the Porta Potti camping toilet and the "Dancing Water" fountains at Walt Disney World's Epcot park. Other inventors, such as Thomas Arthur of Medley, create high technology: Arthur invented a "medical systems integrator" that combines displays from multiple pieces of medical equipment onto one flat-screen display. Yet other inventions reflect Florida-born inspiration: ImpactShield, a hurricane shutter made from a fabric that stretches over windows, was invented by Miami's Cameron Gunn. The History Channel's "Modern Marvels" selected ImpactShield as one of the top inventions of 2007.

In addition to the challenge of creating a useful idea, Florida's inventors all face the obstacles of perfecting their designs or processes, patenting them and getting them to market. On the pages that follow — and at FloridaTrend.com — are profiles of some prominent Florida inventors, along with resources for aspiring inventors.



The Porta Potti camping toilet and the "Dancing Water" fountains at Epcot were invented by Ronald Sargent.



The medical systems integrator combines displays from multiple pieces of equipment onto one screen.

## Patents Granted in Florida

Florida ranked No. 12 among U.S. states in utility patents granted in 2009

Year	Patents
1999	2,600
2000	2,605
2001	2,649
2002	2,397
2003	2,563
2004	2,456
2005	2,291
2006	2,601
2007	2,358
2008	2,046
2009	2,197

Source: U.S. Patent and Trademark Office



Ronald DeMeo wears a Demron full body suit that protects against chemical, biological, nuclear and radiation hazards.

## ► Out of Harm's Way

Ronald DeMeo's innovation protects workers from hazards ranging from radiation exposure to bomb threats.

**Inventor:** Ronald DeMeo

**Product:** Demron

**What it is:** A material that blocks nuclear radiation and protects against bomb explosions and chemical threats

**Market:** Medical profession, defense industry

Over time, Ronald DeMeo, a physician with a practice in spinal therapeutics and interventional pain medicine, realized he was getting a lot of exposure to radiation. He observed how frequently his indicator badge registered high levels and saw in the red-tinged faces of older colleagues

the signs of radiation-induced dermatitis, a side effect of long-term exposure.

DeMeo began searching for something more comprehensive than a lead apron to protect himself and his staff. He started experimenting and invented Demron, a material that blocks nuclear radiation and also protects against ballistic threats (including bombs) and chemical threats. It took three years for DeMeo come up with his first Demron product: A mask to protect the faces of medical personnel.

"There was definitely some trial and error involved, and most of it was error," he says.

Although DeMeo filed his first patent for Demron in the mid-1990s, it wasn't until 2002 that he formed Radiation Shield Technologies, the company that manu-

factures and sells Demron and Demron-based products. It took another two years before the company had mass-producible prototypes it could present to potential customers. Eventually, DeMeo earned 12 U.S. and international patents for Demron and branched out into everything from anti-radiation suits and anti-ballistic vests to anti-ballistic, anti-radiation blankets. Radiation Shield Technologies sells to medical practices, the Fire Department of New York, governments around the world and first responders, and Demron is certified for blast suppression and radiation containment, among other uses. The company does all of its own manufacturing in a 16,000-sq.-ft. R&D, manufacturing and recycling facility in Medley, near Miami.



Donnie Brown (left) and Craig Barker by a demonstration air curtain tank.

## ► Oil Blocker

Okaloosa County is betting on an air curtain to keep its harbors and bays free of oil.

**Inventors:** Donnie Brown, Craig Barker

(a third partner, Lee Ingram, was involved in the early stages but is now in a dispute with Brown and Barker over his involvement with the project.)

**Product:** Pneumatic Air Curtain

**What it does:** Forces underwater oil to the surface, where skimmers can collect it

**Market:** Marinas, coastal regions affected by oil spills

Can a 1,270-foot pneumatic air curtain be instrumental in preventing oil from spreading into harbors and bays? Destin's Donnie Brown and Craig Barker, who developed the curtain, certainly think so.

Here's how the curtain works: 12 giant compressors will pump air through a pipe suspended in the water. The bubbles they create should force underwater oil to the surface, where skimmers can collect it.

Brown, a product development engineer and owner of PumpOut USA, had been working for five years on a similar application to contain fuel or oil spills in marinas. When the Deepwater Horizon rig exploded, he thought he might be able to modify

his work to help contain the spill in the challenging high-wind, high-wave Gulf. He called on his friend Barker, a former mayor of Destin and a product development engineer, to help him. The pair estimate they have been through almost 50 prototyping phases already and have partnered with a large marine company to install the curtain. They estimate it will cost \$200,000 to install and another \$500,000 a month to operate.

Development proceeded at a rapid pace because similar devices had been used in other countries to control spills. "We took the existing base, and we expanded upon it and simply overcame challenges as they were presented," Barker says.

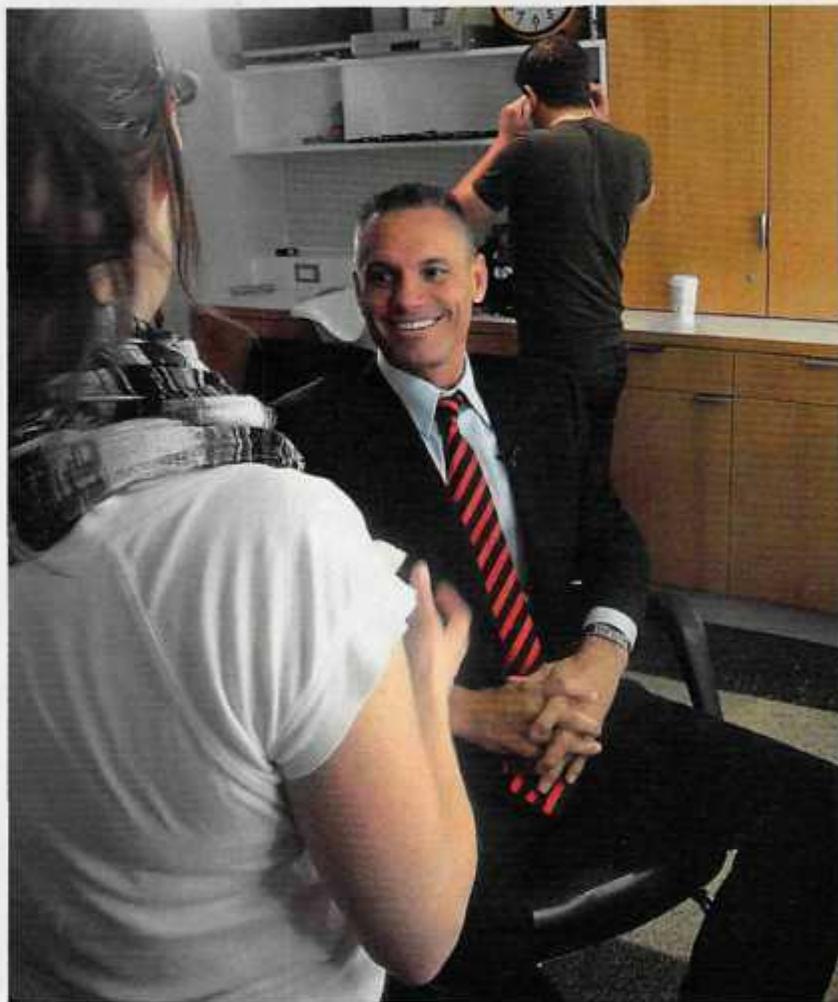
## ► Cashing In

A crop of companies around the state aims to help inventors turn their dreams into marketable products.

**Show up with an invention.** Leave with a company. That's the proposition offered by Sarasota-based Robrady Design, a product design and development studio. The firm helped Dickie Herbst design and package his line of tools that float in water, trademark the invention and create a corporate identity and logos. True to its tagline of "research to reality," the company also created a prototype for Herbst, helped him find a reputable manufacturer in Asia and helped him raise capital to bring the tools to market. Eventually, Herbst sold Xtools and went to work for Robrady, where he is now director of new ventures, brand and retail.

The 20-year-old company also works with major multinationals, designing such products as the second generation Segway, but demand for its services from independent inventors is growing more quickly. "I'm afraid to say it out loud — we're actually slammed," Herbst says of Robrady's 50 employees. "A lot of bigger companies ... slowed down, but a lot of smaller companies and individual entrepreneurs have showed up with a good amount of funding and great ideas."

Turning an inventor's idea into a salable product usually requires engineering, legal skills, design, prototyping, manufacturing, marketing and a host of business skills. Legitimate firms, such as Robrady or the year-old Inventors



**"The biggest mistake inventors make is not to hire the right professionals to help do the market research, complete the design and engineering, and market."**

— Joel Rothman, intellectual property attorney, West Palm Beach office of Arnstein & Lehr

Business Center in Clearwater, do much more than the unscrupulous companies that assemble information that is available for free and try to collect large fees. IBC is run by Kevin Harrington, one of the "sharks" on ABC's "Shark Tank," the television show featuring entrepreneurs who pitch their ideas to a group of investors. Harrington, who had a joint venture with Home Shopping Network in the 1990s, started IBC to complement his infomercial business.

Like Robrady, IBC often starts with inventors at a very early stage. "You can walk in with ... an idea on a napkin and walk out with a finished product, and even that product on television," Har-

Kevin Harrington prepares to film "Shark Tank," a TV show featuring entrepreneurs who pitch their ideas to investors. His Inventors Business Center in Clearwater works with inventors from an early stage.

rington says. He usually finances product development or partners with the inventor and sells it on television.

Other companies offer more specialized help. Fernandina Beach-based e-Zassi offers an online marketplace where inventors of medical devices connect with potential buyers at large medical companies. Software invented by

## [ Bright Ideas ]

company founder Peter von Dyck lets inventors share some data without giving up confidential information. It has more than 1,200 subscribers.

At machine shop TampaTechnik, a small but growing part of Paul Markun's business is engineering and designing prototypes for inventors. "I usually simplify whatever it is they have," he says. At Gross R&D in Fort Myers, former General Motors engineer Joe Gross does similar work, creating for inventors a "proof of concept" prototype. "A lot of times ... they don't even need a finished product," he explains. "It basically just has to be to the point where you can get the idea across either to an investor or a company that might want to license it."

Non-profits — including five inventors organizations around the state — see economic value in helping turn inventions into businesses. "We think this is one of the better approaches to diversifying Florida's economy," says Thomas O'Neal, founder and executive director of the University of Central Florida's Business Incubation Program, which helps inventors outside the university develop business plans and companies once they have their intellectual property squared away. "The IP is something that gives (companies) the advantage to be successful." ■

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## 5 Support Networks

Former GM engineer Joe Gross is president of the Edison Inventors Association in Fort Myers, one of five inventors' groups in the state that provide guidance and support. The Edison association also offers grants, including a new annual award sponsored by the Latham Law Firm in Naples: Each year, Latham will do all of the patent work for the winning invention at no cost.

In southeast Florida, the Inventors Society of South Florida holds an annual expo that attracts people from around the state. Last year, more than 500 attendees perused close to 50 exhibitors, including both inventors and companies providing services to them. Leo Mazur, president of the association, says the group is attracting "more and more engineers, industrial designers — people who were really working in the field."

- ▶ **Tampa Bay Inventors Council:** [tbc.us](http://tbc.us)
- ▶ **Edison Inventors Association:** [edisoninventors.org](http://edisoninventors.org)
- ▶ **Inventors Council of Central Florida:**  
Dr. David Flinchbaugh, [drflinchbaugh@aol.com](mailto:drflinchbaugh@aol.com)  
(no website)
- ▶ **Inventors Society of South Florida:**  
[inventorssociety.net](http://inventorssociety.net)
- ▶ **Space Coast Inventors Guild:** Angel Pacheco,  
321/773-4031 (no website)

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