

NCWIT Interview with Helen Greiner

BIO: *In the early days of iRobot Corp. (Nasdaq:IRBT), co-founder and Chairman of the Board Helen Greiner envisioned robots as the basis for an entirely new class of products that would improve life by taking on dangerous and undesirable tasks. Greiner's vision has been brought to life by products such as the iRobot Roomba® Vacuuming Robot, which has sold more than 2 million units to consumers throughout the world, and the iRobot PackBot® Tactical Mobile Robot, which is helping to save soldiers' lives in Iraq and Afghanistan. Greiner's nearly 20 years in robot innovation and commercialization includes work at NASA's Jet Propulsion Lab and MIT's Artificial Intelligence Lab, where she met iRobot co-founders Colin Angle and Rodney Brooks. Before founding iRobot in 1990, Greiner founded California Cybernetics, a company focused on commercializing NASA Jet Propulsion Lab technology and performing government-sponsored research in robotics. Greiner holds a bachelor's degree in mechanical engineering and a master's degree in computer science, both from MIT. In 2005, she led iRobot through its initial public offering. She also guided iRobot's early strategic corporate growth initiatives by securing \$35 million in venture funding to finance iRobot's expansion in the consumer and military categories. In addition, Greiner created iRobot's Government & Industrial Robots division - starting with government research funding leading to the first deployment of robots in combat in Operation Enduring Freedom. Currently, the division is shipping iRobot PackBot robots for improvised explosive device (IED) disposal in Iraq. In part because of the success of these initiatives, Greiner has helped enhance public acceptance of robots as one of today's most important emerging technology categories.*

Greiner was named by the Kennedy School at Harvard in conjunction with US News and World Report as one of America's Best Leaders and was recently honored with the Pioneer Award from the Association for Unmanned Vehicle Systems International (AUVSI) in appreciation for her work in military robotics. Greiner has been honored by the World Economic Forum as both a Global Leader for Tomorrow and a Young Global Leader. In 2005 Good Housekeeping Magazine named her "Entrepreneur of the Year," and Accenture honored her as "Small Business Icon" in its Government Women Leadership Awards. In 2003, Greiner was recognized by Fortune Magazine as one of its "Top 10 Innovators of 2003" and named the Ernst and Young New England "Entrepreneur of the Year" with cofounder Colin Angle. Greiner won the prestigious "DEMO God" award at the DEMO 2000 Conference. In 1999, she was named an "Innovator for the Next Century" by Technology Review Magazine.

Lucy Sanders: Hi, this is Lucy Sanders. I am the CEO of the National Center for Women and Information Technology or NCWIT. This is part of a series of interviews that we are having with fabulous IT entrepreneurs, women who have started IT companies in a variety of different sectors, all of whom have absolutely fabulous stories to tell us about being entrepreneurs.

With me doing these interviews is Larry Nelson from w3w3.com. Hi, Larry. How are you?

Larry Nelson: Well, hello. Boy, am I happy to be here.

Lucy: Why don't you tell us a little bit about w3w3 because these will be podcasts on w3w3 as well as on the NCWIT website.

Larry: Well, just briefly, we started in 1998 before anybody knew what radio on the Internet was all about. And finally we learned a number of interesting lessons. We started doing podcasting a little over a year ago, so that's a big leap since then. We have been very fortunate to have a number of interviews with top-notch heavy hitters, but after I saw the list that Lucy put together I was just absolutely stunned.

Lucy: To really just get right to it, the person we are interviewing today is Helen Greiner. She is the co-founder and chairwoman of iRobot. I have to admit up front that I am an iRobot stockholder, and Helen knows I am one of her best salespeople -- maybe not her best sales person but certainly one of her salespeople.

Helen Greiner: I hope you are not just a stockholder, but I hope you are also a Roomba owner.

Lucy: I am a Roomba owner. It's getting double duty now because we're doing a kitchen renovation, and we set it loose in the house at night to pick up all the dust and stuff so it's getting a workout, Helen.

Helen: You'll be needing the Dirt Dog model for wash ups and construction areas.

Lucy: Absolutely.

Larry: We're going to have to have a link to all of these on the website.

Lucy: Absolutely. We are really happy to have you here, Helen. We are really looking forward to talking to you about entrepreneurship.

Larry: You know, I can't help but wonder: we have four daughters, and how did you, Helen, get really involved and interested in technology?

Helen: Well, I think this is a common story in technology, but I was inspired by science fiction. I went to see "Star Wars" when I was 11 on the big screen, and I was enthralled by R2-D2 because he was a character. He had a personality and a gender, and he was more than a machine.

I was inspired to start thinking about, can you build something like that? As I was hacking on my little TSR 80 personal computer, obviously I had no idea just how complex it would be.

Lucy: What are you thinking about those new mailboxes that are R2-D2 mailboxes, Helen?

Helen: I think they're pretty damn cool.

Lucy: I think it's pretty cool. As a technologist you obviously look at a lot of different technologies. I am sure you have some on your radar screen that you think are particularly cool and compelling. Maybe you could share some of those with us.

Helen: Well, of course, the coolest is robots because they are just on the cusp of adoption today. Other than the robots and ones that very well might feed into the robot, are large scale memories, multiple core processors, cameras on cell phones. Technologies as they go to mass market are getting cheaper and cheaper which enables them to be bringing them into other applications, like on the robots.

Larry: I just want to make sure that the listeners do understand that you are talking about robots everywhere from the kitchen to Iraq.

Helen: Yes. We have over two million Roombas out there in people's homes doing the floor sweeping and vacuuming. We have a floor washing robot, the Scooba, that you just leave on your floor and when you come back it's clean. We have a robot for the work shop called the Dirt Dog, and what most people don't realize is we also sell a line of robots for the military.

Our Packbot model was used for the first time in cave clearing in Afghanistan and now is being used for

bomb disposal over in Iraq. One of the neat new developments we have is we just put out a version of this with a bomb sniffing payload, so it can actually go out and find improvised explosive devices.

Lucy: Well, I've heard you speak about the robots over in Iraq, and it's very compelling to know that we can use technology like this to really go on these types of missions instead of our young men and our young women.

Helen: The robots allow a soldier to stay at a safe, standoff distance. He doesn't have to go into unnecessary danger.

Lucy: Right.

Helen: Our servicemen and women, you know, are exposed to a lot of danger when you send them to roadside bombs when a robot could do the job instead. We think that's really something that should be changed quickly, and it has changed very rapidly. Just two years ago they would suit up a soldier in a bomb suit and send them down range, and now you have to get permission to do that. The common operating procedure is to send a robot into the danger.

Larry: That sounds like iRobot is doing everything from saving backs in kitchens to saving lives in dangerous situations. Let me see if I can migrate to the entrepreneur part of you. What is it that made you become, or why are you an entrepreneur?

Helen: I was deeply interested in making robots into an industry. People have been talking about robots. They have been in science fiction for decades and decades. Yet, when I started in this field I looked around and there were very few robots that people could actually purchase and could actually use.

When I was at the university at MIT the people worked on wonderful robot projects. It was really, really cool technology, but when the PhD got done or when the project ended, all of it would kind of stop and then somebody would start a new project potentially building on some of the results. But the actual robot that was built. many times progress stopped on it.

Just like the computer industry, I believe it takes a company that can reinvest some of the profits back into the next generation and the next improvements on the products that really has started the industry to take off.

Lucy: Well next the definition that I carry in my head of true innovation is taking research and the types of projects you are talking about, Helen, and driving them out into the consumer space and into the mass market. That is what innovation is all about.

Larry: You bet. By the way, what is it about being an entrepreneur, what is it that makes you tick and turns you on as an entrepreneur?

Helen: Being an entrepreneur is creating something out of nothing. You know, when you start it, it's all consuming. It takes your whole focus. It is very compelling to me. I tend to be someone who when they jump into something they jump into it with absolutely full force, and it allowed me to learn so much along the way. Everything from how to hire people, how to apply for and win a military research contract, how to raise venture capital, how to set up a management structure and, very recently, how to take a company public.

Lucy: Helen, tell us, obviously, entrepreneurship makes you tick. You love to create things from nothing, and along the way as you chose this career path, who influenced you? What kind of mentors did you have?

Helen: I have had a lot of advisors who I could talk to about the different stages of the business, and that's been an incredible gift. That is one of the most valuable things you can give: the benefit of your own

experience. Early on I was influenced by my dad having founded a company, so entrepreneurship was part of my culture growing up.

Larry: So, it's not genetic. It's part of the culture, right?

Helen: I believe that.

Larry: You, I'm sure, like all of us entrepreneurs -- you know, Pat and I, we have been in business together and entrepreneurs for over 30 years. There are a lot of bumps and things along the road. What would be some of the most challenging things that you have experienced?

Helen: Well, iRobot has been in business for 17 years, and it's a lot different company today than when we founded it. Early on, this was a bootstrap company, credit cards filled to the max.

Larry: So you made money right away?

Helen: Yeah.

Larry: You were profitable right away? Yeah.

Lucy: Like many of us.

Helen: No, we really had a bumpy beginning because in part the technology wasn't ready yet upon time. So we came up with a method to develop the technology and to develop business plans so when the opportunity was right we could capitalize on it.

Lucy: So, as we shift a little bit now toward the future entrepreneurs, if you were giving advise to people about entrepreneurship, young people, about the career path you have chosen being an entrepreneur, what would you tell them? What advice would you give them?

Helen: I would say, definitely do it, because it's probably one of the most rewarding career paths you can take. One of the most challenging, but one of the most rewarding. I would say very strongly, don't do it like we did it at iRobot.

iRobot, we didn't do it with a business plan. We didn't start a real crisp idea of what these robots would used for. We basically started with the future of the technology and it happens to have worked for us, but it was a long haul in the early years. I think if I had it to do over again, it would be done a lot more efficiently.

Larry: When did you finally get the real management team put together?

Helen: In 1998 we decided to take venture capital for the first time. And that was a big decision because that's what took it from being more of a lifestyle company, somewhat of a research lab. Folks were building any kind of robot, because they were passionate about it. Some of them are quite frankly cool to a real business concern.

You could almost consider the company a re-start in 1998. It only took the first venture capital, which allowed us to invest in the management team and take it to the next level. Also to invest in our own product lines, rather than relying on government contracts coming in or strategic relationships with larger companies.

Larry: Well, you have been very passionate about iRobots and you've also been very humble in terms of what you have done, what you have been through. What are some of the characteristics that maybe have been a benefit to you in becoming a successful entrepreneur?

Helen: I'd say the biggest one is persistence. There will always be speed bumps along the way. And generally being able to say, OK, I might not have the solution to this problem right now, but I know that

there's a way. And either by talking to people, getting advice, by brainstorming with people, by being creative, by thinking out of the box.

There is always a way to get through any problem that presents itself. It's takes persistence to do that because you will get knocked quite a few times along the road. Being able to pick yourself up, dust off and say, I learned from that experience, I won't do it again.

We don't look at anything at iRobot as failed. This got us to the next step and the next step was different, but they were all stepping-stones to where we are today. And many of them were necessary.

Larry: I have heard that persistence is omnipotence.

Lucy: Sometime we refer to it as relentlessness.

Larry: Oh, is that what that is.

Lucy: Yes. I also have to say something about Helen how and just as a sidebar: Helen gives one of the best talks on robotics I have ever seen. Helen, your talk at the Grace Harper Conference was outrageously good.

Helen: Oh, well I appreciate that. One of the things that I would like for folks listening to know that it is important to be able to grab the microphone and get your message across. My personal background is: I was extremely shy, terribly afraid of public speaking. You know, reports that people who would rather do anything else sometimes than get up in front of a group of people and speak.

I was one of those people. It doesn't come naturally to me. But I recognized that it was important in getting the message of the company across. I really worked on how to improve and just by taking speaking opportunities I got better and better at it. Which doesn't mean I will ever be a natural just really, really want to jump out and do it.

If I can do it, anybody can learn to be a better public speaker. So they can take advantage of the opportunities to get their message out that it provides.

Larry: It might not be natural but you certainly are unique and passionate.

Lucy: The best talk I've heard, a mix of computer science and business and humor, it's wonderful.

Helen: That is very nice of you. It means a lot because I did have to work harder than people who are naturals, "Yes, I want the mike!"

Lucy: One of the things that our listeners will be interested in. The entrepreneurial life is a tough life. It is a lot of work and yet it is important to bring balance between our personal lives and our professional lives. So what kinds of hints do you have to pass along?

Helen: I don't think I'm a shining example of balance in my life, but I can say the philosophy I've always had is: work hard, play hard. So, when I do take off from iRobot, being able to go out snowboarding, being able to tight-board, being able to go scuba diving. I'm just learning how to tight-board. I have a goal to learn one new sport each year, because it's good to take up something new and to me I like doing it in the athletic arena.

Lucy: Well, it sounds like fun to me.

Larry: Lucy likes to go out there and jog every day after...

Lucy: Well, you're right I'm not that good at it either, but I still get out there.

Larry: I can't help but ask this. You know, you have had a very exciting and challenging -- and obviously with the persistence and the talent -- you really accomplished a great deal. I know you want to accomplish a great deal more with iRobot. What's next for you?

Helen: Well, the challenges that iRobot faces today are different than when we were a start up company. Now we have over 350 people. In 2006 we did just about \$189 million in revenues and now it's about making the organization click, to function as a team, and making sure that things work like clockwork at the organization, while still keeping that innovative flair, so you can get the next generation of products into the pipeline.

Lucy: So, I have to ask, just because I love iRobot so much, what's the next great product? Can you spill the beans?

Helen: I can't tell you what the next consumer robot products are, but on the military side, we have a hugely exciting robot that can run over 12 miles an hour, that can carry a soldier's pack. It's got a manipulator on it that can pick up a Howitzer shell. That thing picked me up the other day.

Lucy: Oh.

Larry: Wow.

Helen: We're very excited to get that type of capability also into hands of our soldiers.

Lucy: Wow, that's pretty exciting.

Larry: Nothing like getting picked up. Boy, that's for sure.

Lucy: I don't know what I would do if a robot picked me up, but I guess one of these days maybe we'll experience -- we'll get you to bring that to one of our meetings, Helen. That would be very cool.

Larry: I'd love a picture of that for the website.

Lucy: Yeah, thank you. OK.

Larry: Helen, I want to thank you so much for joining us. We are so excited about this program. When we get to talk to people like you with your background and your experience, it makes it just that much more exciting and motivating to a number of young people.

Helen: Well, I appreciate it.

Lucy: Well, and we want everybody to know where they can find these podcasts. They are accessible on the NCWIT website at ww.NCWIT.org And along with the podcast, his information about entrepreneurship and how people can be more involved as entrepreneurs and also get resources on the web and also from other organizations, should they be interested.

Larry: Yes, and thank you for all of the great hints and probably more than that, some really golden nuggets in there. One that's sticking out in my mind right now is the mass-market adoption. I guess that is what we all want to charge for.

Helen: It's not where we started out, but it is where we're fully focused at.

Lucy: Well, thank you very much.

Helen: OK, thank you. Have a good one.