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Technology All-Stars

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This year's top 25 IT leaders illuminate technology's role in business strategy

THE TOP TECHNOLOGY SLOT IN THE enterprise has changed. Once, forward-looking CTOs and CIOs scanned the horizon for new technologies that would improve the lot of IT. Today, as many of this year's top 25 CTOs can

tell you, technology leaders must also focus on understanding the business goals of the enterprise — and then craft technology strategies to meet those objectives.

The story of Scott Metzger, CTO of the financial services firm TrueCredit and one of this

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year's winners, provides a parable for how technology leadership has evolved. He joined TrueCredit when it was a startup at the height of the dot-com boom, where junior staff infatuated with its own technology flailed at the whiteboard and failed to deliver. Metzger whipped things into shape by learning about the company's business opportunities first —

and then laying out a technology road map to help make those prospects real.

Even CTOs at technology companies are getting with the program. Russell Daniels, who as vice president and CTO of HP Software leads the development of the OpenView line, firmly believes that allocation and management of network and system infrastructure should be

Todd Brennan

DR. TODD BRENNAN, CTO AND CO-FOUNDER of Bit9, is a renaissance technologist whose credentials include a doctorate in electrical engineering and a research stint in MIT's Lincoln Laboratory. It was at Lincoln, while working on satellite communications, that Brennan first got interested in security — as a hobby.

"You had lots of time to think at Lincoln," Brennan says. "I was kind of burning the candle at both ends." The seeds of that work went into Brennan's first startup, the desktop-intrusion-prevention company Okena, which was sold to Cisco in 2003. By then, Brennan was



- CTO and co-founder
- Bit9
- bit9.com

already onto his next adventure: a two-year government-funded "skunk works" project to develop a way to stop completely unknown threats from infecting computers — the so-called "first write" problem.

That research turned into Bit9, which launched its first product, Parity, in September. Bit9's Automatic Graylist technology singles out new files on enterprise networks at the file operation level, then observes their prevalence and behavior. Today, Brennan is developing products and services for ParityCenter, Bit9's Web-based file identification service, which aggregates huge quantities of malware data from the company's various installations.

— Paul Roberts

Matt Bross

TELECOM FIRMS HAVE TRADITIONALLY developed their services in technology silos. But Matt Bross, CTO of BT (formerly British Telecom), sees no reason to continue investing in legacy infrastructure, not when the Internet offers vast new opportunities. The former head of global engineering for MasterCard, Bross has developed the architecture for BT's \$18 billion next-generation communications network, dubbed 21CN, to be deployed in 160 countries over the next five years, one that dumps the traditional phone network in favor of broadband IP systems.

Flying in the face of century-old BT tradition,



- CTO
- BT
- bt.com

Bross shared the whole picture with partners, so everyone works within the same framework. "That caused more than a few comments," he notes wryly.

The result: Innovations are now focused on customer services and developed as interoperable platforms. They come from a mix of BT staff, business partners, universities, and vendors throughout the world — a team of technology scouts looks for promising technologies that can support BT's service vision — so the company doesn't have to invent everything itself. "That change was difficult," Bross acknowledges, but people soon saw the benefits: "They see their ideas fused with the best of the world and put into practice."

— Galen Gruman

tied directly to measurable business impact.

The new business-oriented mindset sometimes leads to radical thinking. To concentrate fully on innovation, Frank Modruson, CIO of Accenture, spun off the operations side of Accenture's IT as a separate business, which allowed it to scale, take on other customers, and become a revenue center.

All of us at *InfoWorld*, not to mention our readers, take a degree of pride in our understanding of technology. But as we discover how to battle the latest security threat or delve into the intricacies of loosely coupled systems, we've learned the best technology is that which is so closely coupled with the business, you can barely tease the two apart.

Dan Canzano

TO DAN CANZANO, THERE'S MORE TO BEING the vice president of IT at Paychex than understanding technology. "I am not a technologist per se," he says. "I have a master's in business and I've been smart enough to surround myself with very capable and smart technical people."

At Paychex, those technology brains are hard at work developing the unique suite of applications that forms the basis of the company's payroll services business. According to Canzano, that software is one of Paychex's most important business assets. "Virtually everything we do is made up of three significant components:



- Vice President of IT
- Paychex
- paychex.com

sales, operations, and technology. Those three pillars, so to speak, are the underpinnings of our success," Canzano says.

In managing the almost 700 employees in Paychex's IT department, Canzano makes sure that technology solutions are deployed in a manner that aligns with business objectives. After that's done, he says, all that remains is to set the machine in motion.

"If there's a philosophy in there anywhere," Canzano says, "it's to make sure that I've got the best technical minds available to me around me, and try to give them some guidance and direction from a business perspective and then, quite frankly, get out of their way." — Neil McAllister

Russell Daniels

AS CTO AND VICE PRESIDENT OF HP'S SOFTWARE business, Russell Daniels has a service-oriented perspective normally associated with applications — rather than, say, his flagship OpenView product.

"Historically, the enterprise management category was viewed as network and systems monitoring, and not much else," Daniels says. But today, he argues, it should be viewed as a way to manage IT assets and services — and measure their effectiveness in furthering an organization's business goals.

Daniels also co-leads the company's Adaptive Enterprise initiative, which combines



- CTO and vice president, HP Software
- Hewlett-Packard
- hp.com/software

virtualization with various datacenter automation technologies to form a malleable foundation for service-oriented IT. The automation efforts are focused, he says, on activities that, when done manually, tend to inject errors into systems. The ultimate objective is for enterprises to spend less on operations and more on innovation.

Although his background is in software development (including work on Web services standards), and he embraces the intricacies of datacenter management, Daniels is keenly aware that technology must always prove its value: "We have to be able to understand the performance of computing systems in business metrics, not IT metrics." — Eric Knorr

Bob DeRodes

BOB DERODES USED TO BE A LONG-SNAPPING center, but he says he missed his shot at the NFL. Instead, he became executive vice president and CIO of The Home Depot.

After joining the company in 2000 and quickly getting promoted to his current position, DeRodes oversaw a massive modernization initiative. “I digitized Home Depot,” he says simply. DeRodes and his team rebuilt all the basic data structures, replaced the WAN and LAN infrastructure, and invested in new operating systems, hardware, and enterprise applications.

The \$2 billion project took one year and a



- Executive VP and CTO
- The Home Depot
- homedepot.com

million person hours to complete, and stretched from the customer Web site to the supply chain to the sales floor. In all, DeRodes’ developers built 12 business apps designed to improve point-of-sale accuracy, sales floor service and execution, and back-end processes.

Previously, DeRodes held senior IT management positions at Citibank, Delta Airlines, and Sabre. He believes that ongoing advances in networking, storage, and personal devices will continue to improve The Home Depot customer experience. Ultimately, he says, shoppers will use wireless PDAs to find what they need in Home Depot stores. “No one company will revolutionize the industry, but one can influence it,” he says.

— John Webster

Fred Dillman

A 25-YEAR UNISYS VETERAN, CTO FRED DILLMAN has seen lots of changes in how IT operates. “When IT was growing, it was all about making improvements in the business, but after a while they got enamored with their own technology,” Dillman says.

His goal, as he sees it, is to restore IT’s former relevance. To that end, he heads up Unisys’s 3D-VE (3D Visible Enterprise) — both a professional services methodology and suite of business process software — which places IT projects at the heart of business process transformation.



- CTO
- Unisys
- unisys.com

3D-VE creates linkages between the line of business manager who understands business processes and how to make them more efficient, and the IT manager who is investing in technology. At the end of the day, he says, each IT project can demonstrate its value through explicit connection to business process improvement. According to Dillman, “It doesn’t look like a technology project but a business investment.”

Dillman believes that 3D-VE forces a culture of innovation on IT. “If I am modeling business processes, it opens peoples minds up. IT becomes a partner with the business because they think about the way the company works.”

— Ephraim Schwartz

Gerhard Eschelbeck

GERHARD ESCHELBECK HAS NEVER BEEN ONE to shy away from a tough assignment. As CTO of Qualys, Eschelbeck oversaw the development of that company’s on-demand vulnerability scanning service, despite widespread skepticism. Qualys, which is gearing up for an initial public offering, now has more than 2,000 customers, including such marquis names as and DuPont, Hewlett-Packard, and TIAA-CREF.

This year, Eschelbeck left Qualys and took the CTO slot at anti-spyware pioneer Webroot. For a man who helped refine the “laws” of software



- CTO
- Webroot
- webroot.com

vulnerabilities, switching to the spyware world was an abrupt change. “With vulnerabilities, you might see 40 or 50 new examples a week. With spyware, it’s more like 400 or 500 a week,” he says.

Eschelbeck’s first major initiative has been to help Webroot transform itself from a pure-play anti-spyware vendor to one that offers broader protection against malicious code. He has also opened up a second research facility. “We want to be able to automate not just finding the spyware, but learning about how it infects a machine and developing a signature for it, so there’s no human in the loop.”

— P.R.

Bruce Fleming

PATIENCE AND PERSISTENCE ALWAYS PAY off. In Bruce Fleming's role as "go-to guy" for the divisional technology office of Verizon's federal arm, he applies both those skills as he shepherds complex projects through the military and other large government organizations, frequently under secrecy and uncertain budget conditions.

Fleming's talents were recently put to the test when he joined a next-generation network task force set up by the U.S. government. The objective was to draw up a blueprint for transitioning away from the traditional phone system, while determining which services the government would



- Divisional Technology Officer
- Verizon Federal Network Systems
- verizon.com/fns/

need to handle disasters and ensure security. He realized he would have to work with separate, uncoordinated networks — the cell network, the Internet, and so on — that could be traversed reliably to deliver critical information.

The next step was to break down the various networks and their connection points and spend several months testing his taxonomy with task force peers from other companies. "It was a very gradual process," Fleming says. The result was a unanimously adopted architecture that adheres to common operational criteria and allows the various networks to interact predictably. If adopted, Fleming hopes it will prevent the communication gaps that hindered rescue efforts after 9/11 and Hurricane Katrina.

— G.G.

Mark Foster

IN 1996, THE IDEA OF LETTING CUSTOMERS move their cell phone numbers from one provider to another was revolutionary — or, if you asked the carriers, impossible. But government pressure forced the move, and Mark Foster was the guy who figured out how to make it work technically. He helped form NeuStar to deliver the neutral database platform that enabled portability. He quickly realized the model was extensible to Internet interoperability.

That eureka moment led to involvement in standards development, including SAML 2.0 for identity management; the SIP-IX standard for



- CTO and Senior VP
- NeuStar
- neustar.biz

interoperability of next-generation VoIP and data services; and the ENUM standard to map phone numbers to unique Internet addresses. All are key to enabling next-generation services across multiple carriers and service providers.

"We look at a lot of what we do as being the Bell Labs of this generation," Foster says. He admires the Bell Labs tradition of entrepreneurial technology development in service to an entire industry, and says he sees a "world peace scenario" from NeuStar's technology that lets a broad swath of service and content providers profit from the Internetization of the phone system. That would truly be an accomplishment.

— G.G.

Greg Framke

GREG FRAMKE, ETRADE'S CIO AND EXECUTIVE vice president, likes being first. He was instrumental in the company's becoming the first financial institution to offer all its customers an RSA SecurID token to supplement username-password pairs. Framke also backed Etrade's move to become the first brokerage to offer its customers indemnity from losses caused by identity theft.

Those initiatives, says Framke, are part of a larger strategy to use technology aggressively to spur innovation — and convince customers to put more of their money in Etrade's hands. Cus-



- CIO and Executive VP
- ETrade Financial
- etrade.com

tomers who use the RSA tokens, for instance, deposit more into their online brokerage accounts, he says. Likewise, Etrade's Intelligent Cash Optimizer lets customers view earned interest on cash holdings while highlighting investment options that perform better. No wonder cash deposits have increased \$3 billion in the past year.

Framke likes the idea of Etrade as a small, nimble David armed with better technology to do battle against the Goliaths of the financial services world such as Citibank or Charles Schwab. "That's how Etrade has to be," he says. "That's how we're going to be successful."

— P.R.

Mark Goodge

MARK GOODGE, CTO OF THE NATIONAL Naval Medical Center (NNMC) understands the importance of technology. He'd better: As a health care enclave for all four branches of the U.S. armed forces, NNMC spans 5,000 network users across 5,000 miles in five states. But technology isn't the only issue on his mind, or even the foremost one.

"Technology is easy," Goodge says. "It's getting the people to buy into the organization, to make them feel that they have some ownership in the process, and make them feel like it's their home."

Being proactive, rather than reactive, has



- CTO
- National Naval Medical Center
- bethesda.med.navy.mil/

allowed Goodge to meet the unique challenges faced by NNMC.

"This is kind of a big first for the military, to have a 'purple union' of Army, Air Force, and Navy, into a unified federal health care industry," he says, adding that NNMC will grow even more during the next five years to incorporate the current staff of the century old Walter Reed Medical Center.

Having spent 10 years as a Navy corpsman before advancing to his current role, Goodge knows a lot about team-building. He has worked hard to empower his staff to make the best use of their skills, resources, and initiative. That's something just about any IT manager can admire.

— N.M.

Keith McGarr

REED ELSEVIER — WITH BUSINESSES INCLUDING Harcourt and LexisNexis — publishes more than 15,000 journals, books, and reference works, and boasts more than 500 online properties. As Global CTO, Keith McGarr focuses on the development of technology to manage and deliver superior online content and services. Last year, online revenue accounted for \$3.3 billion of the company's bottom line, up from \$400 million when McGarr took over in 2000.

McGarr is particularly proud of a recent project dubbed Scopus, a widely praised research tool for scientists. Built on an SOA platform, Scopus boasts a rich, Web 2.0-style UI that



- Global CTO
- Reed Elsevier
- reed-elsevier.com

provides access to the most complete set of abstracts and citations available in a searchable database, according to McGarr. "The engine room of our media publishing is in that project's content creation piece," he says — which also forms the technology foundation for information services to serve law and education professionals. Combined, the content management and delivery system deliver approximately 5 billion documents.

Prior to Reed Elsevier, McGarr spent 17 years at FedEx, where he took that company's IT "into the 21st century," leading the development of a global IP-based infrastructure to serve 1.4 million customers as well as the deployment of the world's largest private wireless network.

— J.W.

Scott Metzger

SCOTT METZGER, CTO OF TRUECREDIT, CALLS his early days at the company a "trial by fire." In typical startup fashion, "many promises were being made that couldn't be kept. I showed up with a gun to my head on Day One."

Drawing on his experience leading Web app dev for MCI, IBM, Apple, and Intel, Metzger established a rational development process, and then took a deep dive into TrueCredit's business agenda. Agility turned out to be job one, so a broad array of consumer credit products and



- CTO
- TrueCredit
- truecredit.com

services could be launched quickly.

Metzger's technology answer was a home-grown, Java-based SOA deployed in 2001, which Metzger gradually migrated to commercial products from BEA and others. IT can now deliver new products every 30 to 60 days and respond rapidly to new compliance demands.

But the secret to IT success, says Metzger, lies in real comprehension of business goals. "It's amazing the value that you get by just engaging whoever the business sponsor is and understanding the business. No technology is going to do that for you."

— E.K.

Frank Modruson

BUSINESS NEEDS ALWAYS CHANGE, BUT IT'S hard to focus on meeting them when you're distracted by operations. Accenture CIO Frank Modruson came up with a novel solution: He moved his operations staff — about 80 percent of the IT headcount — into its own subsidiary, leaving the remaining 20 percent (including him) to focus on engineering and new development directly connected to business requirements. "Projects and planning are very different kinds of work than operations," he says.

The result: Operational costs fell to half of what they had been. One reason for the savings is that the spun-out operations unit added



- CIO
- Accenture
- accenture.com

external customers and achieved an economy of scale it could not have as part of Accenture's internal IT. The unit has actually become a revenue center.

With operations off the table, Modruson refocused the engineering staff on improving its processes, aligning development with business goals. And he was able to reduce management overhead and increase agility by relying on techniques he learned as a volunteer firefighter: implementing a system that ensures clear authority no matter who works with whom, and a standard way of scaling communication no matter what the size of the project. That approach lets IT both innovate and respond quickly, so the business can too. — G.G.

Andrew Nash

DURING HIS 10-YEAR STINT AT RSA SECURITY, Andrew Nash worked hard developing identity and access management technologies, wrote a book on PKI (Public Key Infrastructure), and co-authored several security standards. But one day, in the middle of an RSA presentation, he realized he was "bored to tears" and decided to focus on fresh security challenges better suited to an emerging Web services world.

In 2002, while making the rounds of RSA Security's customers, Nash discovered XML security startup Reactivity, where he encountered technologists who were working on a



- CTO
- Reactivity
- reactivity.com

plug-and-play appliance that would provide secure access to Web services. In 2004, he joined the Reactivity team to lead the evolution of the current Gateway line, which adds XML routing and acceleration.

These days, Nash is focused on the expanding role of the network intermediary in SOA, not just for security, but as a platform for "virtualized" services accessible across platforms and enterprises. "SOA requires a virtualization mechanism that reduces complexity," he says, so that policy can be enforced and change management simplified. As Nash exercises his leadership in technology development and industry standards, a bigger role seems likely, both for him and his appliances. — E.K.

Niraj Patel

NIRAJ PATEL'S RISE TO CIO AT THE CAPMARK Financial Group (formerly GMAC Commercial Holding Corp.) was more than meteoric — it was nearly an overnight leap, from working at the help desk in his first job out of college in 1994 to running the IT department at GMAC two years later.

Today, as he oversees an IT staff of 403, three watchwords mark Patel's core management tenets: listen, help, and value. "You can never stop learning to help," Patel says.



- CIO and Executive VP
- Capmark Financial Group
- capmark.com

"To have the ability to build the technology in-house, and get the business to go global ... is a lot of fun, and it creates value," Patel says. His team, strong believers in Microsoft .Net, developed InvestorQuery, a Web site for the commercial mortgage industry that was the first to deliver timely information to investors and rating agencies during the week following Hurricane Katrina.

"I've always been not just into technology, but the applications and the value those applications create — not just for yourself and your business, but for other people," Patel says. — J.W.

Suzanne Peck

SUZANNE PECK SIGNED ON AS CTO FOR WASHINGTON, D.C., in summer 1998. At the time, the city had a crazy quilt of 370 obsolete systems and no Y2K program in place. “We had 8,000 rotary telephones, no wide area network, and several e-mail systems, the most sophisticated of which would pass maybe 200 messages per day,” she recalls.

But Peck, who held IT leadership positions in various Fortune 500 companies during a 25-year period, was undaunted. Not only did she nail the Y2K deadline, she rebuilt D.C.’s IT — hiring sharp people with corporate experience,



- CTO
- District of Columbia
- octo.dc.gov

outsourcing at a strategic level, lighting up a dark fiber optic network with VoIP, and replacing eight “awful” IT facilities with two mirrored IBM z-class mainframe datacenters.

Ultimately, Peck also opted for an SOA that would integrate and leverage legacy systems. From that grew a business intelligence layer called the DCStat program, which provides unprecedented visibility: Simply gathering timely and accurate information about criminal activity in the worst 14 hotspots in the city has helped reduce crime in those areas by 23 percent. Peck, who joined the D.C. government to make a difference, is living up to that expectation. — E.K.

Beth Perlman

BETH PERLMAN IS AN AGENT OF CHANGE IN AN industry not exactly known for nimbleness: regulated utilities. When she joined the Constellation Energy Group in 2002, she became its first CIO.

“I called it ‘the 190-year-old startup company,’” says Perlman, now in charge of 721 employees and an annual budget of \$260 million. “All the talk was about getting positioned for growth, but it didn’t have the platform for growth.” She inherited IT for four autonomous IT organizations and one totally antiquated HR system. Her first initiative was to conduct an “IT analysis



- CIO and Senior VP
- Constellation Energy Group
- constellation.com

project” and “internal merger,” which collapsed 13 general ledgers into one.

Her changes are credited with allowing BGE Home, a subsidiary, to strengthen its call center and field force functions, while helping to grow Constellation Energy from a regional provider to a nationwide powerhouse.

“I’m a business person who understands technology and I view technology as something that solves business problems,” Perlman says. “Technology is the easy part; it’s transforming processes and getting people to change that’s the hard part. But people get it now: Streamlined processes mean better profitability.” — Richard Gincel

Amichai Shulman

AMICHAH SHULMAN, CTO AND FOUNDER OF Imperva, heads Imperva’s Application Defense Center (ADC), a research arm of the company devoted to building “the most advanced ... security knowledge base in the world.”

A tall order, but Shulman has the background for it. Prior to founding Imperva, he was CTO at Edvice, an application-and-database security consultancy. Before that he served in various command-and-control positions in the Israeli Defense Forces for projects related to information security.

Shulman says there are many good public research organizations for Web servers and



- CTO and founder
- Imperva
- imperva.com

Web security, but far fewer for database security. He also says his most current research has uncovered an entirely new area of database vulnerability, in which ordinary users can turn themselves into database administrators without a valid set of credentials.

The task of ADC is to reproduce such vulnerabilities and then inform vendors, giving them all the background information they need to plug the holes. Imperva claims that in the last year, Shulman’s work has likely prevented major breaches of Oracle and SQL Server databases.

Shulman notes that “critical vulnerabilities” exist in all — not some — commercial database servers. Vendors and customers alike should be grateful for his efforts. — E.S.

John Smith

WHAT DO YOU DO WHEN YOUR CIO ASKS you to build a new data management system because a client can't handle its volume of data? If you're John Smith, you take a deep breath and gamble that you can not only develop a system in four months but that it can be used for future clients, as well. Developing the eExchange platform in 2004 got Smith promoted from director of engineering to vice president of technology — and provided his company, Benefitfocus.com, with new business opportunities.

Smith realized early on that managing data was about business processes and data standardiza-



- VP of Technology
- Benefitfocus.com
- benefitfocus.com

tion, not simply porting the client's fractured processes onto his servers. So he set out to convert all customer data into a common intermediate form so the business processes could be applied easily — without having to accommodate dozens of data types and embedded metadata.

The business processes were essentially produced as services that Benefitfocus.com can substantially reuse for new clients and adapt to new kinds of data. Today, Benefitfocus.com has extended eExchange from health care enrollment data to also cover disease management, billing, and claims management — all bringing in new revenue and clients from that initial gamble.

— G.G.

John Stankey

THESE ARE INTERESTING TIMES AT AT&T. THE company's merger with SBC in November was a \$16 billion deal that had "integration nightmare" written all over it, but CTO John Stankey has led the charge to combine the companion networks swiftly into a single infrastructure. "Getting rid of the duplication of two networks was a tremendous undertaking," he says.

Another huge challenge looms: Project Lightspeed, AT&T's \$4 billion IPTV advanced fiber-optic system, which will offer IP-based home entertainment and video programming plus



- CTO
- AT&T
- att.sbc.com

voice and high-speed Internet service to customers in more than a dozen states.

"Lightspeed affords us the opportunity to break into home entertainment and, in terms of disruptive technologies, do what others have done to us with IP-based technologies," he says. In part, that means going up against Comcast.

Project Lightspeed is being closely watched by the industry and investors alike. "We're not creating new physics," Stankey says, "but we're taking new technologies and combining them. You have a huge integration challenge: getting leading-edge technologies into a deliverable service."

— R.G.

Tim Stanley

AS SENIOR VICE PRESIDENT AND CIO OF Harrah's Entertainment, Tim Stanley's game of choice is "operational CRM," a combination of technologies the company deployed in 2005 to bring CRM closer to real time. Based on up-to-the-minute customer info, employees now ply patrons with special rewards and other benefits, a tactic that has boosted Harrah's revenue by 10 percent.

"What's cool about technology is how much you can integrate into an ecosystem, and building projects and processes around humans," says Stanley, who began his career as a U.S. Air Force officer working on advanced missile guid-



- CIO and Senior VP
- Harrah's Entertainment
- harrahs.com

ance and early GPS efforts. "That's also what's most challenging, especially for consumers with the technology they have now."

Another challenge is dealing with two monster acquisitions: Horseshoe (\$1.5 billion) in 2004 and Caesars (\$9.3 billion) in 2005. Stanley successfully completed IT integration with Horseshoe last year, but the far larger integration with Caesars is ongoing.

Before joining the world's largest gaming company, Stanley was CIO at National Airlines and served as a partner in the consultancy USWeb. He plans to parlay his understanding of GPS to create location-based applications for PDA users and yield a richer experience for Harrah's customers.

— J.W.



Mike Stonebraker

IT MAY HAVE BEEN “A MILLION YEARS AGO” that he co-built Ingres and Postgres, but Dr. Mike Stonebraker is no dinosaur. Today, he’s co-founder and CTO of StreamBase Systems, a company on the cutting edge of CEP (complex event processing) for streaming data.

Stonebraker and Brown University’s Professor Stan Zdonik came up with the idea for StreamBase after noting the rise of “high-volume firehoses of information” untapped by commercial CEP technology. And that information will only become richer as sensors are deployed “to tag everything on the planet,” Stonebraker says.



- CTO and co-founder
- StreamBase Systems
- streambase.com

In 2001, Stonebraker and Zdonik developed a prototype of StreamBase, a real-time processing engine that can analyze hundreds of thousands of messages per second; today the company boasts customers in the military and government security sector. StreamBase differs from competing products in that it operates at the database level, Stonebraker says. “We’re doing for streams what SQL did for storing data.”

Next-generation applications combined with ge positioning would allow StreamBase to power cutting-edge location-based services such as outpatient tracking and real-time traffic coordination. “The downstream value of the technology is dramatic,” Stonebraker says. — Mike Barton

David Ting

SINGLE SIGN-ON, A DECEPTIVELY SIMPLE concept with a long history of failed attempts, may have finally met its match in David Ting.

Ting, founder and CTO of Imprivata, created an appliance he calls OneSign ESSO (Enterprise Single Sign-On) that basically eliminates all application-specific passwords. Using a patent pending technology called APG (Application Profile Generator), the Imprivata system requires no modification to existing log-in code.

Ting’s solution promises to eliminate countless “I forgot my password” tech support calls.



- CTO and founder
- Imprivata
- imprivata.com

Not bad for someone whose 20 years experience has primarily been in a wholly different area, advanced imaging software.

The appliance monitors and changes passwords and sets up one point of entry, which could be a biometric device or a single, strong password. The system works for client/server, Web applications, green screens, and more.

Calling his solution “nirvana for IT,” Ting has this message for his fellow CTOs: “Passwords are just a byproduct that consumes a tremendous amount of IT productivity. You should never have to worry about passwords. It’s mechanics.” — E.S.

Roland Whitehead

WHEN YOUR IT DEPARTMENT HAS SUCCESSFULLY accommodated five M&As in the past four years, you must be doing something right. For Roland Whitehead, global director of IT for the elite auction house Bonhams, the secret lies in custom development, which he considers a key component of Bonhams’ dramatic growth.

Whitehead’s most important project is Bonham’s A3 enterprise application, the central process control of the business, which he characterizes as “midway between ERP and CRM, [because] neither of these two types of applications fit the auction-business model.” A3’s functions include customer and inventory man-



- Global Director of Technology
- Bonhams
- bonhams.com

agement, auction management and analysis, Web site content publishing, customer transactions, and item appraisal.

A3 is constantly being revised and improved, in part because it must handle growing numbers of users and transactions, not to mention policies, laws, and trading approaches specific to 21 countries. Yet Whitehead maintains that the benefits of building out A3 far outweigh the cost and hassle usually associated with commercial software licensing and integration.

“I delight in eschewing SOA and other integration tools,” Whitehead says. “We don’t need them, and I am always so pleased to still be shocked at the huge sums some people still spend on the big enterprise applications.” — Stephanie McLoughlin

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1. Over the course of one year, do you buy, specify, recommend, or approve the purchase of the following products or services worth:

Please include amounts for all locations of your organization. Consultants: please include what you recommend for your clients as well as what you buy for your own business.

- | | | |
|----------------------------------|--------------------------------|----------------------------|
| 01. \$100 million or more | 06. \$5,000,000 to \$9,999,999 | 11. \$100,000 to \$399,999 |
| 02. \$50,000,000 to \$99,999,999 | 07. \$2,500,000 to \$4,999,999 | 12. \$50,000 to \$99,999 |
| 03. \$30,000,000 to \$49,999,999 | 08. \$1,000,000 to \$2,499,999 | 13. Less than \$49,999 |
| 04. \$20,000,000 to \$29,999,999 | 09. \$600,000 to \$999,999 | 14. None |
| 05. \$10,000,000 to \$19,999,999 | 10. \$400,000 to \$599,999 | |

Product category	Write code in box
Large systems	<input type="text"/>
Client computers	<input type="text"/>
Networking / Telecom (including servers)	<input type="text"/>
Wireless	<input type="text"/>
Internet / Intranet / Extranet	<input type="text"/>
Security	<input type="text"/>
Storage	<input type="text"/>
Peripheral equipment	<input type="text"/>
Software	<input type="text"/>
Service/Support / Outsourcing	<input type="text"/>

2. What is your primary job title? (PLEASE CHECK ONE ONLY)

- | | |
|---|---|
| IT / Technology Management | <input type="checkbox"/> 10. IT Staff |
| <input type="checkbox"/> 01. CTO, CIO, CSO, Vice President | <input type="checkbox"/> 11. Other IT Professional |
| <input type="checkbox"/> 02. Director | Corporate / Business Management |
| <input type="checkbox"/> 03. Manager / Supervisor | <input type="checkbox"/> 12. CEO, COO, President, Owner, Vice President |
| <input type="checkbox"/> 04. Network Manager / Director | <input type="checkbox"/> 13. CFO, Controller, Treasurer |
| <input type="checkbox"/> 05. Engineer | <input type="checkbox"/> 14. Director |
| <input type="checkbox"/> 06. Systems Analyst / Programmer / Architect | <input type="checkbox"/> 15. Manager / Supervisor |
| <input type="checkbox"/> 07. Other IT Management | <input type="checkbox"/> 16. Other Business Management Title |
| IT / Technology Professional | |
| <input type="checkbox"/> 08. Consultant / Integrator | <input type="checkbox"/> 98. Other Title |
| <input type="checkbox"/> 09. Developer | (specify) _____ |

3. Please indicate your job function(s)? (PLEASE CHECK ALL THAT APPLY):

- | | |
|--|--|
| IT / Technology Functions | Corporate / Business Functions |
| <input type="checkbox"/> 01. Executive | <input type="checkbox"/> 09. Executive |
| <input type="checkbox"/> 02. Department Management - IT | <input type="checkbox"/> 10. Department Management - Business |
| <input type="checkbox"/> 03. Networks / Systems Management | <input type="checkbox"/> 11. Financial / Accounting Management |
| <input type="checkbox"/> 04. Applications Development | <input type="checkbox"/> 12. Research / Development Management |
| <input type="checkbox"/> 05. Management of Enterprise Applications (CRM, ERP, SCM, etc.) | <input type="checkbox"/> 13. Sales / Marketing Management |
| <input type="checkbox"/> 06. Research / Development Management | <input type="checkbox"/> 14. Other Business Functions |
| <input type="checkbox"/> 07. Consultant / Integrator | <input type="checkbox"/> 98. Other Functions |
| <input type="checkbox"/> 08. Other IT Functions | (specify) _____ |

4. Are you involved in buying, specifying, recommending or approving the following IT products / services?

(PLEASE CHECK ALL THAT APPLY):

- | | |
|---|--|
| Software / Products / Technologies | <input type="checkbox"/> 18. Web / Video Conferencing |
| <input type="checkbox"/> 01. Customer Relationship Management | <input type="checkbox"/> 19. Storage |
| <input type="checkbox"/> 02. Enterprise Resource Planning | <input type="checkbox"/> 20. Disaster Recovery |
| <input type="checkbox"/> 03. Business Process Management / Outsourcing | <input type="checkbox"/> 21. Security |
| <input type="checkbox"/> 04. Business Intelligence / Data Mining / Data Warehousing | <input type="checkbox"/> 22. Anti-Virus / Content Filtering |
| <input type="checkbox"/> 05. Portals | <input type="checkbox"/> 23. Firewall |
| <input type="checkbox"/> 06. Financials / Payroll / Billing | <input type="checkbox"/> 24. VPN |
| <input type="checkbox"/> 07. Performance / Application Management | <input type="checkbox"/> 25. Identity Management |
| <input type="checkbox"/> 08. .NET | <input type="checkbox"/> 26. Authentication / Authorization |
| <input type="checkbox"/> 09. Other Software | <input type="checkbox"/> 27. Intrusion Detection & Prevention |
| <input type="checkbox"/> 10. Networking | <input type="checkbox"/> 28. Encryption |
| <input type="checkbox"/> 11. Web Services | <input type="checkbox"/> 29. Other IT Products / Technologies |
| <input type="checkbox"/> 12. Content Delivery Networks | Hardware / Peripherals |
| <input type="checkbox"/> 13. Network and Systems Management | <input type="checkbox"/> 30. Servers |
| <input type="checkbox"/> 14. VoIP (Voice Over IP) | <input type="checkbox"/> 31. Notebooks / Laptops |
| <input type="checkbox"/> 15. Telecommunications | <input type="checkbox"/> 32. PDAs / Handhelds / Pocket PC / Wireless |
| <input type="checkbox"/> 16. Wireless | <input type="checkbox"/> 33. Printers |
| <input type="checkbox"/> 17. Remote Access | <input type="checkbox"/> 34. Other Hardware / Peripherals |

5. What is your organization's primary business activity at this location? (PLEASE CHECK ONE ONLY):

- | | |
|--|--|
| General Business Industries | Technology Providers |
| <input type="checkbox"/> 01. Defense Contractor / Aerospace | <input type="checkbox"/> 12. Service Provider (MSP, BSP, ISP, ASP, etc.) |
| <input type="checkbox"/> 02. Retail / Wholesale / Distribution (non-computer) | <input type="checkbox"/> 13. Computer / Network Consultant |
| <input type="checkbox"/> 03. Pharmaceutical / Medical / Dental / Healthcare | <input type="checkbox"/> 14. Systems / Network Integrator, VAR / VAD |
| <input type="checkbox"/> 04. Financial Services / Banking | <input type="checkbox"/> 15. Technology Manufacturer (hardware, software, peripherals, etc.) |
| <input type="checkbox"/> 05. Insurance / Real Estate / Legal | <input type="checkbox"/> 16. Technology - Related Retailer / Wholesaler / Distributor |
| <input type="checkbox"/> 06. Transportation / Utilities | Government / Education |
| <input type="checkbox"/> 07. Media (print / electronic) | <input type="checkbox"/> 17. Government: federal (including military) |
| <input type="checkbox"/> 08. Communication Carriers (telecomm, data comm., TV / cable) | <input type="checkbox"/> 18. Government: state or local |
| <input type="checkbox"/> 09. Construction / Architecture / Engineering | <input type="checkbox"/> 19. Education |
| <input type="checkbox"/> 10. Manufacturing & Process Industries (non-computer) | <input type="checkbox"/> 98. Other |
| <input type="checkbox"/> 11. Research / Development | (specify) _____ |

6. How many people are employed at this organization, including all of its branches, divisions and subsidiaries?

(PLEASE CHECK ONE ONLY):

- | | |
|---|--|
| <input type="checkbox"/> 1. 20,000 or more | <input type="checkbox"/> 5. 500 - 999 |
| <input type="checkbox"/> 2. 10,000 - 19,999 | <input type="checkbox"/> 6. 100 - 499 |
| <input type="checkbox"/> 3. 5,000 - 9,999 | <input type="checkbox"/> 7. 50 - 99 |
| <input type="checkbox"/> 4. 1,000 - 4,999 | <input type="checkbox"/> 8. Less than 49 |

7. Which of the following operating systems are in use or planned for use at this location?

(PLEASE CHECK ALL THAT APPLY):

- | | |
|--|---|
| <input type="checkbox"/> 01. Windows XP | <input type="checkbox"/> 04. Linux / Unix / Solaris |
| <input type="checkbox"/> 02. Other Windows | <input type="checkbox"/> 05. Other |
| <input type="checkbox"/> 03. Mac | (please specify) _____ |

B. CONTACT PREFERENCES

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