



Technology experts tell Redmond what makes them tick. By Doug Barney

lex Bakman, founder of Ecora Software Corp., is hoping for a new, more efficient approach to development in the form of "a new software development process that's more engineering and less prone to bugs. It's about time," he says.

In his latest book, "Blink," Malcolm Gladwell tries to discover how great thinkers and decision makers get to be so great. There's no one answer, he concludes. Great decisions can be made in the blink of an eye, but only after years and sometimes decades of building expertise.

Redmond magazine set out on a similar journey, to find out how the visionaries that drive today's third-party innovations came to be so visionary.

If there were a blueprint, we'd all be starting hugely profitable technology companies. It turns out there's a bit of planning, a sprinkle of education and perhaps a dash or two of good old-fashioned genes that make one a Windows guru.

We interviewed a dozen serial entrepreneurs, CTOs and company founders to find out where their ideas come from, and how they turn them into the products that you all know and love.

Guru 101

Lawyers, dentists and psychiatrists all go through seven-odd years of college to earn their stripes. One thing we learned is there's no Ph.D. in technical vision. In fact, nearly all gurus interviewed believe that computer science courses are useful, but not a magic bullet.

"The university training, for me, wasn't the classes. It was the process of training your mind to think critically and how you build a frame of reference; how you go about decision making and problem solving. You learn to look for the interrelationships," says Dwain Kinghorn, chief strategy and technology officer for Altiris (recently acquired by Symantec Corp.).

One thing computer courses can do is inspire. "One business computer course in college was enough to get me hooked. We had only a single programming assignment,

How did you become interested in technology?

"My first-year university programming course. It was the only course I didn't fail that year."



David Waugh, Vice President, Sharepoint Solutions, Quest Software Inc.

yet it made me immediately add a computer science major. I enrolled in every computer class I could and eventually set a software development and consulting company that set the path for my career," says Mitchell Ashley, CTO and VP of customer experience for StillSecure.

Shavlik Technologies LLC founder Mark Shavlik had a similar experience. "In order to pass my first computer course I had to develop my first computer program and I was stuck, really stuck. A friend helped me get past that initial roadblock and I never looked back—I had "cracked the code," so to speak. I got pretty excited—I signed up for as many computer classes as I could. Soon I was staying up all night writing code. I cut classes and even stopped going to parties—just so I could write more and more code," Shavlik says.

Sometimes gifted students are just plain bored by computer classes. "I've touched a few formal classes and always found myself wanting much more than was offered. Given

What is Ray Ozzie's impact on Microsoft?

"You don't come up with Symphony and Lotus Notes and create new, useful innovative products without really understanding customers



and users well. He's old school and new school at the same time, and I like that. I'm excited to see how he will take the reins from Gates and help bring Microsoft into a new era."

Mitchell Ashley, CTO and VP of Customer Experience, StillSecure

Ashley built the company's network access control and vulnerability-management tools and is the co-founder of BoldTech Systems Inc. documentation and books, I could always outpace the class," says Greg Kras, VP of product management for Sunbelt Software.

In many cases, non-computer courses are more useful to a technology career. "The only formal course that really helped me in life was a second year cognitive psychology course. It taught me how to learn effectively. [It's] all about memory and attention," says David Waugh, vice president of SharePoint solutions, Quest Software Inc.

Tom Kemp, CEO of Centrify Corp., had a similar experience. "Besides getting a college degree in Computer Science I also got a degree in History. What inspires me most about



Do you have any software heroes?

"Three names come to mind; **Dave Cutler, Mark Russinovich and** Linus Torvalds."

Greg Kras, VP of Product Management, Sunbelt Software

Kras manages customer support and acts as a technical liaison for Sunbelt customers.

technology is more the societal impact of it, and how you can create a real company out of an idea, and its ability to scale that you don't get in other industries," Kemp explains.

At least one guru is heartily grateful for his formal training. "I have a bachelor's in information engineering. That training helped me move beyond being just a practitioner to being a professional software developer. It also taught me the discipline of getting projects closed—taking them from idea to results," says Marco Peretti, CTO of BeyondTrust Corp.

On the job training may be the best approach. "I was working at a startup airline in the early '80s I went into the technical department to see if a buddy was ready to leave for the day. He said he couldn't go until they had a technical issue resolved and that they had been working on it all day, so that I should go on without him. I asked what the issue was and after he explained it, I suggested a solution. He looked at me kinda odd, tried it—and it worked," says Troy Werelius, CEO of Lucid8. "Later on when the airline went toes up and I needed a new job I remembered this experience and though that perhaps computers were the way to go, so I went to work for a computer chain."

Once in the business, Werelius got even more hands-on experience. "The real value was earned during my networking design, implementation [and] troubleshooting years. During that time I was fortunate enough to work with, design networks and work out technology-based business

issues with some of the largest companies and networks in the world for firms such as Nissan, Matsushita, LA Gear, Deloitte and Touche and others," he explains.

Where Do Gurus Think?

When most of us imagine gurus, we picture them crosslegged on the top of a mountain deep in thought or meditation. Windows gurus are rarely on top of a mountain (except for Lucid8 CEO Troy Werelius, who loves to heli-snowboard).

Instead, our gurus find more mundane places to contemplate the universe. David Waugh from Quest says simple, manual labor is the best way to open the mind, and does his best thinking weeding his garden or splitting wood. The key

How does the Web help brainstorming?

"By giving you the equivalent of the Library of Alexandria at your fingertips."



Tom Kemp, President and CEO of Centrify Corp.

Kemp co-founded NetIQ Corp. and served as entrepreneur in residence at venture capital firm Mayfield Fund.

is to actually slow down the brain. "The tough thing for me is to stop thinking. Most of the thinking is not productive. The real productive stuff usually comes after a break," Waugh explains.

Solitude also helps. "When I'm alone in my car or late at night I explore my ideas, jot down notes, write or experiment on my equipment at home," says StillSecure's Ashley.

Sometimes solitude can be found, even when surrounded by people. "My favorite time to think is on the airplane. With no cell phone or internet access, I have the time and opportunity to sit and think without interruption," says Danny Kim, CTO for FullArmor Corp.

Altiris' Kinghorn does his best thinking when his heart if racing. "My best inspiration comes when I'm running. It lets my mind relax and unwind. Thoughts come to me about how to say something to a person, how to address an issue with a team, or an item I've forgotten about will come back around. Really, it's the challenge of trying to keep yourself whole so your brain can actually come up with some different ideas," says Kinghorn, who has completed 11 marathons.

Ecora Software's Alex Bakman thinks while hiking or watching hockey games. Bakman also relies on his wife for advice, as she has a "woman's intuition and is level-headed."

Nicotine and alcohol have their roles to play as well. "Sometimes I'll take a break and smoke a cigar and just

What was your first computer experience?

"Playing Lemonade came first and programming came later. In my early teens I badly wanted a motorbike (another passion of mine). To help buy one, I worked a

summer job as a developer at age 14 and I loved it. I learned that I liked programming more than I liked to play computer games, and I've never looked back."



Marco Peretti, CTO, BeyondTrust Corp.

Peretti founded Neovalens Software, a company focused on privilege management, and also founded SecureWave S.A.

reflect on projects I'm working on—that would be the closest thing to an allocated thinking time that I have," says Sunbelt's Kras.

Serial entrepreneur Ratmir Timashev has two favored techniques. "I believe that I think when I sleep, because when I wake up I occasionally have some ideas," says Timashev. "[And] I like to just think when I'm alone drinking whiskey in the evening at home. Whiskey makes me relaxed and inspired." Timashev was founder of Aelita, and recently launched Veeam Software.

What is the most inspirational technology book you've read?

"The Singularity Is Near: When Humans Transcend Biology,' by Ray Kurzweil. He's got a bunch of ideas about nano robots and the interaction at a biological level with computing and some

pretty interesting things there."

Dwain Kinghorn, Chief Strategy and Technology Officer, Altiris (recently acquired by Symantec

Kinghorn founded Computing Edge, an SMS-focused company, which was later acquired by Altiris.



If you could create any app, service or Web site without worrying about the business model, what would it be?

"A truly secure Web world that kids can use. They get way too much



today on the Internet and in social sites."

Mark Shavlik, Founder of Shavlik Technologies LLC in 1993 Shavlik worked for Microsoft on the Windows NT kernel, and as part of the overall NT development team.

The Birth of an Idea

Sometimes inspiration comes from being in the right place at the right time. "My biggest inspiration came when I heard Bill Gates speak years ago about software security-patching as a side comment during a presentation he was giving. This was well before anyone did patching as a product, and I thought, 'hey, let's fix this problem," says Mark Shavlik.

Looking at the current state of technology and extrapolating is one way to come up with good ideas. "One analyzes the trends. Analyzing the trends can lead to evolutionary as well as revolutionary—disruptive—ideas. For example, Skype didn't revolutionize anything in technology, but it revolutionized the telecommunication industry," Timashev says.

Sometimes getting the whole development team away makes the lightbulbs go off. "The best inspiration always comes from the least likely places. When we hold our research meetings today, they are always off-site and no pagers, cell phones nor laptops are allowed—except to take notes," says ScriptLogic Corp. founder and CTO Brian Styles.

There are more offbeat approaches. "The best ideas come from left field. When I'm working really hard on a technical or business problem, one of the things I ask myself or the team is, 'what if we did the exact opposite of the path we're on?' At a minimum that can break the log jam and often leads to a new creative solution," Ashley argues.

The past can also be a guide. "I like to read about politics and history, and learn about how people communicate their messages and ideas and have those messages and ideas be accepted. Then, if it makes sense, I think about whether these approaches can be applied to technology," Kemp says.

What was your first computer experience?

"My first computer experience came when my parents purchased a computer for me at age 14: an Atari 800 equipped with a 48k RAM. That night I was writing programs in BASIC. Shortly thereafter, I

purchased the 810 disc drive. The drive cost about **\$1,000** and was only 180k singlesided, singledensity. My friends, however, were still loading their programs from tape. By rewriting



the BIOS of both the computer and the disk drive (using straight 6502 assembler), I was able to increase the data transfer rate 600 percent. I started to sell this as a product and started my first company at age 16."

Brian Styles, CTO and Founder, ScriptLogic Corp. Styles founded Inteletek, a Novell Inc. VAR, and holds Microsoft, Novell and Compaq certifications.

What have you learned from open source development?

"That I don't like communists."

Alex Bakman, Founder and CTO, Ecora Software Corp. Former IT director for a

Fortune 500 company, Bakman founded a Lotus Notes add-on company in the 1980s and holds patents in the United States, U.K. and Israel.

Alex Bakman, founder of Ecora, has a more direct approach, and comes up with ideas "by thinking about the next big pain in the ass," Fortunately, customers help "by telling me about their biggest pain in the ass."

The Customer Is Always Right

There actually is an easy way to come up with winning ideas—just ask IT pros themselves!

"The best ideas come from customers—and not necessarily how they present them to you. You have to look deeper into their situation—what problems aren't being solved that may be off topic in the current conversation. Customers are a vetting and centering factor too. Are they in a place where they could use your idea? Can you shortcut the current

problems they have by taking a different tact? Do others in the market have a similar need or problem?" says StillSecure's Ashlev.

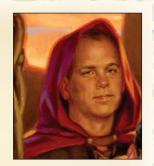
Sunbelt has a similar tack. "Customer feedback is a large source of good ideas: Just listening to admins [talk] about problems they're having and projects they're planning," explains Greg Kras.

Gurus on the Future

Any time you interview 12 technology gurus, you have to spend at least some time asking them about the future. Interesting, several common themes, such as collaboration and virtualization, emerged. When asked what trends that

Xbox, Playstation or Wii—what games are you playing now?

"I would love to play them all but, alas, no time for that. Instead, I save up that time and jump out of helicopters with



my snowboard, rip down the mountain and forget about everything else. So I guess you could say I am my own video game."

Troy Werelius, CEO, Lucid8

will impact the future, Quest's Waugh pointed to "mass collaboration and the ability to partition complex tasks into pieces and farm them out to anywhere on the planet and reassemble them."

But virtualization is the topic that captures nearly all our gurus' imaginations. In fact, Timashev is betting his new company on it. "Virtualization will help to create the world that is on-demand, mobile and more secure. That's why my current company, Veeam Software, is in this area. I think some really exciting things will happen in this space in the next few years, so I want to be a part of it," Timashev says.

"Virtualization: It changes everything. In today's world every piece of software has potential for being distributed on the network, on a device, in a hardware server or appliance, or on a household appliance. Virtualization takes that even further by making distribution much easier. Functionality doesn't need be tied to one device; it could pop up all over the network. It changes the way software functionality is delivered," Ashley says.

For Danny Kim, virtualization and Software as a Service are an industry-changing one-two punch. "Both technologies are potentially disruptive. Either one can fundamentally change the way we manage IT and business, while solving

What trends will fundamentally change the world of software in the next several years?

"Virtualization and SaaS. Both technologies are potentially disruptive. Either one can fundamentally change the way we manage IT and business, while solving

some critical pain points in IT today such as cost, scalability, and time to market."

Danny Kim, CTO, FullArmor Corp. Kim, a Microsoft MVP, has worked for several startups and has a computer science degree from Cornell University.



some critical pain points in IT today such as cost, scalability and time to market," Kim says.

And more horsepower also has our gurus salivating. "I'm most interested in the adoption of 64-bit equipment and the fact that people will have more and more RAM available for applications. Between multiple core CPUs and the extremely

"Business is like sports, where the ultimate measurements of success are customers and profit. If it doesn't generate profit, it's like playing basketball without ever



putting a ball in a basket-no fun."

Ratmir Timashev. President and CEO, Veeam Software Timashev founded Aelita Software, which was later acquired by Quest. He has master's degrees in physics and chemical physics.

high memory limits, I'm sure that developers will start to take advantage of this additional horsepower, both in the server and desktop market." Kras believes.

Meet the New PC

Where virtualization can fundamentally change the nature of software, Moore's law and miniaturization will revolutionize computing devices themselves. Altiris' Kinghorn loves to think about exploiting the ever-growing power of computer hardware.

Gurus' Reading List:

Alex Bakman & David Waugh: "Soul of a New Machine," by Tracy Kidder (Back Bay Books, 2000)

Ratmir Timashev: "Inside the Tornado: Marketing Strategies from Silicon Valley's Cutting Edge," by Geoffrey Moore (Harper Business, 1999)

Troy Werelius: "Pursuit of Happyness," by David Myers (Harper Paperbacks, 1993)

Mitchell Ashley: "The Fifth Discipline," by Peter Senge (Currency, 1994)

Tom Kemp: "Crossing the Chasm," by Geoffrey Moore (HarperCollins Publishers, 1991)

Marco Peretti: "Generic Programming and the STL," by Matthew H. Austern (Addison-Wesley Professional, 1998)

Danny Kim: The Bible

Mark Shavlik: "The Vince Lombardi Story," by Dave Klein (Lion Books, 1971)

"The density of computing is pretty amazing. [Look at] how many magnitudes we've had in computing power over the last eight years. If we continue on that exponential curve, we're not that far away from being able to consider whole new ways you'll interact with computing besides a screen and a mouse," Altiris' Kinghorn believes.

"Even the form factors will change. If you look at something like a BlackBerry or an iPod, it's interesting to consider how much cultural change has happened in five to six years with those devices. If you extrapolate out another 10

to 15 years, it's mind boggling the ways we'll be able to interact with technology. So many software companies are built around the traditional stack of a computer screen and a keyboard and sitting at a desk. But the higher bandwidth and the new form factors currently emerging will change the way we develop software."

Shavlik fully agrees: "People will no longer care about the desktop, they will just care about the applications and data. This is of course what the desktop is today—it's just a way to find applications and data, so once the Internet takes over that role the desktop will lose importance."

All this could prompt a move as revolutionary as the switch from huge stereos to tiny iPods. "I would like to have a computer the size of a USB stick that I carry in my pocket everywhere. When I turn it on, the holographic monitor and keyboard with mouse appear as real. When I switch it off, they disappear and I put it back in my pocket. This stick is also my cell phone, credit card, key—everything I need in one small package," Timashev says.

You, Too, Can Be a Guru!

Technology gurus come in all shapes and sizes, from all different backgrounds. Some are naturally gifted, others work their butts off to get that smart. The lesson here is that almost anyone, with the right education, avocation and inspiration, can become a guru.

"A person's limitations on what they can achieve in life are not the limitations of abilities and skills, but the mental barriers that exist in that person's head about what they can be. The more barriers we can break in our heads, the more we can achieve," Timashev says.

And perhaps most important, gurus put in the time it takes to succeed. Here, for instance, is Troy Werelius's typical day: "Up at 5 a.m., in the gym by 5:30, at the office usually between 7 or 8, work until 6:30 p.m., go home for some family time, at 10 p.m. log on to answer any important e-mails and work to whenever ..." R

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