



THE COMPUTERWORLD
HONORS PROGRAM

The Laureate

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AWARDS FOUNDATION

A mandate for change is a mandate for smart.

The world is ready for change – that much is clear.

For leaders of all kinds, this moment presents a rare opportunity. Our planet is not just getting smaller and flatter. It is also becoming smarter. And that means we have the potential to change the way the world literally works.

Computational power is now being put into things we wouldn't recognize as computers – cars, appliances, cameras, roadways...even pharmaceuticals and livestock. We are interconnecting all of this through the Internet, which has come of age. And we are applying powerful new systems and sophisticated analytics to turn oceans of data into insight, knowledge and intelligence.

Consider the changes already under way.

Smart traffic systems are helping to reduce gridlock by 20%, cutting pollution and increasing ridership on public transit.

Smart food systems based on RFID technology embedded into supply chains are monitoring meat, poultry and other items from the farm to the super-market shelf.

Smart healthcare systems are helping to lower the cost of therapy by as much as 90%.

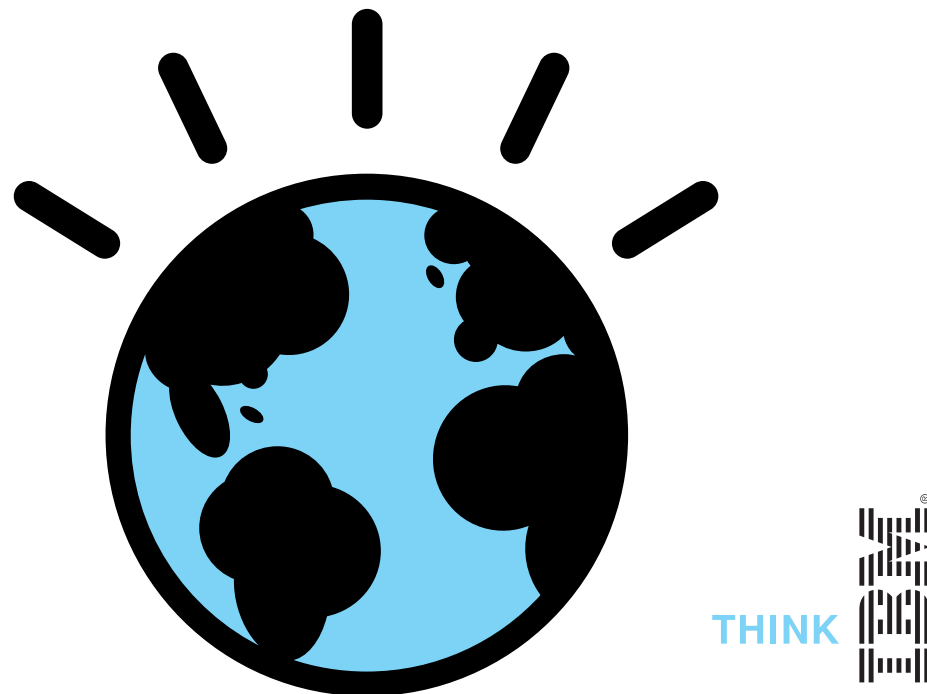
Smart systems are transforming energy grids, supply chains and water management, as well as helping confirm the authenticity of pharmaceuticals and the security of currency exchanges.

The list is long, and the transformation is just beginning. Its benefits will be reaped not only by large enterprises, but also by mid-sized and small companies – the engines of economic growth everywhere – and by individuals and communities around the world.

Imagine how a smarter planet will transform *all* the things we seek. The ways we pursue economic growth, societal progress, environmental sustainability and cures for disease. The way we interact with each other and with the world.

The opportunity is before us, and the moment will not last forever. Will we seize it? As we look to stimulate our economies and rebuild our infrastructure, will we simply repair what's broken? Or will we prepare for a smarter future?

Join us at ibm.com/think
IBM applauds the 2009 Computerworld Honors Laureate medal winners, Finalists, 21st Century Award and Leadership Award Recipients.



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A SEARCH FOR NEW HEROES



THE COMPUTERWORLD HONORS PROGRAM

Honoring Those Who Use Information Technology to Benefit Society

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As we celebrate an illustrious 21 years, The Computerworld Honors Program and our esteemed Chairmen's Committee congratulate our 2009 Laureates, Finalists, and Award Recipients.

Few can argue that most achievements over the last two decades have been influenced in some way — whether large or small — by technology. More importantly, those achievements wouldn't have been possible without the noble passions of people who forged these significant innovations with technology. How fitting that we recognize this year's achievers on that historical note.

This 2009 edition of The Laureate celebrates the contributions these people and organizations have made to the betterment of society through exceptional — if not heroic — use of information technology. As we move into a third decade, The Computerworld Honors Program remains dedicated to a singular and ongoing mission: "A Search for New Heroes." As many who have been recognized by this program know, this search annually identifies, acknowledges and preserves the accomplishments of the men and women, organizations and institutions that are creating the world's ongoing IT revolution.

The search continues to be a daunting, but historically important, task:

- Every year, members of the Chairmen's Committee identify organizations from around the world whose use of information technology has been especially noteworthy for originality of conception, breadth of vision and significance to society. These organizations are invited to contribute a case study to the program's collection.
- After review and qualification to meet strict selection criteria, key case studies are granted Laureate status and are recognized publicly at an historic medal ceremony in Washington, D.C. Among the Laureates, selected Finalists are also identified and recognized, and ultimately, a select group of 21st Century Achievement Award Recipients are announced and recognized at a formal gala ceremony.
- Independent of the Laureate recognition, The Computerworld Honors Program also annually presents several prestigious Leadership Awards to honor the extraordinary lifetime achievements of selected individuals — leaders whose significant, individual contributions have left an indelible mark on the world with technology.

Primary source materials for all organizations and individuals recognized by the Program (including case studies, oral histories, conference proceedings, publications, video tapes/DVDs and other records generated by the Program) are preserved, protected and made available to scholars and the general public at www.cwhonors.org. They are also made available through source and license donations to some 350 affiliated universities, libraries and research institutions around the world.

With great respect and celebration, we commend all of those recognized by The Computerworld Honors Program's 2009 "Search for New Heroes."

*The Chairmen's Committee
The Computerworld Honors Program*

*The Board of Trustees
Computerworld Information Technology Award Foundation, Inc.*

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A Rich History, a Richer Future

Ronald L. Milton
 Chairman, Board of Trustees
Computerworld Information Technology Awards Foundation



On June 1, 2009, we find ourselves traversing uncharted, if not treacherous, waters. Whether we define ourselves as the collective technology economy, as the organizations for which we work, or as individuals faced with personal challenges, we are all swimming side-by-side in the intimidating waves. Importantly, let us remind ourselves that we are in this together, and that our courage is evergreen.

During his United States Senate career, President John F. Kennedy spoke of the word “crisis.” When written in Chinese, he said, the word is composed of two characters: one represents danger, while the other represents opportunity.

There is great wisdom in Kennedy’s observation. Though we face new challenges in today’s technology economy, we must never forget to *seize the opportunity* to learn from past experiences, and to apply their lessons to navigate through more difficult times. Given the innovative spirit of The Computerworld Honors Program’s Laureate Class of 2009, I’m certain our collective and individual abilities to achieve will prevail.

Not surprisingly, the history of IT is all about innovation that prevails. When we experience better economic times, scarce resources are just as precious and cannot be squandered. Moreover, the application of proven technology, sound strategic planning, learned opinions, and relevant experiences are just as critical today as they were in more lucrative economies. No only has our industry survived its limitations, lack of interoperability and scalability, its champions, leaders and heroes are actually *inspired* by it. Ultimately, these very stewards of technology — its people — are what have overcome technology’s obstacles through innovation, and a will to make progress.

The Computerworld Honors Program has documented a proud, 21-year history — through the best of times, and the worst of times. We have witnessed the rise and fall of the Internet bubble, only to see the wisdom of revenue and profit endure. We have experienced an unthinkable, modern-day tragedy on September 11, and found ways to protect and innovate in the face of our grief. And despite modern history’s most significant financial crisis, organizations have continued to submit outstanding, heroic nominations to The Computerworld Honors Program. Few ways can better describe the diligence of technology’s heroes — or the patience of those who approve their projects with their hard-earned budgets — than the submissions documented in The Computerworld Honors Program archives.

Importantly, our program judges have applied seasoned expertise to select our honorees. They’ve not only witnessed excellence in case studies presented during headier times, but they’ve also experienced the difficult technology decisions made when budgets are cut. For this, we commend them for their ability to recognize the best at what we do.

As we honor our 2009 award recipients in the building where President Harry Truman signed 1949’s historic North Atlantic Treaty Organization (NATO) agreement, we are well served to remember some of his words: “America was built on courage, on imagination, and unbeatable determination to do the job at hand.”

In today’s global economy, President Truman would no doubt say the same about our countless Laureates from around the world.

As members of The Computerworld Honors Program Laureate class of 2009, you have added to the rich history of The Computerworld Honors Program. Continue to innovate, lead and inspire. Most importantly, remember that in the best of times, and the worst of times, the essence of leadership is courage, and your courage to innovate will prevail. ■

THE COMPUTERWORLD
HONORS PROGRAM
2009



THE LEADERSHIP AWARDS



THE 2009 MORGAN STANLEY LEADERSHIP AWARD FOR GLOBAL COMMERCE

DANIEL J. WARMENHOVEN

*Chairman of the Board and Chief Executive Officer
NetApp, Incorporated*

“My ideas on leadership and values and culture are all woven together. Leadership compliments management skills. Management skills are analytical. They’re skills of the brain. Leadership is all about inspiring the heart.”

Daniel J. Warmenhoven from April 28, 2009 Oral History

Dan Warmenhoven is chairman and chief executive officer of NetApp, a leader in enterprise data management and open networked storage solutions. Under Warmenhoven’s leadership, NetApp has grown to become a multibillion-dollar company and is a recognized market leader in networked storage—a concept the company pioneered.

Warmenhoven joined NetApp in October 1994 and led the company’s initial public offering in November 1995. Today, NetApp is ranked as the number one among the “100 Best Companies to Work for in America” by *FORTUNE* magazine and has ranked in the top 50 on this prestigious list for the past 7 years. NetApp is also included in *FORTUNE* magazine’s “World’s Most Admired Companies” and “America’s Largest Corporations” lists as well as the “400 Best Big Companies in America” list by Forbes magazine and is included in both the S&P 500 and NASDAQ 100 indices.

Warmenhoven is a member of the Bechtel Board of Counselors and a Director of Aruba Networks, Inc. He is vice chairman of the board of the Tech Museum of Innovation, as well as a trustee of Bellarmine College Preparatory. In June 2007, Warmenhoven received an honorary degree from Santa Clara University for his dedication to global business and technology leadership, and in 2006, was named one of the “50 Most Powerful People in Networking” by *Network World*. In 2004, Warmenhoven was also awarded the prestigious “National Ernst & Young Entrepreneur of the Year” award.

Previously, Warmenhoven served as chairman, president, and CEO of Network Equipment Technologies (N.E.T.), a telecommunications manufacturer. He is a veteran of Hewlett-Packard Co. (HP), where he held senior management positions. Prior to HP, Warmenhoven was a 13-year veteran of IBM Corporation.

Warmenhoven holds a Bachelor of Science degree in electrical engineering, with honors, from Princeton University.

Nominating Committee for the 2009 Morgan Stanley Leadership Award for Global Commerce:

Marvin Adams, President, Fidelity Shared Services, Fidelity Investments

Cristobal I. Conde, President & CEO, SunGard

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About the Morgan Stanley Leadership Award

Established in 1999, The Morgan Stanley Leadership Award for Global Commerce recognizes individuals whose personal leadership has made a critical contribution to the effective use of information technology throughout the world. This year we honor two leaders with this award.



DANIEL J. WARMENHOVEN



Excerpts from the transcript of a Video History Interview with Daniel J. Warmenhoven, Chairman and Chief Executive Officer of NetApp Incorporated, recipient of the 2009 Morgan Stanley Leadership Award for Global Commerce.

The interview was conducted by Ron Milton, Chairman, Board of Trustees, Computerworld Information Technology Awards Foundation on April 28, 2009 at the Phoenix Biltmore Resort.



The Laureate: Dan let's start with your early years. I understand at sixteen you had already decided you were going to be a CEO.

Warmenhoven: Actually I decided to be a CEO I think when I was a senior in high school. I was probably seventeen. Yes, it's the time in your life when you try to decide where you're going to go to school, what you are going to major in, and what are you going to be when you grow up.

I had already developed an interest in computing. In the era when I went to high school, the computer was just emerging. I was very fortunate as a high school student to have access to a computer. I really got enamored with the computer industry at that time. It was in its infancy and I thought that's a great place to have a career, and yet I knew I didn't want to be just an engineer. I knew I wouldn't have the patience to do that for my career.

My father was an executive at General Foods and I spent a lot of time shadowing him around and understanding the business and I really had a big interest in that too. So I basically decided to be a business executive in the computer industry, and then I stepped back for a minute and thought, 'Well if you're going to do that you might as well be the top dog.' So I decided, 'Okay let's go be a CEO of a computer company.' I had no idea what that meant at the time. It just seemed to be something nice to aspire to, but I did set an agenda for both building a technical competence and a business competence, and then building a career around those that set a particular direction in my life.

I remember I also expected it to be a big company. I expected it to be a Fortune 500 company. I mean that was the list right? Fortune 500, if you're not going to go big, stay home right? But I always thought it would be a company that I was part of where I moved up the organizational ladder and eventually became the CEO, and my career started at IBM—that was the first target. I never thought I would be building one. It turns out NetApp this year is about 147 spots I think, from the Fortune 500 and certainly within the next year or two we'll be in that category. But I never ever anticipated I would build a Fortune 500 company from scratch.

The Laureate: Was your father a big influence on you?

Warmenhoven: My father was a big influence in many ways. He was a terrific father and role model. He was very much interested in my personal development. Even though he was a very successful executive, he made sure he always had time for family. Family always came first. I learned a lot from his dealings and sense of people. He was on the fresh produce packaging side of General Foods, Birdseye division. He was running the production for all of North America at the regional headquarters there but he still walked to the factory every day. And everybody there, the line workers all knew him, the guys in the warehouse knew him and he wasn't even running the plant. He felt as though there was no reason why he shouldn't be on a first name basis with everybody in the organization. So philosophically it just kind of set a model. I remember I asked him, 'Why don't you like it when people call you Mr. Warmenhoven?' He said, 'Because my name is Pete.' You'll notice my e-mail is Dan. It's Dan@NetApp.

The Laureate: Talk about the other influences on you before you went to Princeton other than your father.

Warmenhoven: My high school was a really big influence. In fact I look back in terms of formative stages of my life, and say the high school experience I had at McQuaid Jesuit in Rochester was probably the one that had the biggest impact on my personal philosophies around life, and the career, and society and so on. The Jesuit model is to build men for others, build people who are very successful and are leaders in the community. Basically the idea of the Jesuit Order is to try to make the world a better place. Essentially one of the ways you can interpret their mission is to build heaven on earth, keep making improvements until eventually we've developed the perfect world, and that's really something to aspire to over time as well right? It really is built on the notion that we individually are here for a purpose; that there's a greater purpose in life than to just procreate and pass on the gene pool and go have a good time along the way.

Philosophically I think that had a big impact on me. I try to model that, and I try to model that for my kids. I've been very involved and active in a lot of non-profits in the community. My wife is very active. We have a family foundation. My kids are trustees; they're now into the giving process. My son went to a Jesuit high school. I just think that model is valuable, but they also build people who are very achievement-oriented. It's not just about do-gooders. They are very competitive. The high school I went to prized itself on always fielding the winning team in the state of New York in speech and debate. For a small school in Rochester New York to take on the schools from New York City, that is amazing. So really it's not just about being a good person. It's about achievement and maximizing your performance relative to your own abilities. So it really drives you into almost a competitive frame of mind, but it's a competition where you're competing with yourself—how can I do better? It really is, I think, a terrific philosophy, continuous improvement. You can continue to learn. You can continue to do better, and at the same time those things that are the rewards of that, you should probably share with the rest of the community.

The Laureate: How did you get involved in technology? What was the interest as a teenager in technology?

Warmenhoven: Well the school I went to was very physically close to Rochester Institute of Technology, and one of the math instructors at the high school knew a professor over there, and they got a new computer that the students could use. I was a very gifted math student and this particular instructor took an interest in me. So he asked his friend if I could program their computer. I just thought it was fascinating.

If I told you what it was now you'd say 'Wow how old is he?' It was FORTRAN, FORTRAN Two where you could go write some algorithms and get them to run. Well I started to get fascinated with it and then I—now I'll really test your memory—anybody remember RPG and Report Programming and wiring circuit boards? I had a small job at my father's office to basically run a billing application. But the interest kind of built, and I found fascination in the way the technology of both hardware and software were both evolving—the theory of languages, computer languages and how they relate to English languages and things like that. I just found interesting questions that hadn't been answered; things that could really stimulate your thinking and stimulate your creativity.

The Laureate: Talk about the important parts of your years at Princeton.

Warmenhoven: I was probably a bit of an enigma at Princeton. I wasn't a particularly serious student but I was serious about learning. I spent most of my time in the computer center. They had a terrific computing facility, and I like to tell people I was kind of self-educated at Princeton. I did graduate with honors. I did go to class and get some formal education, but I really found the computing center to be where I would learn the most, and I became part of the computer programming staff. I wrote both operating system functions and business functions. It was just one of those places where you could get into the depth of it. We were changing the micro-code in a machine and a variety of different things that you really couldn't do in an academic environment, and I feel as though it was a great experience for me, but I don't think it was so much around the classroom. I did have professors who were terrific advisors along the way. There were a number of them, but they weren't so regimented that I had to be in their class to get a grade. It was a lot of individual study and things like that, and it was great.

Continued

ORAL HISTORY EXCERPT

DANIEL J. WARMENHOVEN

When I decided that I wanted to be an executive in a computer business and didn't want to be an engineer, I actually turned down the opportunity to go to schools like MIT. My grandfather was heartbroken. To him that was the pinnacle of an educational opportunity. How could I be so stupid as to turn that down? But I felt that I wanted a very broad education, one where engineering was the centerpiece of it, but it was a lot more than that. I really felt as though Princeton provided me that opportunity. So I took courses in philosophy and history of religion and other kinds of things well outside engineering—Chaucer, some economics, and a variety of other things that are well off the scope of a normal engineering program. I really think Princeton had that diversity of program that really allowed me to build kind of a balance between preparing myself for a leadership role, a business oriented role, and a technical role.

The Laureate: Was IBM your first job after Princeton?

Warmenhoven: Yes IBM was my first job out of Princeton. I graduated on a Tuesday and started on a Monday. I was broke and I had a ton of debt so I had to go to work and pay it off. Yes, that was a good experience. That was great.

The Laureate: How about chip design? Did you enjoy that?

Warmenhoven: Well the chip design I did actually in the summer between my junior and senior college years at IBM. I had managed to get myself a summer internship. It was about twelve or fourteen weeks and I was part of a design team for an A.L.U., Arithmetic Logic Unit, for what turned out to be the controller for the supermarket systems and the cash issuing systems for banking. I really enjoyed the experience. I enjoyed the people. I enjoyed the company. But I realized afterwards that's not what I want to do for a career. Once you've done a chip, I mean lay it out, the logic in the circuits and the placement and the wiring, you kind of conclude, wow, that's tedious. Most of it is so constrained. The design constraints are such that you don't really get to be creative. I realized that software is really kind of pure thought stuff. There are no constraints really. Obviously there's some memory or performance, but fundamentally you're not constrained by any design rules. Whatever you can think up is good enough.

So I went back, and in my senior year I took every course I could in software development, software theory. In fact somebody asked me one time, 'What did you get your degree in?' I said, 'Computer Science.' This happened to be the guy who runs the Computer Science department at Princeton. He said, 'Let me tell you, when you went to Princeton, Computer Science was a course. It wasn't a department.' And that's true, I have my degree in double E because software was just emerging as an area of study, but it was great. I was kind of at the leading edge of the discipline around software development. It was the era when the art of computer programming came out, and things of that nature—how to write efficient algorithms—and it was just a great time to get in the software game.

The Laureate: You went from IBM to Hewlett Packard. Those were two different cultures at that time.

Warmenhoven: They were about as far apart as you could get. IBM and Hewlett Packard are both great companies, but they are incredibly different. IBM is a very, well not only is it large, but it is very structured. It is very hierarchical in notion, and it's very process oriented. Hewlett Packard is much more collegial and it's much more built around the notion of individual autonomy for the various operating units. The two are radically different, although I think both have their strengths and weaknesses. They are both terrific companies. You can't find two better companies, but internally they are very different.

I think I learned from those two, the best and worst aspects of each culture. As we started to blend together the NetApp culture, those were very prominent in my thinking as to what do you want to do. I thought the IBM system basically stifled creativity. In a way it drove out risk taking. The Hewlett Packard one was a consensus-oriented system, but what that led to was analysis paralysis. It just couldn't move fast enough, couldn't make

ORAL HISTORY EXCERPT

DANIEL J. WARMENHOVEN

decisions—decisions could get re-reviewed. It couldn't move fast. So basically we wanted to have a system where risk taking was rewarded, where we could make decisions quickly but it was consensus-based. It was all collaborative. So we crafted it to be one that would move fast, but have the best attributes of HP.

The Laureate: How did the NET experience add to those two other experiences?

Warmenhoven: I now think of NET as part of my business school training in what not to do. NET, at the time I joined it, was apparently a high flyer. It was experiencing enormous growth. I left Hewlett Packard and went there as the President and Chief Operating Officer, and the plan was that over time I would become the CEO. Well when I got there the very first quarter I remember I went home and told my wife, 'Wow that was ragged. I know it's a small company but there must be better processes in place to control the business than this.' I had only been there about six weeks. Well it was shortly thereafter the guy who was basically the controller, not the CFO, but one of his subordinates, came in and saw me and said, 'You know some of that stuff we reported as revenue yesterday is sitting in a warehouse in San Jose with instructions not to ship until later.' Anyway that was the unraveling of it. It turns out there was malfeasance. There were a variety of things that were wrong. We restated prior quarters; ones before I got there. The stock drops from 30 to 6. We laid off a third of the workforce, and this apparent high flyer became essentially a wreck. It was a train wreck. But you learn in that what not to do, and how not to push the edge of the envelope to the point where the envelope is torn, and I think that's really kind of what they did in the rush for share.

But I also learned a lot about corporate culture. That was a very dysfunctional culture. The prior CEO didn't end up building a team. He pitted people against each other thinking he would get the best performance out of the contest, as opposed to building a team that would collaborate. So when I got there nobody trusted each other. It was a real challenge. Once that culture is imprinted on a company, on any organization, I believe the only way to change it is to swap out all the players and start all over. You can't do one at a time because even if you hire the right profile from the outside, they're quickly integrated into that culture and they become one of the inmates.

So yes, I learned what not to do from a business perspective. I learned what not to do from a cultural perspective, and when you hit the wall like that, it's harder to rebuild a company that has had a great reputation than it is to build one from scratch. Because when a high flyer hits the wall, you lose the confidence of the investor community, the employee community, the customer community. You are now tarnished. It's like you have a record. It's like you have been sent off to prison, and when you get out you still haven't been fully rehabilitated. So it's actually easier to start with a clean record than it is to rebuild one, even if it's got apparently bigger assets. There was a reasonable balance sheet, we had enough cash, we had customers who were dependent upon us and loved us, but it was still really, really hard.

The Laureate: So the clean start is NetApp?

Warmenhoven: The clean start is NetApp. Yes the clean start was NetApp. After I left NET I spent some time thinking about what I would like to do next. You know it's funny; I took nine months to just kind of reflect on where I was in my career, where I was in life, what I wanted to do. I interviewed for a variety of different jobs in a variety of different sized companies, small and large, and really concluded that I would like to take a company that was at the stage of going to market. A company that had a great idea, had developed a product, and the product had demonstrated some degree of commercial feasibility, meaning they had a customer or two. They figured out how to solve a customer problem, and I would see if I could use my experience to help build that into something worthwhile. It was probably about mid-summer. I left at the end of the calendar year, so about six months into my retirement period—which was terrific, I came across NetApp. It was then called Network Appliance. It was

Continued

ORAL HISTORY EXCERPT

DANIEL J. WARMENHOVEN

through an executive recruiter. They called me and said, 'Why don't you look at this deal?' Well I was enamored with it because I had some background in this technology area from my experience at Hewlett Packard. It looked to me like it would build on a lot of the product technology and market knowledge I had.

The model very simply from a business strategy viewpoint was, we were going to be the Cisco of storage, and our whole pattern was to go do in the storage world what Cisco had done in the networking world. The business model was patterned that way, and even the product was patterned very similarly that way. So that vision of, let's go build a kind of a category killer for storage, is still a driving force in the company today.

The Laureate: Tom Mendoza joined six to eight months ahead of you as the first direct sales champion. How did you and he hit it off?

Warmenhoven: Tom and I have an interesting parallelism in our lives but it's like they keep crossing over. He's six days older than me. Tom was born November 21 and I'm November 27. So he had the same life experiences, you know Vietnam and all these other kinds of things like first man on the moon. I mean it was very similar formative experiences. What I mean by crossing over was, I was the Catholic boy from a Catholic high school who went to a Protestant college. He was a Protestant boy who goes to a Catholic college called Notre Dame. He starts his career in sales, and I start my career in engineering. It was just kind of like we kept crossing over and never quite connected.

Tom, at the time that I became the CEO, lived in Dallas, and I had a chance to meet all the executive team prior to me being announced except for Tom. He was never in town. So I got his phone number from Dave or James, and I called Tom the day before the announcement was going to come, and he already knew. They'd already told him what was going on. So I called him and I said, 'Tom, I'm Dan Warmenhoven. I just wanted to introduce myself.' I said 'Tomorrow it's going to be announced that I'm the new CEO of NetApp.' He goes 'Hot dog!' I thought that was great. There was an immediate connection.

I had already ascertained from my look at the company that the biggest issue was all around sales. The product and technology was great, in the right zone with the exception that we hadn't figured out how to put it in front of customers and explain to them why it was a good solution for them. The channel models were all broken. So out of the very short conversation that we had, you know Tom lived in Dallas, and I knew he was a football fan. I didn't realize it was college football at the time as opposed to pro, but I said, 'Do you follow the Dallas Cowboys?' He said, 'A little bit.' So I said, 'You're my Emmett Smith. Let me tell you what my game plan is. I'm going to hand you the ball until you just can't run with it anymore okay? I'm going to get everybody else to be in support of that, but you're going to be the one that gains all the yards.' He said, 'That's great.' He said that was exactly the role he wanted to have. At the time he was running just North America, and it wasn't too much after I was in the company that the guy who was running all of the international was diagnosed as having a lung cancer condition. That was Mike Paul. So it had been split between two sales executives, and Mike got stricken and he left the company. So I turned to Tom and said, 'How do you feel about running international?' He looked at me and said, 'Okay.' But the point is, in everything we did it was a very collaborative experience.

We come at things, as you can tell from these interviews, very differently, and yet the complement has always been I think stronger than either individual could achieve on their own. That goes beyond just Tom and I too. You've met Dave and James Lau, who was the co-founder with Dave. You won't find more diverse personalities than the four of us, and I include thinking styles in that as well. And yet we all seem to kind of coalesce to the same basic business answer from basically four different directions. You get those four different viewpoints aligned and it's a very powerful force. It's also a very powerful force in terms of explaining it to different people in the company. They see a certain degree of consistency and alignment. Dave has a much better rapport with the engineers than probably anybody else, and Tom with the sales people, etcetera. And yet I think we can all relate to each one of

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those functions particularly well, so it's a really great combination. It's the soup. You put all the ingredients in and it comes up something different. That's exactly what we've got from the executive leadership team.

The Laureate: One of the things that's obvious in talking to all of you is your passion for people, and that has to be part of that culture that's allowed you to grow.

Warmenhoven: I believe, and I think everybody does at NetApp, that a technology company, which is really concerned with intellectual property, is all about the people. The people make the company. What is a company? Is it an article that's incorporated in Delaware, or is it a product that you ship? In my view it's all about the people, and I think everybody there feels that same way. A company is comprised of the people who work there and pursue a goal together. It's like asking, what is a country? Well a country is the people who live there who share a common purpose. That's not different than a company. We share certain philosophies. We share certain business objectives, and we have a great deal of respect for people who achieve greatness inside the company.

To understand the NetApp culture, you've got to understand how it got formed. Shortly after we went public in November of 1995—actually it was Tom's birthday, November 21, 1995. Yes, we went public on November 21, 1995, which Tom Mendoza thinks was the best birthday gift he ever got. You know, there is a bit of euphoria right? You're a start-up, you've gone public, and you've demonstrated you're going to be profitable. You're going to have a viable position in the market. Generally for most start-ups, it's kind of 'the goal.' We got to that point, and so shortly after the holidays were over, I pulled the executive team together and asked, 'What you want to do? We got through goal set one, so what do you want to do as a follow-up?' I first asked them, 'Do you want to go further? Have you achieved what you wanted to achieve?' And unanimously everybody came back with, 'No I really think I want to proceed on the course we're on as long as I can scale to whatever the company demands.'

So we basically set our sights on building a new market category that we would lead. We called it Network Attached Storage, NAS. Nobody had used the term NAS at that time. We would have a particular approach to that market which would be very distinctive and allow us to gain share, and that we would double every year for five years. To which Tom said, 'Easy for you to say. I'm the sales guy.' But here's the implication on the culture, I had certain ideas in my mind about what kind of culture I wanted my company to be, which is what Dave and Tom and everybody else shared. One thing you conclude if you're going to double every year is you can't manage that growth. Double is viral, and if you try to manage it or control it too much you'll basically underperform against your objective because you've stifled it. Well if you're going to double every year and you're not going to have the kind of situations that we had at NET, what do you do? So we decided that we would have a values-based system that provides a framework for the behavior we expect, and then we'll go hire some really talented people who are self-driven and achievement-oriented to go pursue big goals. And we'll tell them, 'Look, you figure out how you achieve that goal. We're not going to tell you. Here's the goal. You go do it. Call if you need help.' Then we turn around and go hire the next person and give them the same speech. 'Here's your assignment. Here's your goal.' It's like mission impossible. 'Let me know if you need help.' That attracts a certain type of person, a certain type of personality.

We made sure that in the background it was very collaborative, very cross-functionally oriented and so on. No silos, and everybody on the same page, and we made sure there was a high degree of integrity in the operation of it. There was a lot of emphasis on trust and integrity, and that blend seemed to work very well and people love it. That's how we got to be a great place to work. I believe that culture still persists today. It's had to take on little different entrapments to make sure it stays global and all the rest. It's a little harder when it's eight thousand people than one hundred, but nonetheless that's still the culture that pervades the company today.

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The Laureate: Dan you've been quoted as saying "Culture equals Value plus Behavior." Can you explain that a little bit?

Warmenhoven: The corporate culture that you experience is a set of collective behaviors, and those behaviors are rooted in a set of, I hope, shared values. So the notion is, if you can affect the value system that people use to make decisions, and they shape their actions to reflect those values, then what you see in that system is what collectively we would call a corporate culture. How do people interact is a cultural question right? You can see this reflected in various cultures, for instance in American Indian cultures there was a notion for instance of a 'talking stick.' Only the person who had the stick was allowed to talk. When they were done, they would pass it to the next person who wanted to speak. So there's a value that says we want to hear each voice, and the behavior then is reflected in that only one person talks, and the culture has a great deal of personal respect for each individual.

So our notion was that we could craft a corporate culture if we choose the value set, and then help people understand what that means relative to what we expect in their behavioral system. We use lots of examples. There are some simple ones that are really trivial. I'll share one with you. We point out to people that this is a fabric. That we have a set of values, and these fabrics are intended to be reinforcing, to really make it strong. So we have one value around simplicity, minimized bureaucracy to allow people to work as efficiently as possible, and minimizing the amount of controls. That balance is with trust and integrity, we trust that you will do the right thing. The graphic example I use is the business travel system. In most companies it's pretty standard procedure for an employee to have to get a manager's signature to take a business trip, to go book the hotel room, or book the flight. In our system that's not required. We trust our employees to use their time and the company's resources to further the objectives of the business, and to help our customers. So we make it as simple as possible. Now if you come back from Tahiti, we're going to ask you, what customer were you working with in Tahiti? And after the fact we try to figure out where the deviants are, and then we go take care of the deviants. Because you have to get rid of bad behavior just like you have to reward good behavior. But the notion is that it's a value system that's really lived in the sense that the people in the company become kind of a composite set of behaviors that you think of as a culture.

There are certain examples around teamwork. I'll give you another one. We have an e-mail list called DL Sales. Our sales organization is probably now about three thousand people spread around the globe. Every one of them is on this mailing list. You find these cries for help come from a sales rep somewhere. These people have some little texting code to keep it short. IHAC means, 'I have a customer,' or IHAP means, 'I have a prospect.' These cries for help go out to three thousand people. None of those people have an obligation to respond. They're not going to get any credit for it. Yet you can watch the responses come in, just flowing in. In fact Tom's always concerned about we're overflowing everybody's Blackberry. But the point is that's a great demonstration of teamwork of people who in many cases have never met each other but who share a common purpose and a strong sense of teamwork helping each other achieve the maximum.

The Laureate: What do you think your biggest successes have been at Network Appliance in the early years?

Warmenhoven: The early years of NetApp, you know we think of our evolution of the company in phases, the start-up phase, the growth phase, and the transformational stage. As I look backward I think the biggest single success has been the continuity of the culture that was established during that period. The business mix has been different. The products have been different. The customers have been different. It's really quite interesting, the number one issue that came back from the employees when there were only about a hundred people in the company was, 'Can we sustain this culture as we grow?' Because they knew we were going to double every year.

The number one issue in employee population as we hit a thousand employees was, 'Can we continue to grow and still maintain this culture?' When we got a billion dollars and there were twenty-four hundred employees,

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guess what the number one issue was? 'How are we going to continue to grow and sustain the culture?' Then we had a real true test. We hit the wall. The bubble burst, the tech bubble in 2001. Our revenues dropped, and here we had been growing at almost 100% per year. That five-year period we grew at 87% per year compounded, and all of a sudden wham, we were down 20% in year over year. Now that's shocking to anybody's system. We were concerned that would be the big test, and yet we came flying right through it. So we re-engineered the company to go after enterprises, and so on, and different products and different customers, and the number one concern when we came back out of it was, 'Can we preserve the culture?' The number one concern when we got to eight thousand people was, 'Can we preserve the culture?' So I look at it and say, well you know actually we've done a pretty good job of preserving the culture so far. So maybe we ought to keep reinforcing that this system can in fact scale, and can in fact survive over time. That's not a function of size. It's a function of individual behavior.

The Laureate: How do you define innovation?

Warmenhoven: Innovation to me is really the application of technology in a very imaginative way to solve a problem and a very creative solution. I think it's something like Polaroid. People had desired to see their pictures more quickly. That was really very creative, and it solved the problem. It's not about the technology. It's about addressing a need.

Once at Hewlett Packard I remember reading a paper given to me by John Doyle, who was one of the executive vice presidents. He was a British guy, and his business school training was in Britain, and he handed me somebody's thesis that he had read. It was only fifty pages long. It was a study on great companies and how they'd been able to survive over time. And the number one characteristic that this student could find that was common among these companies was an imaginative understanding of user needs. That really struck home. It's understanding that there's a need there, using your imagination to really get behind it and think about how you can address that need. That's what I think leads to real innovation.

There have been innovative products that I didn't think particularly were needed. I think of the Wankel rotary engine. It was a very innovative engine. The engineering was terrific. I didn't think the world needed another internal combustion engine, but it was very innovative in many ways. I define innovation as, it solves a problem in a very differentiated way, and makes progress in the world. You know the Wankel was one that just didn't make it.

The Laureate: You kept the culture going. You've preserved the culture like you said at NetApp. How do you enable more innovation?

Warmenhoven: Innovation is like a flow. It's like a river. If you don't screw up the sources and dam it up, at some point, you'll get it. Once you get the mechanism working, it's going to be self-feeding and self-propagating. The engineers pride themselves on new ideas. They compliment themselves on new ideas, and they are rewarded for new ideas. I think it starts with Dave and James, who are the two founders, who have come up with some very innovative concepts for how to organize data on disks. The WAFL File System is still unparalleled in the industry, I believe. But that set a tone, and they set a tone of their expectations for innovative approaches.

Innovation implies risk in some sense but what do we mean by risk? Well the idea may not work but that's not risk to the individual, and so the reward system is, if you had an idea, we'll help you figure out whether or not it will work. We'll probably even put that into some kind of advanced funding category and if it works, great. If it doesn't, well you know, we didn't lose anything did we? The engineers really feel as though they've got an opportunity to do something special and pursue an area on interest. I don't mean as research. I mean as product development. They're supposed to go solve a customer problem. It's worked out very well. They actually compete for the opportunity to get their idea funded. It's great. That'll keep the ideas flowing.

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The Laureate: What do you believe is crucial about leadership?

Warmenhoven: I personally teach the Leading at NetApp class. I think we're now at thirty-five sessions and I personally have done three-and-a-half-hour segments in all but four of them. My ideas on leadership and values and culture are all kind of woven together. I'm a big fan of John Kotter, and I really believe that Kotter got it right, that leadership complements management skills. Management skills are analytic. They're skills of the brain. They're on organization and process and budget; and leadership is all around inspiring the heart.

I really do believe that most people who have the aptitude to get a college degree can be great leaders if they work at it, but it is work. I use the analogy all the time in the class about being a great golfer. Most people can pick up a golf club and swing it, but most people are not going to be able to compete with Tiger Woods unless they dedicate their entire life to it. He's known to have the best work ethic on the tour relative to practice, practice, practice. The same is true of leadership. Leadership requires a diversity of different skills that have to be honed and taught and learned, and you have to have good feedback mechanisms. You need good coaching, and you need an honest personal assessment of your own development and introspection. So I really think that leadership is a set of skills that can be developed in any individual if they commit themselves to develop it, and they are provided with the resources to develop it.

We invest heavily in terms of leadership development. At the rate we're growing, we never have enough leadership capacity in the company to do all the things we want to do. So we are personally invested in trying to help the people we have who are very bright and very dedicated to develop the kind of leadership skills we need to get us through the challenges and reach the objectives we have.

The Laureate: How is leadership different in these turbulent economic times?

Warmenhoven: I don't think leadership is any different now than it is when times are great. You might think it's easy when everything is running real well, but in fact when you look at really high performing teams, you can identify a really good leader that stood out even when times are bad. I think it becomes more obvious who the good leaders are when times are bad, when people become more concerned about their own situation—'Will I have a job tomorrow, the value of my house is down, how's my IRA?' They get more concerned about their situation. And good leaders, I think, are more clearly visible to be able to pull them back, to get back and focus on what they've got to do. But I think the good leaders are good leaders in good times and bad times. They're just more visible in the bad times.

The Laureate: Our chairman and founder Pat McGovern has an expression. He says, 'The biggest room in the world is a room for improvement.' Is there any room for improvement in the Dan Warmenhoven legacy?

Warmenhoven: Oh yes, there's always room for improvement. It gets right back to the Jesuit philosophy. We still haven't created the Kingdom of God on earth, so we've got more to go do. The same is true at NetApp. I really think that if you look at the areas for improvement, I don't think they're fatal flaws—that's maybe one way to put it in context. There's always room for improvement. You can always be more efficient. You can always be more effective. You can always handle customer situations better. You can do a lot of things better. I can do a lot of things better as an individual, but I tend to think that I'd give us a pretty solid B or B plus in most areas of performance.

The Laureate: I don't think I've met a group of executives in the technology industry that talk so much about integrity, honesty and passion for people. Do you think that's a big part of your success?

Warmenhoven: I think our connection with the people we have—and I mean that in the sense of knowing them, trusting them, asking them for that trust to be returned, helping them develop in their career—this is a big piece

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of our success. They are very, very loyal to the company and to the people. We have all the sales leaders gathered here in Phoenix right now as we do this interview. I think we could tell them we'd like them to walk through fire next year and they would just ask us, 'Which fire?' There is a tremendous sense of loyalty but also a tremendous sense of commitment.

There is no metric to determine leadership in the sense of a score or a grade. Even in golf you get a score. But there's no measurement of leadership. The measurement of leadership is the ability to develop follow-ship. At NetApp we really have tried to develop follow-ship in a sense of personal connection with the organization. And those people, I think, feel a sense of commitment to us because we feel a sense of commitment to them. It's a bi-lateral kind of arrangement. We're always there to help them.

We talk about the inverted pyramid inside the company, that once the objectives are set, people like Tom and Dave and myself work for the other people in the company—'Let us know what you need us to do to help.' That builds tremendous commitment, that yes, they will do what it is that we need done. I think the whole notion is that we're all in it together, and that we're really committed to their success and helping them be successful. We've got enormous trust in them and their judgment, not just in their actions and behaviors, but their decision making goes a long way toward giving us an edge in the market. We're competing against companies which are much larger than us, and I mean larger in size and scope: three times our size in revenues and employees, and so basically we need every individual out there to be three times better than their counterpart at our largest competitor, and three times more committed. I really think they rise to that challenge because they know they've got eight thousand other people right behind them that are going to help them reach their objective, including all the leadership team.

So yes, I think there is a bit of the success of the company which is tied directly to the notion of trust in the employees and integrity—that we demonstrate and they demonstrate back—the commitment to win together as a team. All those things show through in our performance.

The Laureate: Do you see the challenges ahead to be technical or social?

Warmenhoven: Challenges in the tech world come in all flavors, technical, social, whatever. Our industry is going to go through a lot of transformations in the not too distant future. I think the disk drive industry in particular is going to see a really radical change because of flash memory, and that's going to change system architectures like ours.

I think there are some issues around social as well. Maybe more in the way the customers think about what we do, and the value we offer, than it is our own way of thinking. More customers would prefer to buy their IT infrastructure as a service as opposed to as a set of hardware—the assets. So their buying patterns in a social sense may lead to us having a different way of going to market, and if we don't make that transition we can get left behind.

On the other hand, I don't think either market shift or customer preferences, or technological shifts, puts us at risk as long as we've got the right attitude inside the organization, and we've got the right people. Those transitions represent opportunities, opportunities for us to gain share, differentiate ourselves, move ahead of the competition or whatever. It's this will to win that I think really drives us every day. My father was in the frozen food business. Guess what, that doesn't change a lot, and it's rather slow moving. The tech industry moves at the speed of light. I always used to think that the tech companies are similar in a business sense to the fruit fly, because they have a very short life expectancy but they keep re-populating very fast. I've seen years and years of transitions of generations of fruit flies go by in the short time that I've been at NetApp. And I think we've been able to power through all of those different changes that have occurred over the last fifteen years just because of an

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attitude that says we don't define our business by what we did yesterday. We define our business by what we're trying to do tomorrow and we're going to continue to gain share, and we're going to continue to offer the best product in the marketplace, continue to delight customers and make them successful, and we're going to continue to prosper.

The Laureate: Sounds like there's a lot you're still excited about doing at NetApp.

Warmenhoven: Oh yes. We started off building the culture and the objective of doubling every year, and the goal we adopted as kind of a framework, for what we were trying to do, was to be a featured story when Built to Last Version Two is written. At that time in the mid nineties Built to Last, which I think Collins and Porras wrote, was very popular. It chronicled great companies. So our objective was to be a featured story in Built to Last Version Two.

Now when you drop back and you think of that as an objective you go, 'Wow now that's a BHAG all by itself. That's where the BHAG term came from—big hairy goal.' But the idea was that you can't apply for this. You have to be chosen, and you have to be chosen by probably a set of constituents that include customers and shareholders and employees, and they've all got to say great things. If anyone says, 'I don't think that company qualifies,' you are probably dismissed from the list. So you can't just be a great place to work. You can't just be a place where customers say, 'Gee that's a great product, great company, and great support,' whatever. You can't just be a company that has terrific returns to the shareholders and impeccable business integrity. You've got to satisfy all of them: business partners, the community, all of them. There are a lot of constituents around there. They've all got to say, 'That's a great company,' and that's how you qualify. That's a big goal. That goal's not done yet.

The Laureate: That goal might not be done from your point of view, but you just got the number one ranking from *Fortune* Magazine for the best place to work. That's great.

Warmenhoven: Being ranked number one as the great place to work by *Fortune* is personally, for me, the crowning glory of my career. And I don't mean to say I did it alone. Don't misinterpret that. But to have the company that we have worked so hard to be a great place finally recognized as the best, is quite an achievement. I actually got the message, found out that we were number one when I was on the road. I was in Europe so the time zones are different. I got up and I looked at my Blackberry for what had happened the day before, and I read that we were number one, and I was astonished, and then I was floored. It was such an honor that I just sat there and looked at it. I became almost paralyzed by the concept that we actually had achieved one of the highest rankings that we had set out to achieve. Now I also hear that from shareholders and from customers and from business partners, so I think we'll qualify for Built to Last Version Two.

The Laureate: How do you want to be remembered in the industry?

Warmenhoven: I personally want to be remembered as someone of extremely high integrity, aggressive in a business sense, but always considerate in a personal sense. I want to have a reputation of somebody that built a great company and set it on the right course, but more importantly was a terrific mentor for others.

One of my proudest moments was when I was with Paul Maritz. Paul just recently took over as CEO of VMware. He is a former Microsoft executive. He was kind of new to Silicon Valley, and he was doing some 'Who's Who?' checking. And VMware is a big partner of ours. He and I have met on a regular basis. One day at the start of the meeting Paul said, 'You know I'd really like to feed back something to you I've picked up from people I've talked to. You've developed a reputation as a great developer of CEOs.' He rattled off about five or six names of people who had been at NetApp who were vice presidents and general managers who had moved on to CEO roles. I hadn't stopped to think about it, but in fifteen years there have been at least seven or eight people who have left NetApp and gone on to be really highly regarded CEOs. I looked at it as kind of a testimony to a goal—to help

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others develop their own career and so on. In some sense every time those employees left I felt at a loss, a personal loss since I had invested in them and their development. The company had invested in them, but at the same time I really felt as though it was probably the right thing for them to do personally, to go pursue their own goals. But I really felt honored to have somebody who I respect in this industry, Paul Maritz, say that I've developed this reputation. That's the kind of reputation I would like to have twenty years from now when people will ask, 'Who was Warmenhoven?'

The Laureate: What are your hopes for humankind?

Warmenhoven: If you aspire to the Jesuit theory, you hope that humankind continues to make progress, to provide justice in the world and equality for everybody in the sense of equitable treatment, and the opportunity to prosper and have a good life. If you could define the perfect world, that's exactly what you'd like to keep driving towards, where you eliminate disease and starvation, at the same time that people live in peace and harmony and everybody's got justice for all. That's been I think the mantra for the progress of mankind since we evolved from the apes, but we've got a long way to go.

The Laureate: Dan thanks so much.

Warmenhoven: It's been my pleasure. Thank you. ■

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THOMAS F. MENDOZA

Vice Chairman, NetApp, Incorporated

“I have a simple leadership belief, which is people don't care what you know unless they know that you care. You believe in me and I believe in you. Together we'll sacrifice.”

Thomas F. Mendoza from April 2009 Oral History

Tom Mendoza joined NetApp in 1994 as the head of North American Sales and later served as the company's president from 2000 until 2008. Mr. Mendoza has more than 30 years as a high technology executive and has served on the boards of multiple high tech companies. He is a graduate of the University of Notre Dame and is an alumnus of Stanford University's Executive Business Program and is a guest lecturer at both institutions. In September 2000, the University of Notre Dame renamed their business school the Mendoza College of Business based upon an endowment from Tom and his wife, Kathy.

Mr. Mendoza often speaks about corporate culture and leadership for organizations all over the world. He has been the keynote speaker for such diverse companies as Oracle, the U.S. Marine Corps and at CIO Executive Summits around the globe.

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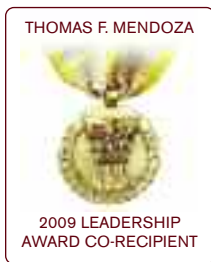
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About the Morgan Stanley Leadership Award

Established in 1999, The Morgan Stanley Leadership Award for Global Commerce recognizes individuals whose personal leadership has made a critical contribution to the effective use of information technology throughout the world.



THOMAS F. MENDOZA



Excerpts from the transcript of a Video History Interview with Thomas F. Mendoza, Vice Chairman of NetApp Incorporated, recipient of the 2009 Morgan Stanley Leadership Award for Global Commerce.

The interview was conducted by Ron Milton, Chairman, Board of Trustees, Computerworld Information Technology Awards Foundation on April 28, 2009 at the Phoenix Biltmore Resort.



The Laureate: Let's start with your early years Tom, how did your family influence you?

Mendoza: I come from a modest family. My grandparents were immigrants. My father's father was from Spain. My father's mother was from Ireland. My mother's parents were from Czechoslovakia. My parents didn't have any real education. They didn't get past sixth grade. So we had a family with normal American values—do well, make people proud, hopefully get a job and get out of the house. That was the family influence when I was a kid.

The Laureate: Who were other early positive influences or mentors?

Mendoza: My dad. I was smaller than the other kids and yet he made me believe I could do almost anything. He showed up for every one of my Little League games—every single one. He was a traveling salesman, and the car would be screeching, and he'd be driving up at the last second, but he made every game. I didn't realize the influence of that until I got to college and I realized he was just there.

We had a mountain climber named Jamie Clark speak to us last year and he said his father had mental disabilities which coincided with his adolescence. I went through that. I think back to so many times to the things he'd told me, and lessons in sports that he told me.

I think sports had the biggest impact on me. We didn't have much money but you could play baseball and stickball and do those things. I think he was definitely the biggest influence in my life.

The Laureate: Talk a little bit about your years at Notre Dame, and how that affected you.

Mendoza: Notre Dame was a bit of a shock to my system. I'm not Catholic. I went there because of wrestling. I had to get a scholarship to go to college—that was clear to me growing up, and when I got there, it was intimidating to tell you the truth. These kids had mostly come up through private school. I had gone to public school. They'd taken classes I never knew existed, and they were extraordinarily determined about academics and excelling at it.

I just got through without having to work that hard. It was my junior year when I got challenged by an upper classman who said, 'You're better than you're showing.' I got really mad at him. I was on the wrestling team so I was going to hurt him, but I determined that wasn't the route I'd take, but at the end of the day, he challenged me and made me commit to see if I would excel. I'd never really been in that environment and I excelled my last two years. That more than anything made me determined that I would never be outworked again.

Notre Dame is a school where only three percent of the alumni are from the state it's in, so there are very few people from Indiana. I'm from New York, so like all New Yorkers never in doubt, right? You show up at school never in doubt. I found out when you're around a bunch of smart people that have their own opinion, it's probably good to listen to them. I was arguing with a guy one time and someone said, 'Do you think you won that argument?' I said, 'Yeah.' He said, 'Why?' 'Cause the guy stopped talking? What was his point?' And I had no idea what his point was. I just thought if you can talk faster or louder, you win. Well, I left there a much better listener, much more determined to give people their due than just 'Here's what I have to say.'

Like most Notre Dame people, it meant more to me in the years gone by than it did when I was there. When I was there, there used to be a saying 'The best thing about Notre Dame is seeing it in your rear view mirror' because it was bad weather and all guys when I was there, but I look back at that experience, and it definitely shaped my life forever.

The final thing that I'd say about Notre Dame is that if anyone knows anything about the school, values are a big deal. Treating people right, doing things for the underprivileged. They have more people working summer jobs to help other people than any other school.

I have to say one thing my dad taught me was treat people well, regardless of their position, regardless of station. I don't have any friends who treat others poorly. I don't have any friends who treat waiters poorly. I believe you should treat everyone with respect until they prove to you they don't earn it, and then they don't have to. I don't care how much money they have. They can prove they earn respect in different ways, but the one thing I demand out of anybody I'm going to be around is that they treat people well. That comes from my father. I believe Notre Dame had a big influence on that.

The Laureate: So your education at Notre Dame was about people?

Mendoza: Absolutely. I thought Notre Dame was an extraordinary social environment to prosper and you have to live on campus. They look for a rounded education so you get to take a lot of different courses. I took a lot of theology. I'm not Catholic. I took a lot of theology because they teach theology of all religions better than anywhere I think in the world. I want to understand why people think the way they do.

Now, as things have developed in the world, I think it's pretty useful thing to know. I studied Buddhist, Muslim religions. Why do they care and feel the way they do? I didn't find they were trying to convince me of a position. It was more, 'Let's go interrogate the facts.' It taught me to think for myself and come up with my own reasons for my arguments and I think that's a lesson that'll be with me for the rest of my life.

The Laureate: Later on, you went to Stanford, talk about that.

Mendoza: I went through the Stanford Executive Program, which is an interesting experience because you're pulled out of your job. First of all, I think it has to be a \$100 million company and above, and your position has to be vice president of the company and above. There were 50 percent international, 50 percent U.S. It was my first exposure to international people's thinking.

In the evening, you'd get together to work business problems. In the beginning, I was thinking, 'How easy is this? Here's the answer.' And then when they started talking about how it would work in South Africa, how it would work in Singapore, how it would work in Korea, I thought 'Boy, I really hadn't thought about that.' So number one, it allows you a time to think. When you're in your job, you have very little time to think about extraneous things. I had a little time.

Number two, I got influenced by the international culture of it, and it struck me how different I would think if I never traveled, how different I would think if I didn't know people around the world. You know, I've averaged about 250,000 miles a year for the last 13 years, and I know that experience is one of the reasons I wanted to do that.

When I show up, I try to make sure I show respect for their culture, I try to understand their way, and then I try to bring something to the equation myself. That Stanford experience has stayed with me for a long time, again on the people level. I think you can learn things your whole life, but the people lessons are, I think, what separate us.

The Laureate: In your earlier years, did you ever envision going into technology?

Mendoza: I never thought I'd be in technology. I didn't grow up with a technical mind or any of that. I got into technology in 1974 and what greater field to be in? I say that because you have so much lateral movement. I was at the beginning of the industry for so many things, and I thought I'd just hit a gold mine. It's a rich field. You can bring a lot to your life and do so many things.

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The Laureate: So a little quote from Dave Hitz' book, 'The best decision I ever made was to start my career in sales. Nothing starts in a company until something is sold.' Does that sound familiar?

Mendoza: Yes, I think having started in sales was a monster advantage to me. First of all, if you've never sold something, you think it's much easier than it is. For instance, in the computer field, you have people who are technical folks who say, 'I don't get why the salesman makes all the money I'm the one who made it happen.' Really? Here's a phone, go find somebody to sell it to and make things happen.

There are a lot of things that happen before you come in and do the magical technical presentation. I have tremendous respect for salespeople. I've learned to live with rejection. People say, 'Never take no for an answer.' If you can't ever take no for an answer and you're in sales, you're going to have a short career. If you're out trying to sell something, you're going to hear a lot of no's. The real thing that separates people is their ability to empathize with the other person, understand what their real issues are, and then find a way to solve them with what you're selling. There's long-term value then. It's not just get that sale and leave. I realized early on that this is something I can bring real value to.

The Laureate: Your first job at NetApp, I understand was starting with direct sales organization because it was indirect before. Tell me about that.

Mendoza: When I first got to NetApp, I was asked to take a look at their business model.

Their distribution model, in my opinion, was a going-out-of-business sale being executed perfectly because with that indirect model, the end user paid \$50,000, and they got 12 of it. The middle guy could stuff whatever he wanted and he took most of the profit. Not only that, the quality of the product was non-existent because you stuff whatever you want. Keep in mind we're selling something that's going to store information for people. They want it to work, number one thing. So I said, number two at a young company, there is no pull for the product. I don't care what you're selling. If it's at all a technical product, someone has to explain to you the value and the purpose of it if you're going to go out and buy it. Well the sales force had to do that.

Young companies need to create their own pull, however you do that. So we created an end-user model up front, not thinking that would be their long-term model and today we're more than 55 percent indirect. I said, 'We have to go convince people they should dream with us.' I've done three start-ups and the reason I love them is you're not going to believe me when I come in and tell you what I'm going to tell you because I can't prove it. I've got to hire other people who make people dream with them, and I've got to find customers who are willing to bet on me and the company I'm representing. To me that is absolutely a tremendous opportunity, and it all starts with sales. If you can't sell it, it doesn't matter what else happens.

The Laureate: So your direct sales strategy was what allowed you then to get credibility with larger companies, then?

Mendoza: Well the direct sales strategy in the beginning allowed us to get off the ground. We said, 'What problem do we solve and who would need that solved?' That was software developers, so where did we go? Texas has a lot of software development, Austin and Dallas, mostly Austin. Then we went to Silicon Valley, of course, but we didn't just spray people everywhere.

I started to think, 'How many of these can they sell a month?' Well, four—that's \$200,000 a month. That's \$1.6 million, which I think is the minimum you can do to have an end-user model. That allowed us to get off the ground. We went from \$16 million in revenue to \$43 million and \$93 million. We didn't get the opportunity to go toward the enterprise probably for six or seven years.

Let me define what that means. We still sold to big companies and their engineering labs, technical development. In the enterprise, which are big insurance companies, banks, whatever, if what they have works and they have all the money they want, they don't change it. So if you have a disruptive technology but there's no business problem it's aimed at, in their mind, that's not a huge benefit. Why would I do it?

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When the crash came in 2000 and the whole world shook, 70 percent of our business was tech or Internet. You can imagine how we shook! But that same potential customer all of a sudden knew they had a problem. I believe if you have to prove to somebody they have a problem, that's a bad business. We find people who have problems, tell them why we have a better solution, and go from there. And the end-user model is always going to be extremely important as you move up to bigger, more complex problems.

The Laureate: So you started before Dan did, but not a lot of time, I think less than a year. How have you two managed the company together? You complement each other, by the sound of it.

Mendoza: I joined the company about six months before Dan. Talk about an odd way of joining the company, we had no CEO. By the way, my wife was here before me. She convinced me to do it. It's good to marry somebody smarter than you. We had to sell enough that the next round of financing would come in from a high end VC, who would then go get your CEO. This is not a recipe for success. We did well selling quick. Don Valentine of Sequoia came in. He's one of the most famous venture capitalists. He became our chairman and then he went and got Dan.

I found out about Dan on the way in. I didn't interview him. He called me. I lived in Dallas, Texas, and he said, 'Tom, you're going to be my Emmitt Smith. I'm going to give you the ball as long as you can run with it, because we need to sell.' And as soon as he came in, we had a sales meeting with the whole company actually—it wasn't very big. He said, 'It's the year of sales. We're backing sales.' It was the first time in my career to hear that coming from the top of the company. I typically worked for engineers at the time, so it was the first time somebody said, 'We believe in you. Take the ball and run.'

Let me tell you a funny story about that. Dan had been on board a short time and he had to do a presentation. He turned to me and said, 'Give me a 12-month forecast.' Now, keep in mind, we'd been in business eight months. I gave him my forecast. He said, 'How confident are you in this forecast?' I said, 'Well, Dan, it's based on people we haven't hired yet, selling to people we haven't met yet.' He said, 'Okay.' And then he said to me—which is a cool question—'Is there anything you'd do different?' I said, 'Nope. We're going to make it happen.' He believed in me. To know somebody believes in you and respects what you can bring is so important.

The second thing, I was brought in here by Dave Hitz and the other founders as the only business guy, but also for culture. I've been in companies where the piece I ran seemed to go real well, but quite honestly I buffered my customers and even my own employees from my own company because they didn't really have everybody's best interest at heart. In my opinion, that was often true. Well, here I had an opportunity from day one to set up a culture where people were going to act with respect. They were going to care a lot. They were going to sacrifice for our own customers and our company. When Dan joined we were in lock-step on that. He comes from a very solid business background. He started in engineering but he's a businessman. I came from a sales background. I know business pretty well, but where we were 100 percent in agreement from day one was, we were going to build a company and be proud of it for the rest of our lives.

I often get asked, 'Did you think NetApp would be this successful, meaning dollars, revenue, and awards?' I said 'No, but I always believe we'd build something we'll be proud of the rest of our lives.'

The Laureate: What specific successes are you most happy with?

Mendoza: Well, the biggest success is that we got off the ground after that first year. People don't understand, we're going to go to companies that let us hold their information. You need to believe us. You need to trust us, that is a hard thing to do. When I joined the company there were \$600,000 in sales—as I said, they were in deep trouble. \$16 million was the goal. We had 10 months to get there with three sales people. We made that goal.

Most of the people we hired stayed five years. I think any challenge we went through after that pales in comparison. The second was when the dot-com bubble burst. Up to that moment people said, 'We have a great culture.' When your stock's doubling all the time, and we were one of the best performing stocks in history between 1995 and 2000, anybody can have a good culture. It's just not that hard.

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You find out in business, and in life if you have a friend when you've got a problem. When I give talks, I often say, 'I'll bet in your personal life you've had an experience where you really had a trauma and people you thought would step up didn't, and people you never thought would, did, and your relationship changed forever.' That intrigues me. I wanted to be the company that when real problems happen, people believe in us.

When the crash came, I looked at our whole employee base and I very clearly said, 'This is our time to prove we have a great culture.' The fact is that we, from there, have grown four times the size, 7,000 more people, and now we're winning awards—we've been in the top 50 best places to work seven straight years, starting when the bubble burst. Getting that award in the 90s would've meant nothing.

We talk about growth at NetApp a lot. We're a growth team. We're all about growth. Well it only matters if your customers, your partners, and your own people think you're as good or better than when you're on your growth path. Many companies grow themselves into a spot where nobody likes them, and their customers and their own people can tell you long before Wall Street. What I'm proudest of as we sit here today, 2009, is that our customers, everywhere I go in the world, talk to me about our people more than our products. This happens everywhere. Number two: Our own people are passionate for this company. Our turnover rate over the last five years is less than it was during the boom. And finally, we've created really strong partnerships with companies like Microsoft, Oracle, and SAP. They say to me, 'You guys are the best partnering company that we deal with.' If you control everything, that's one thing, but partnering is very difficult. I think it's a unique skill and critical to continuing the growth of our company.

The Laureate: So in Dave Hitz' book, Dan is quoted as saying 'The culture equals values and behavior.' Can you talk about that a little bit? Behavior seems to be such a big factor in the culture of a company.

Mendoza: You know, culture's an interesting topic and I speak on it everywhere I go in the world. The one requirement is that I speak internally to keep us on the same page. I believe the ability to keep everyone on the same page is critical. Think about the growth we've had. I get asked to speak at companies a lot. There are five things I speak about. You can even say this isn't culture, but this is the behavior that I believe separates people in NetApp, and let me just tell you the five.

Number one is attitude. I tell every new-hire class, 'If you're not excited to be here at the end of this week, quit. Don't make us fire you.' I spoke to the Marine Corps at Quantico and at the end, the general jumped up and said, 'Tom, how do you motivate unmotivated people?' I said, 'I fire them.' And everybody got excited. You know what? It's not my job to motivate unmotivated people. It's my job to hire motivated people and lead them.

Number two is candor, and I think this is a tough one. Dan used to end every meeting with, 'What do you think of the pace? What do you think of the content? What do you think of the candor?' The first two are just so people will talk, but if we can't honestly say what our issues are, you can't address them, and we have to keep battling to keep candor.

The third one is one I brought to the company, which is a saying, 'Catch someone doing something right.' Every company I've been with can tell you what's wrong, and it's usually in a different group. I've always wanted someone to come forward and say, 'I just realized I'm incompetent.' That would be an interesting conversation. I don't know what I'd do with it but it would be an interesting conversation. It's always the other guy's incompetent. Rather than focusing on what was wrong, I wanted us to be a company that celebrated what was right. I have always stressed thanking people. When the company grew and I couldn't see all the good things that people were doing, I said to all the employees "If you see someone doing something extraordinary to help our customers or to help NetApp, send me an e-mail with their cell number and I will call them that day. I have averaged about 15 calls a day for many years. There is no one that doesn't appreciate getting recognized.

Bill McDermott, the CEO at SAP, called me when he read this in a book called Contagious Success. He said, 'How do you find the time?' I said, 'How long do you think these calls take? It usually goes like this: Joe's on the firing line. He's trying to help three customers in trouble. "Joe? Tom Mendoza. He goes 'Ohhh...'" "He's not

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thinking 'I was looking for this call.' I say, "Joe, we may not win, but without you we'd have no chance. People around you are proud of you." We changed the whole dynamic now. That took about 30 seconds. My average call is under a minute. What are we doing that 10 to 15 minutes a day we can't take time to thank people? I believe people leave companies because they don't believe they can make an impact nor do they feel appreciated. I say if they leave NetApp because of either of those, it's our fault, especially the latter.

The fourth one is leadership rather than management. I have a simple leadership belief, which is, people don't care what you know unless they know that you care. And I challenge people all the time. Tell me why people know you care. What specifically do you do to show them you care? It's the little things. I send an anniversary note to every single person five years and above.

I had a conversation with a Marine Corps general on leadership. He said, 'People have to buy into the mission.' What's the mission? It has to be incredibly important for you to succeed at the mission. Number two, you have to give them what they need to succeed. Number three, you have to get the clutter away that's stopping them, and number four, lead from the front. Leadership's an earned thing. If I give you a title, it means nothing. But if I demonstrate to you that I'm going to help you at the point of attack—I care about you, I care about your family, I care about where we're going. I have earned the right to ask for your help when the company needs it.

There are many different types of leaders that are successful. When you travel the world, you see all different kinds of styles, but the fact of the matter is, every great leader accomplishes the same thing, which is people come through for him not because they're afraid, not because they're intimidated, but because they simply don't want to let him down. And my father gave me that. When I was growing up, the one thing that kept driving me to excel a little more is that I saw he would drive all these miles to help me. I wanted to make sure I didn't let him down.

The last one is embracing change. You're either getting better or you're getting worse. And if you're staying the same, you're getting worse. I don't believe in reunions. I always felt if I wanted to know these people, I would, but on top of that, I would never get together with old friends to talk about old times. I just don't care. I want to get together with old friends to go have new times. I find people are interesting, age well, and are vibrant, if they're talking about what's next.

Companies age well, too, if they say, 'What's next?' Everything NetApp has done to date—and you people have been very nice, you've said nice things about us. It means nothing for us if we don't capitalize on it and take it to the future. It's a new game. It just gives us the right to play in a bigger game. So I don't like to look back much. Embracing change is key to what we do, and a simple way of doing that every day, we end our meetings with 'What are we going to do better?'

The Laureate: What enabled the growth years that allowed you to go even further—looking forward?

Mendoza: The growth years were pretty interesting, and I learned something important from Dan during that time that I never forgot. We had just gone from \$43 million to \$90 million and Dan wanted to do a five-year plan. Number one, create a market segment. Number two was, dominate that space. I'm thinking both sound great. I must've gone to get a coffee or something, because the next thing I know, I'm the sales guy and there's a billion dollar number on the wall. I shoot my hand up, 'Where did that come from?' Dave Hitz one of our engineers and founders says, 'Well, if you double every year it's actually 1.18 billion.'

We left with that plan and I'm thinking get the resume dusted up, I'll need it in a couple of years. We went from \$90 million to \$150 million to \$250 million. Externally people thought we were rock stars. Internally, people were thinking 'We're going to miss this plan.' We said we had to make bigger bets. We did \$500 million and \$1 billion, and I guarantee you, if we'd set that goal at \$700 million, we'd have done \$700 million.

What I learned, if you don't believe and you don't stretch—you've got to look at market opportunities and how you're positioned to get it—but if you don't set that target out to really aggressively bold goals, you have no chance to get them. You may not get them even if you do, but you have no chance to if you don't. I think we're a

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company that constantly dreams big. That way we have to win big. We're not here to do well. We're here to do something significant, that we can be proud of the rest of our lives. That's a lesson I learned from the high growth.

The Laureate: You travel often as a motivational speaker on the topic of leadership. Can you elaborate on your focus of feelings versus content?

Mendoza: Yes. I don't speak with slides ever. Sometimes I speak before big crowds, OracleWorld is 17,000 or whatever. I came to the conclusion in 1985 that the only reason to speak is to change someone's actions, change something they're doing. I don't believe people change because of data. I don't believe people feel data.

I get asked by different groups to speak, and I ask them, 'What do you want the audience to feel?' If I'm trying to make you feel something, why would I need charts? People remember and feel a story. So I think about how I'm going to start, how I'm going to end, and what are the three stories that are 'So that happened'—the Paul Harvey thing. You listen because you want to know the end of the story.

I found back in the mid 80s and early 90s, I was fortunate enough to have the ability to make people feel something from a stage. So I've capitalized on that as much as I could in my career. I think it's been really helpful. When we've faced tough times at NetApp, I think it's really helpful if people know you come from your heart. When you speak without slides, you have to be more prepared and not less prepared, because you have nothing to fall back on. But if you have a message and they leave and feel what you want them to feel, it doesn't matter how you get there.

I have a mental outline, but they don't know if Mickey Mantle hit 64 or whatever home runs—or was it 54 or 55, who cares? That's what people always try to remember before they speak, to get all the data points right. The audience doesn't care. My goal, if I'm asked to give any kind of motivational speech, is to change someone's life. Someone—one person—and I'm going for it. If you do that, you have to give of yourself from the stage. You have to expose part of yourself from the stage. If you give of yourself, people in the audience get it. Think of anybody you've been attracted to the way they speak. Often times they'll say 'I thought he was talking directly to me.' That's a huge compliment.

The Laureate: Talk to me a little bit about the transition from being a sales champion to president in 2000, just before the Internet crash.

Mendoza: I was the sales leader for the first six years of the company. I took over international sales in 1995, primarily because the gentleman there unfortunately got lung cancer and passed away. So Dan said, 'Would you do it?' My life dream was not to take on more travel at that point, and I had never really done international business, but I felt if I went there with passion and listened to them and treated them with respect, it would work out. And it did.

In 2000, Dan and our chairman Mr. Valentine came to me to discuss a couple issues. Dan was the only guy who could be the face of the company for big events. They're not going to send the head of sales to speak at OracleWorld or for Veritas or whatever, so Dan was doing all the analyst work, he was doing all the things a CEO has to do, and he was doing the internal planning. So we needed to break the functions down. Dan and I are kind of an atypical team. I'm not really an operations guy. I've done it and I can do it, but I think not particularly better than anybody else. What I am really pretty good at is understanding what the customer is thinking, what my own team is thinking, what my partners are thinking, and making them want to do bigger things with NetApp. So Dan said, 'Why don't you take everything facing the customer? I'll have everything else and we'll combine up here.' Having a partner, a true partner in business is rare. Nobody cares whose title is what, what balls are moving around, and where you are on the org chart.

The second thing I'll bring up to you is one piece of the good news about NetApp should also be the bad news: The people that started this company are all here. Well, that's great on culture, but how do you get new people to come in and be inspired if they don't think there's any way up? I'll bet companies come to mind where the top person basically kept control so nobody could move up.

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Dan and I, from 2001-2002, the moment I took all that responsibility, had a conversation of 'Eventually I'd like to shed it,' and give more to other people so we can bring in very, very smart people. Our goal was to be stewards of NetApp, continue to help and contribute, but not by title, but by impact and influence, and let the other people grow. We've been extremely fortunate in the staff that's been attracted to come to NetApp.

The Laureate: How do you define innovation?

Mendoza: I think innovation is thinking 'I'm going to do something differently' and having the courage to do it. How many times do you hear people say 'I had that idea?' Maybe, but you didn't do anything about it. 'I could've joined that company' is the way it typically comes down. Early on, I realized I wasn't smart enough to come up with the next innovation, so I took a different path.

At a suggestion of a friend of mine who's a top venture capitalist in Boston, I went and met the top six VC firms. I made sure they knew who I was. I asked them where they were spending their money. What are you investing in? Every single one of them said 'Sounds like networking is a big deal now and they're going to have to store it somewhere.' That's kind of how I came to where I came to. I think if you follow the money, you've got a good chance.

Then I said, 'Is there a group of people I want to be around? Is it true innovation, or are they trying to do the same things the other guys are doing at a little lower price? That's not innovation. If it is, you better be really, really good at it. I guess Dell did it, right? But that's not what I'm interested in.'

I'm not here to tell you I can do it exactly the same as the next person. I'm here to say if you'll allow me to look at your problems and come back with the way I want to solve them, if it's compelling to you, then we'll get into the how. We're actually going to do a different way of coming at a problem. That's innovation. Through true innovation, I can bring better value. Now that is an exciting proposition to me.

Dave Hitz and James Lau are two of the greatest innovators this industry's had. Innovation isn't just copying and offering it for lesser price. To me that's nothing. I love the fact that people are constantly challenging themselves to think differently. If you're going to be a successful company long term, it's a culture of innovation. People say to me, 'It's risky to innovate.' 'Well, it's risky not to innovate.' Making no decisions is a decision. Taking no risk is a risk. So the question around risk and innovation is what happens when it fails? I believe the behavior of a culture when something fails tells you everything you want to know.

I believe when someone takes a risk, that doesn't work, if they attacked it with passion and integrity, got the most out of it, you've got to make sure it's something good that happens to them. The next person says, 'I want to take a risk.' In most companies, everybody's for risk until it's not paying off, then nobody can remember how it happened. And innovation stops.

People emulate the behavior you recognize. What behavior are you recognizing? Let's recognize that they took that risk. It didn't work out but we're going to give them this now. Now everybody else will want to do it. Innovation's the lifeblood of a technology company, if you can't innovate long term, you're not interesting in my opinion.

The Laureate: And the way you define leadership, it sounds like the employees of NetApp don't want to let you, the leaders, down by not innovating either.

Mendoza: I travel 250,000 miles a year. The reason I do that is because they ask me to come help. A lot of people want to hear about leadership and culture more than technology today because they're wondering how NetApp came through the things they went through or whatever. Whatever they want me to do, I'll traverse the globe to help.

When I leave, when I get on a plane and I'm tired, all I think about is, 'Did I bring value to this? If I ask them, will they come through for me?' I believe that's an earned thing. Dan has earned it, and Dave has earned it, and Rob Salmon, the guy who runs sales. If you don't earn it you can't ask back. I believe leadership is about aspiration and inspiration. What are we aspiring to do, and what are you inspiring them to do? I don't think you can inspire sitting in your office. You've got to get out and help somebody be effective.

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You can talk about values, but if you don't walk the walk it, it's irrelevant. I go crazy when people talk about their values and they look at the wall and read it. I mean, wow, that's impressive. To me it should be your actions telling me what your values are. I can see it in you. If I can't see it, it's not real.

The Laureate: So NetApp received the Fortune 500 Award this year, number one ranking, how does that make you feel?

Mendoza: I was on a plane coming back from Tokyo when I learned that we were the number one company. My first reaction was surprise, only because I didn't see it coming. Nobody had talked to me about it. They did a pretty good job of keeping it quiet. Number two, I knew instantaneously the pride that would be felt throughout the company. The most intriguing thing, and I guess the thing that made me feel good, were the notes I got from our customers saying 'I'm not surprised.' I can't tell you how many of those I got, and former employees saying 'I'm not surprised.'

I get irritated with some of these awards. They give them to companies who hand out back rubs and golf lessons, all this stupid stuff. That's not what being a great place to work's all about. Being a great place to work, in my opinion, is having a dream that people are buying into that we're going somewhere great, because there has to be something here that we're proud of. It's about treating each other with respect. If it doesn't work out, it won't be because we didn't go at it hard together. It's not a matter of being nice to each other. It's creating opportunities so we can all be successful, and I think that is just one step on the way.

I was on a plane going to Phoenix and I was sitting next to three young people from MySpace. I asked them about their business, their customers, and they asked me, 'Who do you work for?' I said, 'NetApp.' I'm used to telling people what it is because in the big world not many people know what data storage companies do.

'Oh, number one company in the world!' They said, 'How is it that the economy is not affecting your business?' I said, 'Why would you say that?' 'Well, you're the number one company.' I said, 'Being a great place to work is much more important in a bad economy than a good one. I'm glad we got that award, but this is going to be an interesting year for all companies: Markets shift, winners and losers change. We believe our culture is a weapon. We're going to find out.'

The Laureate: Are you managing, or leading any differently in these turbulent economic times?

Mendoza: I think the key in turbulent economic times is to make sure you lead from the front. I think that many companies and executives make a mistake when, if they don't have all the answers, they don't want to talk. So they hide. They do it by e-mail. They send memos. I don't believe in that. I have meetings in every one of our offices everywhere I go. The reason is you want to have a small enough meeting so they can challenge you on things. I want the tough questions. I want them to ask me whatever's on their minds so when I leave, they're going to talk amongst themselves.

I've been asked, 'Are we going to do layoffs?' A typical reply would be 'I don't know. Let me tell you what would affect that, how we come to that decision.' I don't care what they ask, just tell them the truth. In turbulent times, I think we have to constantly ask what are our employees feeling, how can we understand how our employees are feeling. Let's be honest with them and let's give them a plan they can believe in. Right away when the crisis started nobody knew what was going on. Let's give them something to go attack.

The Laureate: What other leaders do you admire? Give me some examples.

Mendoza: Dan Warmenhoven has been a great leader at NetApp. He cares deeply about the people, our customers and our business.

I admire John Morgridge a great deal. John's the chairman of the board of Cisco now. He was my boss in the 80s. I admire John for the way he treated people. I admire John for some of the stands he took outside of work. There was a high school in East Palo Alto that was murder capital of the U.S. He read an article that basically said black kids are not as smart as white kids. It infuriated him and this school was primarily a black school so Cisco donated

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a ton of gear—this was in the early 1980s—he and his wife Elaine donated a lot of their own time. Cisco people gave of their own time, and guess what? Two or three years later, this school had done monstrously better. He did it on one condition: They couldn't talk about it. He didn't want this to be a PR event. The lady who was the school principal spoke about three years ago and said, 'I can't keep it quiet because this is what America needs, more people doing it for the right reason.'

Sidney Poitier is someone I've become friends with and Sidney is, no matter where you travel anywhere in the world, someone people respect and he treats them with respect. I've learned a lot from him about staying curious and just being the type of person people admire.

I also admire Bill McDermott of SAP. I've had the great pleasure of getting to know Bill very well, and I watch how he treats people around the world. He inspires them. So that's a small set of people that I actually know. There are people I know from afar that I admire, but it comes down to are they trying to do something great? Is whatever they're trying to do not in their benefit, but it's for a greater good? And lastly, how do they treat folks? I get asked sometimes, 'What do you hope for NetApp long term?' It never had anything to do with revenue. It never had to do with size, never had to do with awards. Twenty or 30 years after I'm done or however long that is, how did NetApp people do what they do external to NetApp? I want to read about that and be proud whatever that is.

If we've really set up a great company and put people together for good things, hopefully to do well in business, I hope it empowers them to do other great things. But the real measurement is, what are they doing with that power? What are they doing that's making this world a better place? And if we do a good job, we'll be proud for a long time.

The Laureate: Our chairman and founder Pat McGovern has an expression. He says 'The biggest room in the world is the room for improvement.' Is there any room for improvement in Tom Mendoza's life?

Mendoza: Yes, I think there's a lot of room for improvement in my life and in NetApp's life. I'm never that satisfied about either of those two things. I do think that it's constantly important to have something you're trying to improve upon. I don't think you can get somewhere without a goal—something big, something written—time-bound measurable goals. I have 90-day goals. I've had them since 1989. I give myself three personal goals and three professional goals every 90 days.

On a personal basis, I say 'If I do what, will I feel good about me?' There are things everybody has. I remember one time I said to my wife, 'I feel better when I'm in shape.' She said, 'Are you working out?' I said, 'I don't have time.' I mean, stupid on the face of it, but how many times have you caught yourself saying that? Every 90 days I have three things I'm going to try to accomplish on a personal basis. I never show those to anybody. I'm trying to break through my own barriers. If you asked me how I got a little more successful than I was, on the professional side, I said, 'What am I going to do to make an impact every 90 days?' And I ask the people around me, 'Is this going to make an impact?' before I do it, and then I execute. So constant improvement to me is the essence of what makes you grow.

The Laureate: You talked about the 250,000 miles a year traveling for customers. Should leadership be any different for CIOs than the way you described it?

Mendoza: I actually talk at a lot of CIO forums, and one of the things I talk about is 'How does a CIO get a seat at the table? How does a CIO get important enough that we want he or she at the table?' I'll give you an example of what Marina Levinson did when she came to our company as CIO. She said, 'What do you think the top three priorities are?' So I give it to her quick and I'm pretty proud of myself and she goes away.

She comes back in about a month and says, 'I'd like to review your priorities.' I thought 'Great' and she replayed them clearly. I'm thinking things are going well. Then she starts saying to me, 'Can I share with you some of the input I got from other people?' I said, 'Sure' and in my mind, I'm thinking it's not as good as mine, but go right ahead.

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Then she starts talking about some situations we had in North Carolina—Wow, that's important. Then we opened up India—that's important. By the time she left, I agreed with her three priorities, and none of mine made the list. And I felt good about it. The story there is she went to every business leader, got their buy-in, understood what they were really trying to do, got us to energize around a few things.

The second thing she did, in every presentation she gave to us she talked about how whatever project she was working on, how whatever innovation she was trying to bring was going to help us get to our goals. She knows what our goals are. She's not a cost center. She's trying to help us accelerate growth. If we can do this, I can get you that, which will help us accelerate growth. Bingo!

My message to CIOs is, think about if you did what, would you be most valuable in helping the company achieve their goals? Are you aligned with your business units? Do they consider you an asset or do they consider you somebody you have to deal with? If you do those first two, then I'm going to want to have you in the room when we're creating the strategies as opposed to handing it to you at the end. If all I think is you're a delivery mechanism and a cost problem at the end, I don't need to involve you.

The Laureate: What do you think the greatest obstacles in front of NetApp are? Are they technical or are they social?

Mendoza: The greatest obstacles for NetApp in the future are not technical, nor is it a lack of market. Let me just make it a larger statement. If you've looked at all the great companies that came out of technology—let's use Silicon Valley—who are great or who were great, it never was an invention that stopped them. They very rarely ran out of market. They let down their customers, their partners and their own people somewhere along the way and they were dead. I believe that we've created a great company at this point, to date, but as we go forward, we're going to be more of an acquiring company, for instance. We have quite a bit of cash, we're in good shape. A lot of people can't get cash. There are a lot of good ideas out there, there are people in trouble. They can't accelerate, they want to be acquired, so we're in a different spot than we were many years ago.

Part of the reason we have a great culture, in my opinion, is that our growth has been almost entirely organic. That's good, but it's not as hard. We're going to have to show one day that our culture can embrace other people when we do acquisitions. We have to show the same respect and bring some of their culture with them, so it can't be just our way, we will have to adapt. That's going to be a big challenge going forward, in my opinion. This industry is changing so rapidly, including recent acquisitions that nobody even saw coming. We shouldn't assume that because we did it before we can do it again. We have a large addressable market and great technology. As long as we make sure that we stay close to the customer, that's our primary objective. Solve problems in the way they want, have them look at us and say, 'You're the company I trust to help me solve bigger problems,' then I think we'll do fine.

The Laureate: How do you want to be remembered?

Mendoza: I was asked in the late 70s if you can believe this, I got interviewed for a management magazine and they said, 'How do you want to be remembered?' You know my long-term plan back then was what's for dinner, so that was kind of a tough question. And I said to them, 'I hope that a number of people, when you ask them who influenced their life, that I come to their mind. That I said something, did something, an action I took actually had an impact on their life that was positive.' I don't care if they ever tell me. I live every day thinking, 'I wonder if I can do that to somebody today?' However, it happens. That's why I try to give of myself when I give talks. If you give of yourself from a stage, you're vulnerable and probably exhaust yourself, but I believe it's all about giving back.

I never use the word 'lucky.' I use the word 'fortunate.' No one ever hit the lottery and said, 'I have to give something back.' We're fortunate enough to be with a good group of people that have done something the rest of the world respects, and brings value. I really feel an intense interest in giving back. It could be money, it could be energy, whatever it is. I hope I'm remembered as somebody who treated people with respect, that people are happier they knew me, and hopefully I've added something to their lives with something I've done.

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The Laureate: You're obviously so passionate about people. Any hopes for humankind you'd like to share with us?

Mendoza: I'm actually hopeful as I travel around the world. Here we are sitting in May 2009. When the Iraqi War was going on and I traveled the world, the general reaction of the world was, 'You guys decided to do this. It's your war. I wish you well.' It wasn't particularly antagonistic in most cases, but it didn't affect their lives is what I'm saying.

The economic crisis is different. It is clear to people everywhere that it is a global issue and it can only be solved if the world acts together.

I believe the debates on the global issues of climate are going to go away. I believe we're going to have to do something different in the world long term, and I love that. I love the fact that big countries, for self-interest, are going to have to help each other. Alliances start to be built on things other than your own interests. Obviously you need extraordinary leaders, and I think the world is ready for change on this particular basis.

They want to help each other. They see it's in their best interest to help each other. That's the interesting thing. Before it wasn't necessarily in their interest, I guess is what I'm saying. So even in the last 30 days in the month of April, as I traveled the United States I saw people starting to believe things could get better. Of course, your own confidence is a big impact on how it comes out, and the sense that the rest of the world is rooting for us and would love to see us win. We have an opportunity for the first time in many, many years I believe to elevate the conversation to what can we do better as a group, and I don't think we've been there for quite a long time.

The Laureate: Thank you.

Mendoza: Thank you very much for your time. Appreciate it. ■

THE 2009 IBM GLOBAL PUBLIC SECTOR INNOVATION EXCELLENCE LEADERSHIP AWARD

JAMES G. ARGIROPOULOS

*First Deputy Chief of Staff of the Chicago Office of Emergency
Management and Communications (OEMC)*

“Innovators are people who are very open minded to change. You have to be very customer focused. I think innovation is about the passion and desire to do the right thing. Here, it’s all about protecting our first responder and the citizens of Chicago. You have to be striving, effective, motivated, and you cannot under any circumstances, stop pushing forward. The moment that you do that, you’re going to fail.”

James G. Argiopoulos from May 2009 Oral History

Jim Argiopoulos was appointed First Deputy Chief of Staff for the Chicago Office of Emergency Management and Communications (OEMC) on September 16, 2007. Shortly after his appointment, he was named Communications Co-Chair for the Illinois Terrorism Task Force.

Prior to his appointment, Argiopoulos served as Director of Information Systems for OEMC and implemented the functional requirements and database table layout for the Computer Aided Dispatch (CAD) system currently used in Chicago for 9-1-1 and Homeland Security systems. Argiopoulos has been involved with the ongoing technical development of the OEMC since February 1995, and prior to that served in the Chicago Police Department Communications section, where he began development of the City’s current Computer Aided Dispatch System.

In 1991, Argiopoulos was the Watch Manager for the Southwest Central 9-1-1 Dispatch in Palos Heights, Illinois, where he was responsible for operations of the Computer Aided Dispatch system, Mobile Data Terminals, microwave and Enhanced 9-1-1. This multi-jurisdictional dispatch system served 23 police and fire agencies.

Prior to that, Argiopoulos served as Director of Emergency Management for Whitley County, and is credited for the development and implementation of the County’s Enhanced 9-1-1 system as well as that area’s first central dispatch system for all law enforcement, fire agencies, Emergency Management and Emergency Medical Services. Also during that tenure, Argiopoulos coordinated one of the largest rescue/recovery operations in Kentucky, which spanned 23 days, and involved numerous state and local agencies.

Argiopoulos has been active in emergency services since age 15, when he became a cadet volunteer member of the Williamsburg, Kentucky Fire/Police Communications section. Later he served as a Lieutenant in the Fire Department and was the first and only Paramedic for the department during his 11-year tenure.

Members of the IBM Global Public Sector Innovation Excellence Leadership Award Nominating Committee:

Norm Lorentz, Strategic Advisor, Partnership for Public Service

Curtis Clark, Global Executive Director, IBM Public Sector Innovation

Roger Rehayem, Principal, Emerging Technologies, IBM Global Services

About the IBM Leadership Award

The IBM Global Public Sector Innovation Excellence Award honors exemplary organizations that take their place at the forefront of public sector innovation. They are making not just small improvements, but transformational, game-changing ones that will help change the world. They represent the value of collaboration, the significance of culture and are role models for all leaders. May they inspire us all to continue on and deepen our own innovation journeys.



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2009 LEADERSHIP
AWARD RECIPIENT

Excerpts from the transcript of a Video History Interview with James G. Argiropoulos, First Deputy Chief of Staff for the Chicago Office of Emergency Management and Communications, recipient of the 2009 IBM Global Public Sector Innovation Excellence Award.

The interview was conducted by Ron Milton, Chairman, Board of Trustees, Computerworld Information Technology Awards Foundation on May 11, 2009 at the City of Chicago's Office of Emergency Management and Communications.



The Laureate: Jim, you were originally born in Chicago, tell us about that.

Argiropoulos: I was originally born in Chicago. My mother and father were from the south side. I lived here until I was about 12 years old. I attended grammar school here. When I became a little older I actually moved to Kentucky at the age of 13, and I was there a little over 12 years.

The Laureate: Tell me a little about your family's influence on your early years.

Argiropoulos: My father passed away when I was very young. My mother has really been a driving force in who I am today. I owe her the credit. She taught me the moral values and the hard work and the ethics that I still carry into not only my personal life, but my job as well. So I owe that credit all to her.

The Laureate: Your mother's family is from Kentucky?

Argiropoulos: My mother's family is originally from Kentucky. A lot of them were here when I was much younger, but most of them have retired and have moved to Kentucky.

The Laureate: Were there other influences on you when you were in your teens?

Argiropoulos: My Mom really was a driving force. I pretty much looked up to her for everything. I remember the sacrifices that she made since I didn't have a father. She was a single parent working very hard to ensure that I had all of the necessities and the other things that I wanted as a child. So I really look at her as that driving force that really continues to make me work hard, and continue to strive for more.

The Laureate: Tell us a little about the values that your mother had that she instilled in you at a young age.

Argiropoulos: My mom was a very hard working individual. She always taught me that you work hard, and you treat others like you want to be treated. If you have dollars, you obviously always pay your bills. Then if you have money left, that will obviously go to what you want and is not necessary. But she was very hard working, a very dedicated lady that taught us that you respect others. She brought us up in a very good home, and I think that who I am today, and where I am today, is 100% a direct result of how my mother raised me.

The Laureate: I understand that at age 15 you became a cadet of the Williamsburg, Kentucky Fire and Police Communication section. Tell us what that was like.

Argiropoulos: Well, I was looking for something to do. The Southeastern Kentucky community was a very rural area. One person that was in the fire department was actually my brother's boss. I went down there one evening to meet with those folks, and one thing led to another. The next thing I knew I was actually there answering the telephone on non-mission-critical calls. I then started to migrate into life threatening calls. We didn't have a 911 system then. It was your tradition 7-digit dial number. I continued to volunteer my time there all the way through high school until I was 18.

I was actually one of the youngest people ever hired in that fire department. I went on to become a paramedic. I was a paramedic in that fire department a little over 10 years, and the county judge executive, or the equivalent of a county board president, actually came to me and asked me to start to develop their 9-1-1 system. I implemented

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their system from scratch. We had nothing. We had to address the entire city and the county, and actually put in what was at that time, a state-of-the-art 9-1-1 system, which is still in existence today.

The Laureate: How old were you when you started the 9-1-1 architecture?

Argiropoulos: I was about 21 years old. I felt very fortunate that I had a lot of street experience. I had seen a lot of horrific things—human tragedy at it's worst—and it really helped me to develop the mindset of placing technology in the appropriate hands, and the type of technology that would be needed to really help solve a major gap, which of course was the existing multi-seven-digit dial numbers, which would be combined under the new 9-1-1. I learned by being in the field, and understanding what the user needs, as a paramedic and as a firefighter, and then working with the police. I had been around all of those folks since I was 15 years old. This is all I have known for 30 years of my life. And I really think that field experience is what helped me in migrating to a very well-architected 9-1-1 system.

When I started to develop that 9-1-1 system there, understand that there was nothing in existence. I really had to go to that school of hard knocks if you will, to understand telephone technology, 5e versus digital switching. The master street address guides are that bible for the database for 9-1-1. So I was starting to integrate radio communications and computer systems together to really formulate a then state-of-the-art 9-1-1 system. So it was really trial by error. I had to do a lot of reading, a lot of researching, and then combine it with a lot of practical knowledge in the streets to put that system together.

The Laureate: You were in Williamsburg, Kentucky, for quite some time. Tell us about your experience there being the only paramedic.

Argiropoulos: I worked midnights a lot of my career in the fire department, and I held those police officers that worked the midnight watch in the highest regard. Being a small, rural community, I was really their first line of defense. The closest hospital was approximately 18 miles away, and depending on the significance of what was happening—especially a police officer that was shot—I could have potentially been the difference between life and death. Thank goodness, nothing catastrophic happened. But I always held a very high regard for those officers. I knew I had my first aid kit and my response kit with me 24 hours a day to help them first and foremost, but of course the goal is, if we can help each other and the first responder, how can we help the community? Of course the community was very important to me.

But being a paramedic in a rural area that really had no pre-hospital existence before myself, and not having a close hospital within blocks of vicinity, that's a tall order. I really had a huge burden on my shoulders.

The Laureate: Can you cite some examples that were pivotal in terms of how your experience grew in that environment?

Argiropoulos: You know they talk about a firetruck's lights and siren in the eyes of a child, and how sometimes that's nothing more than just a glimmer and excitement. For me it became a passion. And I think that not having a father, and being just with my mom as a single parent, it really caused me to gravitate to something I really liked. I grew up quick. I started actually working at 15 years old to help support my mother. She had some pre-existing medical conditions. Thank goodness nothing life threatening. But besides my job and school, I really came to just love the passion of being able to answer calls, being able to respond with that engine, being able to help a person who is potentially on death's door—or start CPR—or stop bleeding—or put that fire out. That just drove a desire to want to do more. When I saw human tragedy at its worst, and I saw how I could effect change, it really continued to drive me. It wasn't for the money. It was for the passion to make a difference in my community.

The Laureate: You received many certifications while still in Kentucky. How did they influence your future career?

Argiropoulos: Well one of the things that I partook of several times was a teaching methodology course. It was at Eastern Kentucky University. It was huge for me in terms of methods of instruction. So I went on to teach several hundred hours of fire classes, emergency medical technician classes, and then even participated in some paramedic

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classes. And I think that taking the passion and desire that I had, the practical experience of being out on the street, and then the desire to want to teach others who I potentially could influence with my passion and desire, really made me want to continue to teach. I secured a rescue system, jaws-of-life, airbags, and things of that nature for my community. So then I became an extrication instructor, once again trained at Eastern Kentucky University.

Then I took many science courses at the University of Kentucky, learning the whole methodology of fire: the whole fire suppression theory, jet fuel, or explosions of hazardous materials. All of the educational classes that I participated in, really came full circle when I was tasked with the responsibility of now implementing a 9-1-1 system. That system is the core nucleus of that call that comes in, and then all of the offshoot services that are provided—police, fire and EMS. But my experiences on the streets, having that understanding, and then my education, combined with my desire to help those first responders, and the community really brought that entirely full circle for me.

The Laureate: The people you met through some of those courses, have you stayed in touch with them?

Argiropoulos: My job today is a 7-day-a-week job. It's nothing you take lightly. Early on I did stay in touch with some of those folks. Over the years I have obviously drifted. I do from time to time see the hometown newspaper there, and I will see people who have been part of a class, or maybe people that have moved into management that are still there and alive and well. But I haven't been in a position to keep up with folks. The magnitude and enormity of what I do here today in the city takes up all of your time.

The Laureate: They're all watching you now.

Argiropoulos: Well I hope so.

The Laureate: You were in charge in one of the largest search and rescue missions in Kentucky history that lasted 23 days. What was that like?

Argiropoulos: We had a young lady who was visiting our area. We had the 8th largest county in Kentucky, and we very fortunate to have a very scenic area, which was referred to as the Cumberland Falls. It is kind of a mini-Niagara Falls. Unfortunately, a lady who was visiting with her family got too far over the edge of a support beam and fell over the falls into the water. I conducted a very large water recovery operation for 23 days searching for her. It was very tireless, very endless. We had helicopters involved. We had the Kentucky state police involved. We had many area rescue squads. It was a very large endeavor that took close to a month. My passion to find her and bring her home to her family was in fact my goal. And because I had developed the 9-1-1 system, the county board president actually asked me to become the emergency management director. So part of those responsibilities was really a holistic approach to police, fire, EMS, 9-1-1, and emergency management. It was a very, very, very tiring effort, but at the end of the day we were able to find her. We were able to bring her back to her family.

The Laureate: What effect did the Intergovernmental Executive Development Program have on you? Was it more learning for you, or was it opening doors to other things?

Argiropoulos: It was a very enlightening course. I can't say enough good things about it. It was a combination of human skills, a combination of developing relationships with existing city employees as well as outside of the city. It was really effective for bridging a communications gap with folks that I didn't know, that I still talk with today. It involved a whole lot of thought processes, about how you construct and implement a large-scale project. It encompassed the entire lifecycle of large-scales projects: the budgeting aspects, the continuing operations, the maintenance, and support after a project.

So this class covered the entire lifecycle of pretty much anything that you want to do from a governmental perspective. And I think at the end of the day it really taught me to utilize time more effectively. It enabled me to be more open in terms of communications, to develop relationships with folks outside of your domain, and really continue to strive to do better. Those instructors from that class are still a part of city government, and I still talk to them today.

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The Laureate: Tell me about your evolution to managing IT in OEMC.

Argiropoulos: The Office of Emergency Management and Communications opened September 25th, 1995, at the cost of \$217 million. Approximately 10 months prior to the existence of this facility I was a police employee, a dispatcher at the old police communication center. So when we processed the first call on September the 25th at 4:00 A.M., I was here. My job at that time was to come over from an administration standpoint and help with policies and procedures. Probably two months before the existence of this facility I was tasked with updating data plans and data fields within the computer-aided dispatch system. So I spent seven days a week starting to build a core foundation of the computer systems here as it related to data.

As time went on, I influenced the computer-aided dispatch vendor, in terms of screen layouts, concepts of design, architectural foundation, which I personally feel is a world class organization today. And the core foundation of this building is really centered around the computer-aided dispatch system. What I then did was work with the telephone system to integrate the 9-1-1 callers with the computer system, and then integrating the radio system directly to the CAD, or computer aided dispatch system.

Now here we are 13 years later, and due to the beautiful and great vision of our mayor, I was promoted to the First Deputy, which is the number two person of this organization. The technology folks still report to me to today. And I think that my vision and my drive and my desire is to do more to continue to mature systems, continue to integrate systems, because that's what it's all about at the end of the day. It's about the 3 million people outside of these walls that we serve—the citizens of the City of Chicago.

The Laureate: Talk about the integration of the telecommunications. I understand AT&T brings communications to the building and you take it all from there.

Argiropoulos: We're very fortunate. I feel very fortunate because this is all I have done for 30 years. I have talked to people all over this great nation in terms of their 9-1-1 systems. One of the things that we do very well here, and really sets us head and shoulder above the rest, is that we actually own our own telephone company here. We have over 500 miles of fiber and 850 miles of copper that bring every police, fire and strategic government location back here. In addition we also produce our own dial tone. So out of some 1,150 people that actually people that work here, 70 men and women take care of all of our network infrastructure and the wide area network. We actually have fiber crews. We have tunnel crews. We have fiber splicers. We even have area bucket trucks running around the city taking care of the copper. But anything from delivering dial tone, all the way to critical communications, has really been the driving force of this organization.

And I have to give credit where credit is due. It's very important. We could not have remotely achieved what we've done today had it not been for the vision of our mayor. He is the driving force that allows us to spend dollars, allows us to mature systems, allows us to continue to strive to be the best. It was all his vision. He took three old communication centers, two old fire centers, and an old police communications, and combined them into this state of the art facility. He continues to push us, and we continue to mature, evolve and implement systems to today.

The Laureate: How does the culture of the city of Chicago then internally impact OEMC?

Argiropoulos: You know, a lot of folks say, 'Government employees are nine-to-fivers. They hang their coat up at the end of the day, and we will see you tomorrow morning.' However the mindset and the culture here is mission-critical. It's not Dominos Pizza. You can't mess up and we'll deliver you another one in 30 minutes or less. Here, people come home in body bags. So it's a very critical job. It's one that we take very seriously. It's not a job. It's a passion. It's a desire. You want to do more. You want to improve the quality of life for the people in the City of Chicago.

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9-11 taught us a whole lot in terms of the very tragic event that happened in New York City, and the countless great men and women that died. At the end of the day here, it made us stronger. It made us wiser. It caused us to want to implement even more. It caused us to want to implement even a larger more robust network infrastructure, more systems, more capabilities with surveillance and video technology.

We just undertook a program with Northrop Grumman and IBM where we integrated our entire video surveillance system directly into our computer-aided dispatch system. This center processes 5.2 million calls a year. In June, July and August, we process about 23,000 calls a day. When the men and women on that operations floor that actually process a call, whether it's a cell phone or a wired call, when the latitude and longitude of the call is passed to our CAD system it reverse geocodes it. It turns it into a physical address and immediately paints a 150-foot bulls-eye around that address. And if there are any cameras within the vicinity it instantaneously provides them to the call taker. We've had countless circumstance occur where video has been directly placed to the call taker, where he or she was on the call with the citizen, that effected a great outcome—someone went to jail potentially, or could have potentially saved a life in an accident. Integrating all that into a subsystem to make them look seamless to the user is what we're all about here.

The Laureate: Comment on this quote you said once Jim, 'We're in the life saving business. I have only one chance. So I have to be guaranteed delivery.'

Argiropoulos: Our core values and the core product that we deliver here is life saving services. The police officer, the firefighter, the paramedic, the emergency management person, technically would not be able to respond without us. So we really have one chance to do it right. The men and women around the country that are dedicated police officers, and fire fighters, have a very strong call taker and dispatcher behind them. I look at the 9-1-1 system and I say from the standpoint of day-to-day operations, we're the unsung hero. The nucleus of that call will either have a great outcome or a very poor outcome depending on how we process the call. It is reliant on the appropriate information we take, the way we spoon-feed to that first provider, or first responder.

Since the citizens technically never see the 9-1-1 operations, they really see that as the police officer and firefighter who come to your door, the one who saves your baby's life, who puts that fire out. But it's the dedicated, hardworking men and women here in this center and across the nation, that actually process those calls. They are the people the public never sees, but at the end of the day the outcome of that particular call is either a great one, or a very poor one by the service we provide here. So we only have one shot at it, and we have to do it right at least 5.2 millions times a year.

The Laureate: So the role of IT in a public sector context, when you're in a life saving role, is quite different than corporate America.

Argiropoulos: I look back at where I started in Kentucky, I feel that I am more of a well rounded individual. I understand a very small budget from Kentucky, and I understand a two-council operation. Now I'm here with 109 workstations, and a \$101 million annual budget.

Looking at the budget disparities, looking at the level of operations, I know beyond the shadow of a doubt, technology is where we obviously have to go as a nation when it relates to public safety. 9-1-1 is 40 years old. It actually started in Haleyville, Alabama. The old days of a small radio and a card system of processing calls, has now evolved into this organization as an example, that has over \$16 million in servers, some \$76 million in software. The great men and women, 398 on police operations, and 98 on fire, actually drive the systems.

The systems that we build and implement help make decisions. But it's that very highly trained, highly skilled individual that moves those camera systems, that moves that computer-aided dispatch system, that makes split-second decisions on the type of response to send out for any call. The computer systems play an intricate part to take that stress off the human. The human can become fatigued. The computer-aided dispatch system never gets tunnel vision. It never becomes obstructed. It always thinks clearly. It does exactly what the human programmed it

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to do. It is just what a computer-aided dispatch system is—it aids the human being.

The Laureate: Jim, going back to your roots in Kentucky, what caused you to be so passionate about using technology in a life saving context?

Argiropoulos: I have 30 years of experience now in looking at the good, bad and otherwise. I have looked at the impact of inadequate technology, or technology that actually wasn't in place, as well as looking at what we have here today. What really drives me is being in the field, and understanding the big picture of what it takes to drive that ambulance or fire engine, and living with police since I was a child, and understanding the difference in a felony stop versus going into a domestic disturbance. Through those experiences I understood the appropriate technologies that could affect an outcome of saving the first responders, because if I can't help them, at the end of the day, I obviously can't help the citizen. I think those types of initiatives are really a mindset. A lot of folks have asked me, 'How do you master these systems?' What we achieve in this organization is really a one-off. A server is a server. An Oracle database is an Oracle database. A Cisco router is a Cisco router. It's how you apply that technology that makes you one-off. We're not a business class organization. We're in the life saving business. We do have millions of dollars in technology, but it's how you use it. You have to have a vision. You have to have a passion, and you have to understand, not only the domain inside these walls, but also what goes on throughout the city at the first responder level.

A case in point: We're finishing a scope of work very soon that will actually allow us to provide more intelligence directly out to that mobile data terminal. It will give us the ability to look at the life safety systems on a police car and a fire truck. So if that vehicle is involved in an accident, it will instantaneously send A, an inbound message to the controlling dispatcher, B, it will immediately pull a 150-foot paradigm around that accident and show us full streaming video around a police officer, or a firefighter in trouble. It will also enable a call for emergency assistance. We will soon be in a position where if a Chicago police car has an accident, airbags will deploy, and that vehicle will call its own fire response. So before a human can think—in 30 milliseconds—cameras are drawn, and an emergency accident message is at the dispatcher's console. And that car has sent an inbound message to the fire CAD telling them 'I need in pin-in response and advance life support ambulance request.' That's unheard of. It's phenomenal. But I think it's really the vision of taking the tools. The technology is there. It's how you apply it. It's the difference in saying, 'Yes, I am going to pay for this rocket and send it to the moon.' It's pie in the sky stuff. This is about creatively taking the existing systems and then applying them in a very methodical, very strategic way. That's what we're all about.

The Laureate: I am going to change direction a bit here and talk about innovation and how it is applied here at OEMC. What are the traits in innovators that you admire?

Argiropoulos: I think innovators are people who are very open minded to change. The mindset of the individual that actually is trying to achieve something is very important. You have to be very open. You have to be very customer focused. When you look at Alexander Graham Bell who invented the telephone, that started out with old copper pairs. That evolved to actually transmitting voice through fiber and today, voice over IP. When you look at the early painstaking tasks to actually transmit that voice, and then look where we are today with 5e digital switches, and voice over IP on the Internet which sends your call across the nation or across the world, that's what it's all about.

I think innovation is about that the passion and desire of wanting to do the right thing. At the end of the day that's what it's all about. I think that practically applying technology in our domain is definitely a one-off. And the brightest minds that have provided technology to us over the decades looked at that globally. Here, we're very tunnel-visioned. We're very specific. It's all about protecting our first responder. It's all about protecting the citizens of Chicago.

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The Laureate: How do you further enable innovation here at OEMC?

Argiropoulos: We do that in a couple of different ways. We further innovation here by looking at our core mission, and we never rest on our laurels. We always have to continue to strive to do better, to take existing technology and increase it, and to look at implementing new strategies. As an example, all of the vendors that are part of the core mission here, provide us every quarter, or semi-yearly, a road show overview of where's your product today? Where's your product going in the next 6 months? Where's it going over the next couple of years? That helps us to really fuel that creative thinking and get us thinking about, 'What do we need to do with the next level of technology?'

Again, I keep going back to give credit where credit is do. We have a mayor who consistently pushes us to do more. It's almost like I'm standing behind that pickup truck that going 50 miles an hour, and if I stop running you're going to get run over. The mayor is constantly pushing us. So it drives us to bring those technology folks in and continue to do better for the city.

The Laureate: How do you personally define leadership?

Argiropoulos: Leadership is really leading by example, being forward thinking. Not being narrow minded, and a good listener. You can't be an effective leader if you're not a good listener. I go back to what my mother has taught me—you have to treat others like you want to be treated. You have to be very hard-core and focused on the mission. You have to be very soft when you need to be, yet very stern on the opposite end of the spectrum if you have to be. If you have to put a boot in someone's rear end because you have to achieve that objective, you have to do what you have to do. But at the end of the day that carrot is dangling. The only way you're going to get a bite out of it is you have to be striving, effective, motivated, and you cannot under any circumstances, stop pushing forward. The moment that you do, you're going to fail.

The Laureate: Another definition we heard recently about leadership is that you have to make people not want to let you down. Would you agree with that?

Argiropoulos: I think that's an important factor. You have to be a motivator. If you're in the position where for example, you have 10 folks on your IT team, and information technology is what you're striving to achieve, you really have to motivate those folks. We just finished what's referred to as an intelligence cell. It's a multiple application of geo-spatial intelligence with 40-some layers of intelligence, above- and below-ground infrastructure. There were some bright minds at the table who have never spent one hour in the street on an explosion, never had a mother provide their baby to you at the end of the driveway dead and ask you to please save them. So I will actually instill those types of stories into the program, and I can see the fire in their eyes. I can see that spark light when I explain to them the understanding that what they are doing today can effect and change the course of action of saving somebody's life. To say that globally is one thing. You can hear that on television. But to look them in the eye and bring the passion to the table, to give them a real life experience, really drives and motivates an individual to not to want to you let you down. And most importantly, have them understanding that at the end of the day, it's not lost revenue. Here, it's lost lives. And I think that it's very fulfilling as a programmer, as a network architect, as a system administrator, a database administrator, to go home knowing that what you've done, effectively will save countless thousands of lives. That's a motivator within itself.

The Laureate: I have a quote from Edward Demmings dating back some 20 years. The quote is, 'It is not necessary to change. Survival is not mandatory.' How do you interpret that in the context of the life saving work you do here?

Argiropoulos: The way that we live, and the world that we live in, post 9-11, has really changed focus on all of us. We watch CNN, and Fox News, and some of the other world outlets and think, 'How unfortunate' when a specific circumstance happens overseas, and then it hits American soil. It really changes your mindset as well as your objective and deliverables, and what you're trying to achieve, and how you're trying to achieve it, and at the end of the day being able to survive. We're in a world that will never change. We live with the mindset that the next shoe is going to drop. If the next shoe does drop, we have to be there to support, to survive, to continue to move on.

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And the only way to do that is to train the great men and women that provide the response in the street, the great men and women behind the radio that dispatch the calls, and the IT professionals. The IT management of public safety has substantially changed in a post 9-11 world for obvious reasons. Those folks in those positions are not there for a 40-hour work week. They have to be there for a passionate desire or they won't last here.

The Laureate: What are the values and ethics that you pass on through your actions to the employees in this facility?

Argiropoulos: I say time and time again, my mother taught me that you treat others like you want to be treated, but also to be very hard working and motivated. We just hired a brand new project manager here. I provided him a one-hour closed-door meeting, and one of the things that I said is, 'If you're here for the money, you won't last more than a month. I'll get rid of you. You have to be here for the passion and desire. This is a mindset of an occupation that you can't take lightly. This is a motivation and desire to do the right thing. If you're here for a dollar, you won't last. If you're here for a passion and desire, that is the type of individual that we want here.'

The IT professionals, all the men and women that are here, are a dedicated group of individuals. But the way that I treat them, and the core values I instill in them go all the way back to the roots of how my mom taught me. She walked through the snow providing for my livelihood when my father passed away. She never had driven a car before, and she always walked everywhere, going out in the deep snow, and working countless hours and overtime to provide for me. That is the mindset that I still have today in terms of my work ethic, and my striving and desire. I take that exact mindset and approach, and I instill that around the people that surround me.

The Laureate: We're living in the most turbulent economic time since the Great Depression. Is leadership key to us getting back to some form of normalcy?

Argiropoulos: The economy has hurt us all. It has hurt every facet. Unfortunately, regardless of how the economy is, the services we provide here have not lessened. Sometimes it has even increased. The challenges that we face are no less of a challenge as a result of the economic impact to America. So from our standpoint, we obviously have to be smarter. We have to work wiser. We have to maximize the efficiency of that dollar. We have to buy systems that we know are a multi-year approach, not a multi-month approach. Don't misunderstand me, I'm not saying from a local government standpoint that pre the downturn of the economy we were any different. We're dealing with taxpayers' dollars here. We have to maximize that efficiency regardless of where we are economy-wise because at the end of the day you pay tax dollars, and you desire them to be spent efficiently. So quite frankly, the downturn has maybe curtailed some of our projects, nothing of consequence that would really affect a life. But at the same time, our mindset has really been one that when you implement a project throughout the entire lifecycle, from the infancy all the way through to the conclusion and post maintenance, we strive to do the best we can ad use dollars wisely.

The Laureate: To the people you serve, and passionately serve obviously by the way you describe it Jim, have you seen a reaction that's different from them for the service you give them?

Argiropoulos: No, not really in terms of the people that are around us. The folks that are calling in 9-1-1 calls, the generalities of those are consistent. Human tragedy is still human tragedy. Calls for service are still calls for service. The people around us are looking at doing more for less, potentially cutting into four-day work weeks. Things of that nature are part of the downturn, and quite frankly, that's going to hit us all. But at the end of the day, even if it is a four-day work week, that means that we obviously have to produce more in that four days even if we have to take a pay cut.

The Laureate: You have heard the term, 'No risk, no reward.' Do you agree with that?

Argiropoulos: You have to be very careful. When it comes to a term like 'No risk, no reward.' In our business we can't afford to mess up because the end result is that somebody dies. Risk-taking in this environment is something we don't condone, and is something we avoid at all costs. If that means we have to delay a project six months because

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the intricacies are not quite there, the integration is not where it should be, the desired result is somewhat off—then we have to curtail that. And if that means that we have to tell our executive director of this organization, or the mayor, that it has to wait a couple of months, at the end of the day, everyone in positions of authority know that we work hard, and we know that we can't take a risk.

There are circumstances on the private sector side that risk-taking sometimes can make a difference in a big windfall. Risk-taking in our business means potentially somebody dies. And at all costs that's what we have to avert. You have to live, and it can't be a result of sloppy work or inadequacies in our technology.

The Laureate: Our chairman and founder regularly tells us that the biggest room in the world is the room for improvement. Is there any room in the Argiropoulos for improvement?

Argiropoulos: Yes, beyond a shadow of a doubt. I love what I do. I am a very humble person. Here I am 30 years later, and I love what I do today like I did when I was 15 years old. I'm not remotely tired of it. Is there room for improvement on my side? Absolutely. Could I be a more effective listener? Of course I could. Could I do things more efficiently? Of course. Sometimes I really get down into the trenches of an application or a concept, or a design more than I should. I really should hand that off to people that are around me. Sometimes you feel like if you want it done right you have to do it yourself. That's always been a downfall of mine.

It's not saying that there are not great men and women that are here. But sometimes you just have that passion. It's almost like, as much as I could do to try to instill on that programmer or that project manager how I see the world, sometimes you just can't articulate it, and you can't see the world any better than Jim could.

So should I in fact pass those types of things off, which obviously would make me a more efficient person? Absolutely, but once again I go back to the thought process of you can't see the world unless you are me. At the end of the day we can't afford to do it wrong the first time. It could potentially end up in catastrophic results.

The Laureate: The recipient of the 2007 Leadership Award, John Thompson, was the Chairman of the Board of Symantec at the time. He said, 'Information is the currency of our age, and as such it has become invaluable.' Do you agree with that?

Argiropoulos: Absolutely, when you take the police officer, the firefighter, the emergency management person that is actually responding to a specific call for service, information is very important. Information overload is dangerous. But actually providing them with the latest and greatest intel on a specific address, a specific block face, the last 30 days at a given location—the types of fire calls that have been there—is invaluable. The mindset that you portray to an individual that is jumping off the engine, we call it a rig, or jumping off an ambulance, or getting out of the police car, could mean the difference between life and death. You can't rest on the feeling that you have this particular situation under control, because situations evolve, and they turn on you just like tornados drop out of the sky. Providing them with intelligence on buildings, on architectures, on floor layouts, on calls for service, is beyond a shadow of a doubt invaluable to the first responder.

The Laureate: I am going to ask you to comment on a quote from a book by Jack Welch. I know it's going to be a softball question based on what you have been saying, but I have to ask you. The quote is, 'Leaders make sure people not only see the vision, they live and breathe it.' How do you feel about that?

Argiropoulos: I could not agree more. Actually I think he stole that from me somewhere down the road. You have to really love what you do. You have to really have a desire to want to do more. You have to instill your passion and desire in people that are around you, and that even goes out to the vendors. The folks who come to meetings, whether it's a design session, to discuss a scope of work, to discuss a new concept, I instill that passion in them, the desire to want to do more. If you have to stay up an extra three hours tonight before you go to bed, let's get this data down pat because we have to implement this new strategy. It is important for us to articulate the details of a day in the life of an emergency management person, or a 9-1-1 operator, or a police officer, or firefighter, or a paramedic to the vendors. At the end of the day it makes a difference in the outcome of that particular project. That's the bottom line.

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The Laureate: Jim, what are your hopes for humankind, and how can IT help achieve those hopes?

Argiropoulos: The human nature of an individual, whether you're brought up and instilled with great values, or whether you happen to be an undesirable, we deal with those folks here day after day. Human tragedy is something that unfortunately is part of our business. It is what it is. We obviously hope that you never have to call us, but at the end of the day, we hope that technology and the technology dependencies that we use today, affects the outcome and quality of life.

Technology is very vibrant. I think that a lot of folks of all ages embrace it. The laptops and wireless networks are in kindergarten classes today, and the mindset of the individual in school today versus 20, 30 years ago is substantially different. I think that technology has brought us a very ever-changing quality of life, especially Internet in every house. President Obama wants to actually send broadband around the United States, to place it out in your less economic developed communities. That is very important. As time goes on, as the years pass, technology is integral to every facet, from public safety to public life, to the private sector, to world-renowned institutions. Everywhere you go you're starting to see more and more technology, and it is hands down a dependency, from telemedicine all the way down to teleconferencing, from universities to a school classroom. It's in every facet of our lives.

The Laureate: Do you see the obstacles to IT in the future as technical or social?

Argiropoulos: I think from a technology standpoint, one of the things we are facing for example, is mobility. In June of 1997 point-two percent of our call volume was wireless. In June of 2008, it was 60.2%. So with that ever changing evolution of mobility comes voice over IP and cell calls. The cellular technology gives you a long, and a specific dynamic area of where you are, and that's passed to the 9-1-1 operator. Is there room for improvement? Absolutely. Voice over IP is another huge animal for us, because an IP packet doesn't understand geographical areas. An IP packet doesn't have a GPS header around it that tells us where you are. So if you have a voice over IP service and then place a 9-1-1 call, or use high speed bandwidth, and air cards into a laptop, you can inevitably send first responders to the wrong address, because the actual subscriber information over your voice over IP call is where your bill is going. That might not be where you are on a laptop.

So the challenges are there. Text messaging has taken the nation by storm. Sending text messages into 9-1-1 center is really the next evolution or NextGen 9-1-1. We have to start looking at 9-1-1 messages, pictures, AVIs off of cell phones, all of those mobility aspects aspect will take what started in Haleyville, Alabama, up to where we are in 2009. But the technology evolutions with the cellular build-outs, with the mobility aspects, with air cards that you can place in your hand, or USB drives with voice over IP services, these are all technology challenges that substantially effect what we do here in terms of service providing.

The Laureate: Let's talk about the Jim Argiropoulos legacy. How would you like to be remembered?

Argiropoulos: I would like to be remembered as somebody who was very passionate, who wanted to make a difference for others, who wanted to affect the quality of life in a very positive way. Someone who was hard working, who never took no for an answer, who never stopped because it was Saturday morning and it was a beautiful, sunny, 70 degree day. I want to be remembered as the person that made a difference. Someone who worked hard, that gave his heart and soul for the citizens of the City of Chicago, and built what I feel is a world-class communications center.

The Laureate: James Argiropoulos, First Deputy Officer of the Office of Emergency Management and Communications for the City of Chicago – you are the 2009 recipient of the IBM Global Public Sector Innovation Excellence Award in The Computerworld Honors Program. Thank you so much for your time.

Argiropoulos: Thank you! ■■

THE 2009 CA LEADERSHIP AWARD FOR INNOVATION IN LEAN IT

GINNY T. LEE

*Senior Vice President and Chief Information Officer,
Information Technology, Intuit Inc.*

“Leadership to me isn’t about being the smartest person in the room with all the content expertise, but rather your ability to assemble and develop a great team, create a vision, and inspire others to deliver and realize that vision. I have been truly blessed with a rich and varied set of experiences that I will always take with me to become an even better leader tomorrow”

Ginny Lee from May 18, 2009, Oral History

Ginny Lee is Intuit’s senior vice president and chief information officer. Appointed to the position in February 2008, she is responsible for further developing Intuit’s technology and business infrastructure to support the company’s growth strategy and provide customers with great experiences.

Working at Intuit since November 1996, Lee has held a variety of general manager and business operations leadership roles. Before being named CIO, she was vice president and general manager of Intuit’s Payroll business unit, where she was responsible for the company’s line of payroll products and services. Previously, she was vice president of Intuit’s order-to-cash organization and customer service, and vice president of corporate business operations and enterprise systems, overseeing Intuit’s companywide infrastructure. Lee has also served as business line leader for QuickBooks Internet Gateway Services and director of operations and product management for the Financial Supplies Group.

Before joining Intuit, she spent several years as a management consultant at CSC Index, focusing on strategic implementation and business process re-engineering. Lee was also a marketing manager at Pepsi-Cola International.

Lee holds bachelor’s degrees in both business economics and organizational behavior and management from Brown University, and a master’s degree in business administration from Stanford University.

About the CA Leadership Award

The CA Leadership Award for Innovation in Lean IT recognizes visionary leaders who have leveraged technology innovation to achieve greater enterprise value. These leaders and their companies have embraced the principles of Lean IT by visualizing and automating critical IT systems and processes across the enterprise to deliver optimal business results. This award recognizes the achievements of these Lean IT innovators who have dramatically increased productivity, improved the customer experience and optimized business value for their organizations.



GINNY T. LEE



Excerpts from the transcript of a Video History Interview with Ginny Lee, Senior Vice President and Chief Information Officer of Intuit, recipient of the 2009 CA Leadership Award for Innovation in Lean IT.

The interview was conducted by Eric Knorr, Editor in Chief of InfoWorld, on May 18, 2009, at Intuit Headquarters.



The Laureate: Ginny, can you talk about the early, important influences in your life?

Lee: My family had a huge influence on who I am today. Just to give you some context, I am first generation, bilingual and bicultural—all of which has its benefits and its implications as well.

My parents emigrated from China in 1959. They had two little children and a third on the way, and they had less than \$100 in their pockets. They came to Boston and my dad started out as a waiter in a Chinese restaurant. My mom started out sewing piecemeal at a sweatshop factory. Needless to say, we came from very, very humble beginnings.

I was the youngest of 8 children and grew up for most of my life in a government subsidized, low income housing in Boston's Chinatown. My family had an incredibly strong work ethic as they worked 7x24x365 to provide a better life for all of their children in the U.S. They believed in hard work, focus, discipline and the importance of education, even though neither one of my parents finished high school. That is the essence of who I am, and what has made me become who I am today.

In terms of other things that have influenced me early in my journey, it starts from living in Boston in general. It's a huge education city. I lived within miles of Harvard, MIT, Northeastern University, and so forth. I went to Boston Latin School in high school. It was the first high school in the United States. It was erected in 1635. The first graduates of our high school went to Harvard undergrad. In fact Harvard was made for the first graduates of Boston Latin School, so that school has lots of tradition.

One of the early influences for me was my headmaster, Mr. Michael Contompasis. He had a philosophy around tough love and the Pygmalion effect. He believed in me, sometimes more than I believed in myself, and he instilled in me a mindset that I have a bigger role to play than just being a good student. He always told me that I had a higher purpose of being a role model to others, whether it's based on the background that I have, my education, or the journey I've been on. So he was a heavy influence for me in my early days as well.

Likewise, I played a tremendous amount of sports in my life. So if there's a common theme of who Ginny is, it's team. I played volleyball as a sport for over 15 years. I was all-city, all-state, all-New England and all-national. I even played several years of Junior Olympics. Along with the many lessons that come with excelling in any team sport, such as the discipline, the camaraderie, etc, there is the biggest lesson of all that I learned from some wonderful, wonderful coaches and that is: it's about the team. It's about knowing your role on the team and how you can make it perform better. It's about ensuring that you'd rather be a player that makes a great team than being a great player. I really, really believed that in my heart of hearts. That's what I espouse, and that's what I want to stand for.

In terms of other things that influenced me early on, it was never giving up. I share the Nike tag line, 'There is no finish line.' In sports and in work, if you put enough effort into something, and you set your mind to something, you can accomplish anything. And you've seen that in my history as well—from my very humble beginnings and my bilingual and bicultural background to where I am today in the workforce. So that is also an essence to who I am.

The Laureate: What were your first jobs out of college?

My first job out of college was working on Wall Street for an investment-banking firm as a mergers and acquisitions analyst. It was by far one of the best jobs for someone coming out of undergrad for three primary reasons: one, the training that you get and the exposure that you get to big business issues is phenomenal for someone who is 21 years old. Two, you get significant grounding in numbers and what makes a business tick through the financials. Then to be honest with you, why I went into investment banking is because it's one of the few jobs that enabled me to pay back all the student loans that I took on when I put myself through school at Brown University.

I spent two and a half years in investment banking. Then I went on to work for PepsiCo International as a marketing analyst. That was also a wonderful training ground in terms of how to commercialize consumer-based products as well as how to start to think about what it means to be a manager and a leader, because Pepsi is renowned for developing great managers and leaders.

After Pepsi, I went on to get my graduate school degree in business from Stanford University. After earning my M.B.A., I went into management consulting. I worked for a company called CSC Index, which specialized in process reengineering. That was again, a very pivotal part of my life. Consulting was a great training ground to get a variety of experiences across multiple industries and multiple business problems. And again, it had the practical nature that afforded me the ability to pay back yet another set of student loans that I incurred while putting myself through business school.

With CSC Index, I gained a tremendous amount of learning around process reengineering. I learned to think about things from the customer point of view—to think about things from end to end, not just your part. One of my favorite Harvard Business Review articles is 'Staple Yourself to an Order'. The customer cares that they get their products from us in XYZ days; they don't care that the products had to traverse 10 different organizations. It's about having a customer outside-in perspective vs. an internal inside-out perspective. I also learned to think about things holistically, not just about the business processes themselves, but also about the culture, the individual jobs needed, the technology and, the reward systems that surround and enable the business processes. That was great training and I've carried that with me to this day, and in every single job that I have had since then.

The Laureate: In your professional experience, was there a particular mentor who inspired you?

Lee: In my work experience I've been very, very blessed with a tremendous amount of mentors throughout my life, both personally and professionally.

On the personal side, one of my biggest mentors is Jim Collins. He was my professor at business school. He taught an entrepreneurial class and has since gone on to write great books called *Good to Great* and *Built to Last*. He taught me to always have your own personal board of directors, where you want to surround yourself with people that know who you really are and who you really want to be. These people should keep you honest versus telling you what you want to hear. In my opinion, your board should represent your total self, not just your professional self. For example, the chairman of the board of my personal board of directors is my husband, who makes sure that I am not just a professional, but a mother and a wonderful wife as well. He provides wonderful checks and balances to stay very grounded on my total self.

Another mentor for me was Bill Campbell, who was the CEO of Intuit when I joined back in 1996. First and foremost, he is a wonderful human being and a phenomenal leader. He taught me a tremendous amount about what it means to manage and what it means to lead an organization. He taught me that sometimes it is best to take the road less travelled because on that road, you can most often learn and grow farther and faster than taking the road travelled by many others. Also, he taught me that in everything you do, you must lead with your mind, your hand, and most importantly, with your heart. Having the mind means being smart by surrounding yourself with the best people with the best ideas. The hand means making sure that you are decisive in the things that you do. Then, obviously, lead with your heart because at the end of the day, the organization is made up of human beings and all the dynamics of that.

So those are some key mentors to me throughout my years that I have been so incredibly blessed with.

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The Laureate: That's a wonderful personal philosophy. How does that dovetail with the culture of Intuit?

Lee: Jim Collins also taught me another valuable life lesson. He told me not to think about the specific job, title, or industry because that doesn't define who you are. But instead, focus on what the company stands for and ensure that is aligned with what you stand for. Intuit was just that place for me. The culture of Intuit is wonderful. It stands for ensuring you solve big customer problems in innovative ways. Sometimes they're problems customers don't even know they have. Scott Cook, the founder of our company, exudes this type of innovation. It's in his DNA. If you read one of the books that was written about him and Intuit called *Inside Intuit*, it talks about the passion that he had back in the early 80s developing a product called Quicken. Through a lot of customer-driven innovation, Intuit was founded with Quicken and subsequently other products like QuickBooks and TurboTax.

The Laureate: So during your tenure at Intuit, what achievements are you most proud of, and why?

Lee: I've been with Intuit for over 12 years, and I've played 6 completely different roles in that time period. The consistent theme has been that I can be deployed across multiple business units or functional groups to solve many different business problems. What I am most proud of is the fact that I can consistently deliver significant business outcomes whether I'm the subject matter expert or not, and I can lead an organization through a tremendous change management and business transformation journey from point A to point B in a short period of time. Leadership to me isn't about being the smartest person in the room with all the content expertise, but rather your ability to assemble and develop a great team, create a vision, and inspire others to deliver and realize that vision. I have been truly blessed with a rich and varied set of experiences that I will always take with me to become an even better leader tomorrow.

The Laureate: Geoff Moore in *Dealing with Darwin* talks about learning from the past and transforming your internal dynamics to overcome the inertia that threatens every bold innovation. Is there truth in this for Intuit?

Lee: I believe there is a tremendous amount of truth in that for Intuit. What has made us tremendously successful yesterday could easily be the very thing that threatens our innovation for the future if we don't learn from our past. For example, we have a very proud heritage of making easy-to-use consumer-based desktop products. The world is moving to the Internet and to mobile devices and solutions hosted on the Internet are becoming more and more prevalent everyday. How do take our customer-driven innovation approach in our desktop products and transform that into a new technology where our software is a pure 'connected service' (SaaS) that delivers revolutionary benefits and costs, or a software-advantaged service where connecting our service to our software, or where our vast ecosystem serves as a platform that connects people to people? You need to pause, take a step back, and learn from what's happening and not happening to determine why a business result is being achieved or not. It's not just about the execution. It's about the culture. It's about the people. It's about the social architecture. And if you dissect it all and really internalize those learnings you can overcome the inertia and then lead great change.

The Laureate: How have you kept innovation at Intuit going, personally and professionally? And is it the people or the events?

Lee: At Intuit we have wonderful sets of innovation that happen at both the individual level and at the company level. I think you need both.

At the individual level, we have unstructured time for our engineers—who are very precious to us because they are the ones building great products for our customers. We give them the freedom to dream and to create. Ten to 20% of their time is what we call "unstructured." There isn't a deliverable. This is a way to foster their creativity.

Then we create programs we call 'Idea Jams.' Idea Jams are events where these engineers can showcase their innovation, and pitch those ideas to senior managers for funding. We also have wonderful innovation galleries to showcase these ideas to others and bring the spirit of innovation to the rest of the company. If you want great innovation, leaders must create and encourage an environment in which their people can dream and be creative. So I would say innovation has to occur at both levels, at the company level and the individual level.

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The Laureate: What other innovators do you admire?

Lee: Other innovators that I admire? I admire Scott Cook, the founder of our company. He thought about creating a product that no one else did early in our journey. We're 26 years old now as a company. And his vision was tremendously innovative.

Take QuickBooks, for example. Then look at many of our competitors' products that require you to be an accountant to use their accounting packages. At Intuit we try to take all that complexity away to make it really simple and easy to use so that a non-accountant can do your books. That's innovation to me: creating that simplicity. And that comes from Scott. He's still very active in our company and we are a better company because of that. I get a lot of inspiration from him. I think he's one of the best innovators.

At the same time, innovation isn't just about the idea, but it's about how do you assemble all those things together? Someone like Steve Jobs would say to you, 'It's not about the actual product that I innovate, but how do I take pieces from others to then create a better product assembled?' That's innovation too.

The Laureate: Another of our leadership recipients this year said leadership is 'Not a personality trait. It's about wanting to make people not let you down.' How do you define leadership?

Lee: Leadership to me is about creating a simple living strategy, and inspiring others to make it real. It starts with the people, knowing who to get on the bus, who to get off the bus, and making sure they're all in the right seats. That's something I learned from Jim Collins. Then, once you find and develop the great talent that will follow you to deliver that vision, as the leader you must be able to make difficult decisions when necessary and remain human and humble all along the way. My view on leadership is that I serve the people that work for me, and I use that word 'serve' very, very carefully. A leader's job is to remove the barriers to its people so that they can execute and in that sense, I serve them.

Likewise, you must decide what 'brand' you want to have and be known for. For me, it's about having the utmost integrity in all that you do, and it is about having what I call a high 'say/do' ratio. People will remember you most by your actions, not by your words, and the more aligned the two are, the better the leader, I believe.

Finally, I definitely aspire to Jim Collin's theory of 'level 5 leadership' from his book *Good to Great*. In there it talks about how a leader builds enduring greatness through a combination of professional will and personal humility. Professional will to create superb results by putting those foundational elements on which an enduring company stands; personal humility where you act with quiet, calm determination and rely principally on inspired standards (and not inspired charisma) to motivate. I particularly love the analogy in the book where great leaders look in the mirror, not out the window, to take responsibility for poor results; and in turn, great looks look out the window, not in the mirror, to give credit for the success.

In terms of whether leadership is nature or nurture, I think it is both. You have to have the passion for making a difference and leading others and that's the nature part of it. If you don't have that innate passion then it's going to be difficult for you to be a wonderful leader. Then of course there's the nurture part. To be a great leader, you must be open to learning from others to then internalize those learnings to teach others.

The Laureate: Your title is Senior Vice President and CIO. Your background is primarily not technical. So, how do you fill this leadership position as the CIO without that technical background, although obviously you have worked in the technology industry for quite a long time?

Lee: It may come as a surprise to most people that being the Senior Vice President and CIO of Intuit, I don't have a deep technical background. I wish I could tell you that from the age of 5, I always had a deep passion for technology. On the contrary. For me, being a CIO (or General Manager for that matter) is more about leadership than it is about technology.

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Prior to this role I was the general manager of a large business unit within Intuit. And my CEO, Brad Smith, knocked on my door and said, 'Ginny, you're doing great in your role, but you can have a larger impact on Intuit by being our CIO and transforming our technology infrastructure from enabling great desktop software products to enabling and hosting connected services.' And I looked at him and I said, 'Hmmm, I don't know what that really means because I don't have a technical background.' Sixteen months later in the job, I know it isn't about that. It really isn't. The CIO's job is about delivering business outcomes, delivering those business outcomes for your customers, whether they're the customers that buy your products, or the internal customers, the employees that you have to deliver processes and tools and systems to make their lives easier. If you have that outside-in perspective, and you can manage a rich set of portfolios to get things done, and you're a strong leader, I think you can be anything that you want to be.

So I break the stereotype of being a CIO with a tremendous amount of technical background. In fact, what I've done is I've hired for that. At Intuit we are very business- unit-centric. Thank goodness for that because unless you have that you won't really have wonderful customer-driven innovation inside the business units for the different customer segments that we serve. As the CIO, what has helped me in this role is balancing the strengths that I bring to the table, which are my collaboration and my partnership with the general managers. The fact that I was one of them for the last 10 years at Intuit makes me understand what makes them tick, how better to communicate with them, and how better to be transparent with them in the solutions I need to deliver. It's about my running IT like a business with products and services I provide that solve important customer problems effectively and efficiently. At my level it isn't about whether I know a particular technology, or how the data center is operated, or a particular set of code that needs to happen. It's about business transformation.

Today Intuit is undergoing one of the largest transformations it's ever seen. What has made us historically great in our first 25 years is not going to make us great in the next 25. We're great at shrink-wrapped desktop products; the Quickens, the QuickBooks, the TurboTaxes, but technologies have changed. The environment has changed. Our sophistication as a consumer segment has changed with our Gen-Y'ers. We're transforming from a desktop, shrink-wrap software company to what we call connected services, where it's both software and services, both desktop and on the Internet. It is that transformation, to enable the business outcomes and my ability to understand and direct and portfolio manage the work that we do, and the resource allocation that I was put into this job to do.

If I was just a technologist, I could easily fall in love with the technology and solving the technical problem before I fall in love with solving the customer problem. And for us, it's about delivering an awesome customer experience and solving that unmet need for the customer through effective and efficient use of technology and infrastructure.

The Laureate: Can you talk about how being closer to the technology has impacted your leadership, your style of management?

Lee: Being the CIO and coming from the business side of the house, what is important to me is to surround myself with very strong technologists. So I have hired some key people with that deep technology understanding, and in turn, we meet each other in the middle. I help my direct reports explain the technology issues in a language that the business community can understand; in turn I learn in the process how better to leverage the technology. Technology can solve any business problem. The question is, which ones are the right ones, and which ones have the best and biggest return on investment? So it is important to hire and surround myself with deep technologists and balance that with ensuring that they have the business acumen by which to deliver the business outcomes with the most effective return on investment. At the end of the day, that's what this is about. This is about delivering for the customer, and making sure it's a wonderful customer experience, because those are the people who are using our products, who are paying for our products, and we've got to make sure it works.

The Laureate: I want to shift gears a bit to current challenges in the business environment. We're living in very difficult economic times. What do you think in terms of your leadership is key to these times? Do we need a different kind of leadership in this environment? What is that leadership at Intuit, or leadership for the country for that matter?

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Lee: We live in an interesting time right now. The macro-economic conditions are very hard on all of us. I think at times like these, leaders have to be a little different. They have to take the fundamental things that we have in our toolkit but emphasize some things more than others because of the situation that we are in. The tougher the times, the taller the leader has to stand. My philosophy is that when times are really good, that is when the leader takes a step back and lets the team shine. When the times are really hard, that's when the leader has to step forward and stand really, really tall, and over-communicate, because it's a very uncertain time for the people. They say over-communicate by a factor to 2 to 3X so that you ease the troops. So you take all the fears and uncertainties and doubts from the people so they can focus on just delivering for the customer.

So there are some things that leaders in these times have to do differently. I have this analogy that I often share with (Intuit's CEO) Brad (Smith), and that is that it is very easy to be a peacetime general. It is much, much harder to be a wartime general. It rings very, very true. Not that we're at war, but it's a very hard time that we're going through. So if you can stand tall, stand calm, stand self assured, you will alleviate a lot of the uncertainty that the people have, and therefore continue to inspire your troops to deliver.

The Laureate: And would you say that's a part of your brand, the Ginny Lee brand?

Lee: I pride myself very, very much on having a very high say-do ratio. You don't have anything else to rely on but your own personal brand. Every single behavior, every single interaction has to be aligned with what you say, what you do, and the actions that you take every single day. It all has to be aligned. And if they don't see that, the troops start to think that you're disingenuous, and that's not at all who I ever want to be.

So I believe in aligning the words that I use, the actions that I have, so that the individuals can feel and touch that, to be one and of the same. And I hope that universally anyone that comes in contact with me, has that same experience, because it's about that integrity of a high say-do ratio.

The Laureate: There's a saying, 'The biggest room in the world is the room for improvement.' How do you view your own room for improvement?

Lee: I absolutely agree with the biggest room in the world being the room for improvement, and boy do I have a mansion for that. If you stop learning, if you stop believing that you can get better, you're not a very good leader. So I espouse that the biggest room is the room for improvement. I love that saying. As I said before, my motto which I take from Nike is that there is no finish line. I believe that in everything that I do. There isn't a point that I will ever want to stop learning and stop getting better.

That brings up another thing that I love about Intuit. We're a very open and honest and communicative culture. You get feedback every day. Brad Smith, our CEO, a wonderful CEO for us, talks about feedback as a gift. He says that there are gifts that you have, and there are gifts that you receive. And I am so very blessed with all the gifts that I receive each and every day that help me become a better leader, each and every day.

The Laureate: This CA Leadership Award is for your outstanding achievements with Lean IT. Can you tell us what that looks like at Intuit, and its unique value?

Lee: One of the initiatives I have at Intuit is to create a leaner IT organization. Why does that matter? It isn't about cost cutting and it isn't about right-sizing IT. We have a philosophy within Intuit called resource allocation and making sure that we have effective resource allocation. I've worked very closely with Geoffrey Moore. He wrote the book, *Dealing with Darwin*, and he has this philosophy of looking at the core and differentiating what is context, or those things that enable your core. He has this 2-by-2 matrix of core and context, what is mission-critical or not mission-critical. And the theory of the case is using that 2-by-2 matrix to figure out those things that are absolutely core, absolutely critical as to why a customer would choose and differentiate you over some of your competitors.

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We are not a company that sells IT services. We're primarily the context which defines mission-critical, because if our servers went out on April 14th and millions and millions of customers couldn't file their taxes, that would be a problem. That's why we're mission-critical. My job is to figure out how to optimize as much of that context so that we as a company can resource, reallocate funds back into what we call the core; those things that really make a difference for our customers. That's where the initiatives of Lean IT come in. It asks the questions, what are those programs and projects that we can do that enable us to automate, create self-serve, go to the cloud, and what are the things that will help us be leaner, so that we can resource allocate back into those things that will make us core and value differentiated by our customers?

The Laureate: How do you take that leadership forward and create that alignment so you can serve those customer needs and concentrate on the core values that differentiate you?

Lee: At Intuit the CIO job is structured a little bit differently. There's about 50% of my organization that serves the internal customer, or the employees. Serve, meaning we deliver process and technology solutions for employees to do their jobs better, whether it's a help desk on the desktops, whether it's using enterprise applications on which Intuit transacts its business in, for example, the call center or finance organization. There's another half of my organization that delivers for the end customer, because we have to keep these customer-facing products up and available, and what I call, 'always on' when the customers need them.

Let's take the Turbo Tax online product. The application itself is developed by the business unit, but they rely on me heavily to make sure that it is always on and highly available.

So having that is both a wonderful challenge and in some regards a curse. My job would be enormously easier if I just enabled the internal customers. But because I have both internal and external customers, it makes my job that much more fun. It is about making sure I have the right portfolio management capabilities to deliver for all those customers, and it takes very much strong tops-down prioritization and leadership to make it all happen.

I know it's a cliché to say you want to be close to the business, and have that business unit partnership, but at Intuit I really mean that. As a prior general manager, I knew how much I depended on IT to deliver for my customers. So one of the first things that I did when I became the CIO was to put these business unit IT functions and roles into my organization, and I'm running IT like a business. I have what I call product managers that sit with each of the business units and are double solid lines to the general manager and me. Each internal product manager's job is to determine how best to execute the business unit strategy through the usage of technology and infrastructure. So I have groups of product managers. Then I have a group of what we call product development leaders that deliver the technology to enable the business outcome. I have a product development leader in the enterprise applications space, in the infrastructure space, and in the business intelligence space. Finally, I have a service delivery leader to ensure we deliver the services for our internal and external customers for my business called Intuit. That organizational structure enables me to align to each business unit and functional group alignment and then from there I drive a rigorous and transparent process to make sure we prioritize that work that we do, to make sure we can adequately allocate to the biggest levers that deliver for Intuit as a whole.

The Laureate: That's ingenious, but it sounds like what they brought you in to design.

Lee: Yes, I am sure many other companies have similar varieties of flavors of that, but it's very critical for me to have that strong alignment of each of the business units because we are business-centric at Intuit. These product managers spend 90% of the time with that general manager and his staff. That's more time than they spend with me. They play this hybrid role so that I get a pulse of all the things that need to happen for each of the business units, and that we get the transparency across the two teams. Having that hybrid role again, is a hard skill set to find, but something that I think is critical to our success, and critical to ensuring that we truly do have that business unit and IT partnership. Particularly in a software as a service (SaaS) model now, the lines between where a product development and an IT role begins and ends have become so very blurred. That's part of the

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transforming that I am putting IT through right now. In this shrink-wrapped software world it was very easy to say, 'Okay business unit your product development team should write a bunch of code, put it on a disk and we'll ship it out to the supply chain.' In the SaaS world it's very, very different. Where does the business unit product development person begin and end, and where do you say the IT person begins and ends?

We house these war rooms during the last two to three weeks of peak (tax season) activity. In the first two weeks of April, before April 15th, we man a cross-functional team to ensure that every customer has a wonderful experience using our products and that our products and services are always on. I can now close my eyes and attend the war rooms, and I would not know what function is what, and who is from what function. And I think that is the beauty of this business unit, this IT partnership that we have developed. It's having that partnership coupled with wonderful sets of technologies that enable us to keep these products always on and highly available. That's our secret sauce.

The Laureate: Ginny, in closing I want to get your perspective on what role technology can play in enhancing life for future generations. We sit here in Silicon Valley where ideas for the future become valuable reality.

Lee: I think in terms of technology enhancing life for humankind, the sky's the limit. The technology has changed so rapidly. We could use that technology to bring down the borders so we can connect and learn from each other. Not just business to business, but more importantly, globally. If I look at the technology that's out there, you could access anything, anywhere, any time.

I started with Intuit in 1996. That was just when the Internet started to come about. I can't imagine my life without the Internet today. I look at my children. My daughter is 9. My son is 5. They can't imagine life without a computer. I compare that to my father who is in his late 70s, and he's never even opened a computer. That's how quickly this technology is changing.

When I think about all the social things that come out, and what I mean by social, the technologies that enable me to connect with others globally. It's phenomenal! Gen-Y'ers are learning to grow up in this and don't know anything other than this. It's phenomenal! So if we can harness all of that into something that makes—and I know this sounds very lofty—but harness it into something that makes the world a better place because we're creating better things and because we're learning from each other, that is great. Then the variation across the globe will start to reduce, because right now we have a fair amount of variation. Being in the heartbeat of Silicon Valley I am skewed towards the far right. But if I think about the things that are out there, iTunes, and how they are changing music; the iPhones, the PDAs where you can connect anywhere, any time; it's truly outstanding. So to the extent that we can continue to leverage technology to bring the barriers down, to reduce the variation across the globe, it'll be a far better place in the future.

The Laureate: Ginny Lee, thank you very much for this interview and for participating in The Computerworld Honors Program.

Lee: Thank you, it is both an honor and a privilege to be part of this program.

THE LEADERSHIP AWARDS

RECIPIENTS: 1990 – 2008

2008

MIKE LAZARIDIS, President & Co-Chief Executive Officer, Research In Motion
The Morgan Stanley Leadership Award for Global Commerce

JOHN WHITE, Head of Manufacturing, RBS Americas, The Royal Bank of Scotland
The EMC Information Leadership Award

RICHARD WILLIAMS, Vice President & Group CIO, AstraZeneca
The IBM Global Public Sector Innovation Excellence Leadership Award

2007

LAURA E. CAMPBELL, Associate Librarian for Strategic Initiatives, Library of Congress
The EMC Information Leadership Award

JOHN W. THOMPSON, Chairman of the Board & CEO, Symantec Corporation
The Morgan Stanley Leadership Award for Global Commerce

MICHAEL R. BLOOMBERG, Mayor, City of New York
The IBM Global Public Sector Innovation Excellence Leadership Award

2006

LINDA M. DILLMAN, Executive Vice President of Risk Management & Benefits Administration, Wal-Mart Stores
The EMC Information Leadership Award

HECTOR DE J. RUIZ, PH.D., Chairman & Chief Executive Officer, Advanced Micro Devices
The Morgan Stanley Leadership Award for Global Commerce

2005

MATTHEW J. SZULIK, Chairman, Chief Executive Officer & President, Red Hat
The Morgan Stanley Leadership Award for Global Commerce

RALPH SZYGENDA, Group Vice President & Chief Information Officer, General Motors
The EMC Information Leadership Award

2004

JOSEPH M. TUCCI, President and Chief Operating Officer, EMC Corporation
Morgan Stanley Leadership Award for Global Commerce

JOHN HAMMERGREN, Chairman and Chief Executive Officer, McKesson Corporation
Cap Gemini Ernst & Young Leadership Award for Global Integration

KENNETH D. LEWIS, Chief Executive Officer, Bank of America
The EMC Information Leadership Award

2003

JOE FOREHAND, Chairman and Chief Executive Officer, Accenture
Morgan Stanley Leadership Award for Global Commerce

PAUL OTELLINI, President and Chief Operating Officer, Intel Corporation
Morgan Stanley Leadership Award for Global Commerce

JEFF HAWKINS, Co-Founder, Chairman and Chief Product Officer, Handspring
J.D. Edwards Leadership Award for Collaborative Innovation

CRAIG BARRETT, Chief Executive Officer, Intel Corporation
Cap Gemini Ernst & Young Leadership Award for Global Integration

LINUS TORVALDS, Software Engineer, Transmeta Corporation, and Creator of Linux
Cap Gemini Ernst & Young Leadership Award for Global Integration

J. CRAIG VENTER, President and Chairman, The Institute for Geonomic Research
EMC Information Leadership Award

2002

CRAIG CONWAY, President & Chief Executive Officer, PeopleSoft, Inc.
Cap Gemini Ernst & Young Leadership Award for Global Integration

EDWARD C. JOHNSON 3D, Chairman of the Board and Chief Executive Officer, Fidelity Investments
EMC Information Leadership Award

VINTON G. CERF, SR., Vice President of Internet Architecture & Technology, MCI
J. D. Edwards Leadership Award for Collaborative Innovation

STEVE BALMER, Chief Executive Officer, Microsoft Corporation
Morgan Stanley Leadership Award for Global Commerce

2001

TIM BERNERS-LEE, Chair, MIT Laboratory for Computer Science, Director, W3C
Cap Gemini Ernst & Young Leadership Award for Global Integration

RAY LANE, General Partner, Kleiner, Perkins, Caulfield & Byers
J.D. Edwards Leadership Award for Collaborative Innovation

STRATTON SCLAVOS, Chief Executive Officer, VeriSign Inc.
Morgan Stanley Leadership Award for Global Commerce

THE LEADERSHIP AWARDS

RECIPIENTS: 1990 – 2008

2000

BILL BASS, Senior Vice President, e-Commerce & International, Lands' End
eLoyalty Award for Leadership in the Relationship Revolution

STEVE CASE, Chairman, AOL Time Warner
Morgan Stanley Leadership Award for Global Commerce

CARLY FIORINA, President & Chief Executive Officer, Hewlett-Packard
Cap Gemini Ernst & Young Leadership Award for Global Integration

MAX HOPPER, Principal, Max D. Hopper Associates
J.D. Edwards Leadership Award for Collaborative Innovation

GORDON MOORE, Chairman Emeritus, Intel
PricewaterhouseCoopers Award for Lifetime Achievement

ANN VESPERMAN OLSON, Vice President, Customer Service, Lands' End
eLoyalty Award for Leadership in the Relationship Revolution

1999

ANDREAS BECHTOLSHIEM, Vice President of Gigabit Switching Group, Cisco Systems
MCI WorldCom Leadership Award for Innovation

JOHN CHAMBERS, Chief Executive Officer, Cisco Systems
PricewaterhouseCoopers Award for Lifetime Achievement

MICHAEL DELL, Chairman & Chief Executive Officer, Dell Computer Corporation
Morgan Stanley Leadership Award for Global Commerce

JOHN GAGE, Director, Science Office, Sun Microsystems
Toshiba America Leadership Award for Education

IRWIN MARK JACOBS, Chairman and Chief Executive Officer, Qualcomm Inc.
Cap Gemini Ernst & Young Leadership Award for Global Integration

BILL JOY, Chief Scientist & Co-Founder, Sun Microsystems
MCI WorldCom Leadership Award for Innovation

THE LEADERSHIP AWARDS

RECIPIENTS: 1990 – 2008

1998

SCOTT ECKERT, Dell

Technology Solutions Company/Relationship Revolution 21st Century Pioneer Award

JAY W. FORRESTER, Sloan School of Management, MIT
PricewaterhouseCoopers Award for Lifetime Achievement

ALBERT GORE, JR., Vice President,
United States of America
Toshiba America Leadership Award for Education

SCOTT MCNEALY, Chairman & Chief Executive
Officer, Sun Microsystems, Inc.
*Cap Gemini Ernst & Young Leadership Award for Global
Integration*

ROBERT METCALFE, Founder, 3COM
MCI WorldCom Leadership Award for Innovation

JOHN A. POPL, Northwestern University
Silicon Graphics Inc. Leadership Award for Breakthrough Science

1997

ANDREW GROVE, Former Chairman and Chief
Executive Officer, Intel Corporation
Price Waterhouse Leadership Award for Lifetime Achievement

FREDERICK HAUSHEER, Founder, Chairman and
Chief Executive Officer, BioNumerik Pharmaceuticals, Inc.
Silicon Graphics/Cray Leadership Award for Breakthrough Science

TIM BERNERS-LEE, Inventor of the World Wide
Web and Director, WWW Consortium, MIT
MCI Leadership Award for Innovation

SEYMOUR PAPERT, LEGO Professor of Learning
Research, MIT Media Lab
NEC Leadership Award for Education

HASSO PLATTNER, Co-founder, SAP AG
Ernst & Young Leadership Award for Global Integration

1996

GASTON CAPERTON, Former Governor of the State
of West Virginia
Zenith Data Systems Leadership Award for Education

VINTON CERF, Senior Vice President of Internet
Architecture and Engineering, MCI
MCI Leadership Award for Innovation

DAVID EVANS, Founder, Evans and Sutherland
Price Waterhouse Leadership Award for Lifetime Achievement

ROBERT KAHN, Founder and President,
Corporation for National Research Initiatives
SAIC Leadership Award for Global Integration

JOHN MCDONALD, Chairman, Department of
Anesthesiology, Ohio State University
Cray Research Leadership Award for Breakthrough Science

DON STREDNEY, Senior Research Scientist, Ohio
State University
Cray Research Leadership Award for Breakthrough Science

IVAN SUTHERLAND, Founder, Evans and Sutherland
Price Waterhouse Leadership Award for Lifetime Achievement

1995

MARC ANDREESEN, Co-founder, Netscape
Communications Corporation
SAIC Leadership Award for Global Integration

C. GORDON BELL, Minicomputer Developer
Price Waterhouse Leadership Award for Lifetime Achievement

WILLIAM R. HEWLETT, Co-founder,
Hewlett-Packard Company
MCI Leadership Award for Innovation

J. ANDREW MCCAMMON, Pioneer in Theoretical
and Computational Chemistry, University of San Diego
Cray Research Leadership Award for Breakthrough Science

DAVID PACKARD, Co-founder,
Hewlett-Packard Company
Price Waterhouse Leadership Award for Lifetime Achievement

LINDA ROBERTS, Director, Office of Educational
Technology, U.S. Department of Education
Zenith Data Systems Leadership Award for Education

THE LEADERSHIP AWARDS

RECIPIENTS: 1990 – 2008

1994

SEYMOUR CRAY, Founder, Cray Research
MCI Leadership Award for Innovation

LAWRENCE J. ELLISON, Co-founder, Chairman
and Chief Executive Officer, Oracle Corporation
SAIC Leadership Award for Global Integration

DOUGLAS ENGLEBART, President, Bootstrap
Institute, Stanford University
Price Waterhouse Leadership Award for Lifetime Achievement

DAVID MCQUEEN, Professor, Courant Institute of
Mathematical Sciences, New York University
Cray Research Leadership Award for Breakthrough Science

INABETH MILLER, Vice President of Affiliate
Programs, Curriculum Television Corporation
*Computerworld Smithsonian/C.E. Stone Foundation Leadership
Award for Education*

CHARLES PESKIN, Professor, Courant Institute
of Mathematical Sciences, New York University
Cray Research Leadership Award for Breakthrough Science

1993

SHARON MCCOY BELL, Director of the
Information Technology Department, New Orleans
Public School System
Computerworld Smithsonian Leadership Award for Education

ROBERT CHERVIN, Naval Postgraduate School
Cray Research Leadership Award for Breakthrough Science

WILLIAM H. GATES, Chairman and Chief Executive
Officer, Microsoft Corporation
Price Waterhouse Award for Lifetime Achievement

R.E. TURNER, Founding Chairman and President,
Turner Broadcasting System, Inc.
SAIC Leadership Award for Global Integration

ALBERT SEMTNER, National Center for
Atmospheric Research
Cray Research Leadership Award for Breakthrough Science

GORDON E. MOORE, Chairman of the Board,
Intel Corporation
MCI Leadership Award for Innovation

1992

KENNETH H. OLSEN, Founder, Digital Equipment
Corporation
MCI Leadership Award for Innovation

RONALD K. THORNTON, Director of the Center
for Science and Mathematics Teaching, Tufts University
Computerworld Smithsonian Leadership Award for Education

THOMAS J. WATSON, JR., Chairman, IBM
Corporation
Price Waterhouse Award for Lifetime Achievement

1991

ERICH BLOCH, Distinguished Fellow,
Council on Competitiveness
MCI Leadership Award for Innovation

GAIL MORSE, Christa McAuliffe Educator and
Science Teacher, Zebulon Middle School
Siemens Leadership Award for Education

ROBERT N. NOYCE, Co-founder, Fairchild and Intel
Corporation
Price Waterhouse Leadership Award for Lifetime Achievement

1990

H. ROSS PEROT, Founder, EDS
Price Waterhouse Leadership Award for Lifetime Achievement

ROBERT TINKER, Developer of the Technical
Education Research Center
Siemens Leadership Award for Education

THE COMPUTERWORLD
HONORS PROGRAM
2009



FEATURED CASE STUDIES



Onehen.org

A CASE STUDY PRESENTED BY:

One Hen, Inc.



INTRODUCTORY OVERVIEW

The goal of Onehen.org is to harness the power of interactive media to create can-do and compassion in kids. Currently, kids spend a lot of time online, but most charity sites are not engaging them. In fact, approximately, 87% of kids aged 6-14 are playing games online. On average, they spend almost an hour online each day, and a third of that time is spent on computer/Internet games. Many of these kids live in poverty—e.g. approximately 20% of U.S. 6-14-year olds—but to date few charities are meeting kids online and inspiring them with web activities geared to engage them in acts of compassion and giving. Even fewer websites are empowering disadvantaged kids.

The One Hen vision is “To teach Microfinance to Harness Kids as a Force of Hope in the World” by using stories and interactive games to introduce children to entrepreneurship, and helping them to become financially responsible, global citizens. This vision was the basis for the creation of Onehen.org, an interactive web site based on the popular new children’s book *One Hen: How One Small Loan Made a Big Difference*. The One Hen team believes that children have the opportunity to help create change. Onehen.org allows kids to partake in the world of microfinance, teaching the lesson that everyone, even children, can make a difference. By playing games on this web site children can learn global responsibility, and even earn money that will transform the lives of the poorest of the world’s poor.

Since its publication in March 2008, *One Hen* has evolved from an inspirational story to a service-learning tool integrated with www.onehen.org as text and technology curriculum. Teachers, librarians and after-school programs leaders in the U.S., Canada and U.K. are using *One Hen* the book and [onehen.org](http://www.onehen.org) to teach math, social studies, reading, world resources and more through lenses of financial literacy, youth entrepreneurship, youth philanthropy and global citizenship. They are developing and sharing lessons, plans and activities across the world through [onehen.org](http://www.onehen.org)’s “Teacher & Librarian” tab, and participating in periodic focus groups to help develop the site in ways that further classroom goals. *One Hen* curriculum, stories and activities strive to teach kids commerce with compassion, and the lesson that one small act can make a huge difference.

Through the book and the *One Hen* game web site, kids can learn about entrepreneurship and finance, and can participate directly in microlending with real Kojos around the world (Koyo is the book’s protagonist). By training trainers, networks of teachers and youth organizers to adopt and adapt the *One Hen* curriculum and the story of Koyo across multiple subjects, we will inspire more children of means to compassion, and reach more disadvantaged children to instill the “can-do” spirit and plant the seeds of entrepreneurship. If just .5% of at-risk kids in the U.S. developed an entrepreneurial vision for their lives that kept them in school and out of jail we could save U.S. society \$2-4 billion. We also aim to inspire more kids to youth philanthropy (influencing a \$60 billion estimated pocket money market for 6-14-year-olds in U.S.). If even .5% of that market redirected to microfinance, that would generate \$300 million in small loans and help some 1.5 million of an estimated 600 million unfunded entrepreneurs worldwide.

THE IMPORTANCE OF TECHNOLOGY

The integration of the *One Hen* book into [Onehen.org](http://www.onehen.org) provides the first and only high quality educational and interactive microfinance for kids website. The text can be read on two different levels with games on multiple levels to match. The book has rainbow text on each spread for read-alouds to pre-schoolers and for early readers, as well as full text bars for ages 7 and up. The games on [onehen.org](http://www.onehen.org) have three levels of difficulty to match the age levels in the book. [Onehen.org](http://www.onehen.org) is an educational and engaging site purposed to create values—develop can-do and compassion in kids. The website uses gaming to draw kids into the act of microfinance, developing their compassion for those in need (loan recipients) and their own sense of can-do, based on the belief that starting small can effect great, positive change.

They earn “beads” for completing games such as navigating a maze to Koyo’s village, matching illustrations from the text, completing a quiz on the book, and catching virtual fish from a West African fishing boat (a pirogue). Then, they are asked if they would like to donate their beads to an entrepreneur on the site’s virtual market, and trigger a real loan to a real African entrepreneur. Opportunity International, a Chicago-based microfinance nonprofit, accumulates up to \$100 daily in bead loans to send to the field as kids give their beads on the site. Real stories of entrepreneurs flip forward on the site as the kids invest their beads. This allows the kids to actually see the effect a small loan has on the life of a poor entrepreneur. There is also a video of the life of the real Koyo, Ghanaian poultry farmer Kwabena Darko, and a photo/video library with profiles of microentrepreneurs from around the world. These resources are donated by *One Hen* partners at ACCION, Opportunity, WCOCU and Grameen Foundation.

This interactive education component—the relationship of the site’s content and games to microfinance itself—sets [onehen.org](http://www.onehen.org) apart from other charity sites. For example, charity site www.freerice.com offers a game (a vocab quiz) that is fun and supports an excellent cause (sending a grain of rice to a needy country for every correct answer), but does not educate on the cause per se, world hunger. [Onehen.org](http://www.onehen.org) provides a “sticky” text and technology curriculum to transform classroom learning, as our core bead funder, The Jenzabar Foundation, highlights the opportunity to provide *One Hen* training at teacher colleges where Jenzabar Inc. provides software solutions. Jenzabar helped *One Hen* Inc. see the opportunity of bringing interactivity into classrooms as a way of teaching today’s Internet-savvy kids. Micro-entrepreneurship is something that any child who has run a lemonade stand can understand. Using interactive technology to teach and involve kids in poverty alleviation and developing world citizens is the overall goal of the *One Hen* mission. Watch a video on [onehen.org](http://www.onehen.org) website at the youtube link: www.youtube.com/watch?v=qc4y-krRB3k

BENEFITS

Eight months after our site launch, we are on track with our vision to create community around the book, *One Hen*, and [onehen.org](http://www.onehen.org) in an effort to make microfinance relevant to youth, while providing educational resources to families, teachers and librarians, in the cause of poverty alleviation. Votes of confidence have come from pioneers in poverty alleviation, including Nobel Laureate Muhammad Yunus, founder of Grameen Bank, and Alma Powell, the wife of General Colin Powell and founder of America’s Promise. The *OneHen.org* curriculum is the first to incorporate concepts of microfinance and

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FEATURED CASE STUDY

PRESENTED BY: ONE HEN, INC.

entrepreneurship, while teaching children to become financially responsible, global citizens. Teachers, librarians and after-school programs leaders in the U.S., Canada and U.K. are using One Hen the book and onehen.org to teach math, social studies, reading, world resources and more through the lenses of financial literacy, youth entrepreneurship, youth philanthropy and global citizenship. They are developing and sharing lessons plans and activities across the world through onehen.org's "Teacher & Librarian" tab.

Onehen.org is providing an online space for teachers and children to collaborate on ideas for microfinancing not only in the U.S. but also in the U.K. and Germany with the recent launch of <http://www.onehen.org.uk> and a mirror site in Germany where the book is also currently being translated. There is also interest from China. Onehen.org has received traffic from more than 40 countries to date, including requests for extended curricula from Ghana, Italy, London and Spain. Microfinance is a relatively new concept to many, but it is something that any one who has run a lemonade stand can understand. One Hen is the first curriculum of its kind to harness the power of interactive media to create can-do and compassion in kids, and be able to share it globally.

Examples of school adoption and engagement with One Hen include:

- Wellesley, MA, elementary schools introduced One Hen/onehen.org into their social studies unit on Ghana for first graders.
- JFK School in Canton, MA, developed a full 4th grade curriculum in math, social studies, science and reading for fall 2008 using onehen.org.
- City Year Boston and City Year New York City are training their staffs to introduce the curriculum as after-school programming.
- Teach for America is profiling the book/site in their newsletters to reach teachers across the country.
- Heritage School in Texas introduced One Hen across all grades.
- A Gresham, Oregon, school introduced the book and website across all grades, and wrote a song about Kojo.
- Several schools in Toronto are introducing One Hen as their "Be the Change" curriculum.
- Jenzabar plans to introduce the text/technology resources to teacher colleges, starting with Bank St. College in New York City. There is a tab of resources on the site for teachers and librarians, which now holds lesson plans across multiple subjects that City Year helped us develop, including a number of classroom activities for older and younger readers, a classroom poster developed by Kids Can Press, and a toolkit for classroom fundraisers developed by Opportunity International.

Our newest site feature is a "Share Your One Hen Experience" section, which lets school children post their thoughts and experiences, share their learning, and help each other. Examples of some of our postings from children and teachers are included below:

- Kristi, a teacher at the Buckman School in Portland Oregon: Dear Kojo, thank you for sharing your story. My students are learning about ways we can make a difference—even as kids. Your book was a great place to start learning about ways we can help the world. We also love the website!

FEATURED CASE STUDY

PRESENTED BY: ONE HEN, INC.

- Ernesto, grade 4, Mexico: Dear Kojo, I like your book of One Hen. We know you're for real. I like your family. Our classroom read your book, it's cool that you know how to speak African Language, you're so awesome.
- Heidi, grade 4 student, Gresham, Oregon: Dear Kojo, when my teacher read the class the book One Hen, I thought that it was one of the best books I have ever read! I thought the story itself was great, not to mention the experience. I loved the book, the website, and all of the pictures! You are a great inspiration and I hope I will learn from what you did. Love, Heidi.
- Rachel: This website is really neat, I love the fish game! The fact that it donates beads/money makes it even sweeter! There is so much care and effort put into onehen.org. Keep donating!
- Chase, grade 3, Sicily: I really liked the the story One Hen.
- Issy Henderson, grade 3, Ho-Ho-Kus New Jersey: I loved this book because it taught me so much about Ghana! It felt like I was right beside the story reader every time he or she was reading it to me. Thank you so much.
- Michelle Hewitt: Hi, as a school we went onto the One Hen website today to earn beads at the start of our own microfinancing project. We earned over 13,000 beads. I read the book and passed it on to my colleagues. Every class then had the book read to them on Monday, which is also Harmony Day in our school district and dedicated to diversity. I also have some fundraising going on with my leadership students, and then they're going to do some of their own microfinancing, perhaps through Kiva.

ORIGINALITY

Onehen.org is the first educational site to provide a service-learning tool integrated with text and technology curriculum. By bringing this multilevel interactivity approach into classrooms, One Hen has put itself in the vanguard of teaching today's Internet-savvy kids the value of compassion by integrating a Learn, Play, Make a Difference concept. Learn: Children learn the story of Kojo, a Ghanaian boy who gets a small loan and takes flight as an entrepreneur. Play: Kids play interactive games and earn beads which they can donate toward loans to micro-entrepreneurs in a virtual market, advancing each entrepreneur's story. Make a difference: Each bead loan triggers real loans to real micro-entrepreneurs (via our field partners) that make a difference in the real fight against poverty.

DIFFICULTY

The largest obstacles faced by One Hen have been funding resources and a designated management team. To date, onehen.org has been created and run by an amazing volunteer team of 40-plus young professionals from Morgan Stanley, Bain, ACCION, Opportunity International, Bridgespan, Inc., City Year, and Sapient. Babson and Bentley Colleges committed to creating content and marketing the site. At the encouragement of advisors, a management team has been named and a business plan to accelerate roll out onehen.org across North American schools is being developed. One Hen Inc. was incorporated in January 2009 as a separate tax-exempt charity under 501 (c) (3) status. Previously, One Hen was an

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FEATURED CASE STUDY

PRESENTED BY: ONE HEN, INC.

initiative of ARCA Partners foundation (also tax exempt). To date, funding has been provided through capacity building grants from Shlumberger's SEED Foundation. The \$50,000 bead loan funding provided by Jenzabar and a number of individual donors is administered via Opportunity International's One Hen fund, and released as real loans to African micro-entrepreneurs when kids donate their beads on the website. Funding resources for bead loans and for the business plan will be a continuing challenge.

SUCCESS

Onehen.org has provided the first youth educational activities and content for educators as well as the Microfinance (MFI) community. Onehen.org has created MFI partnerships to share the One Hen message. Partnerships are in place with Opportunity International (site hosting, media outreach, profiles, video, school fundraiser toolkit) ACCION (resource pages, social marketing, profiles), Grameen Foundation (profiles), KIVA (resource page, curriculum, school fundraising toolkit), Campus KIVA, Kiva High School, Ashoka Youth Ventures (resource page), Kids Can Press (school curriculum), City Year (lesson plan), Teach for America (newsletter), Womens World Banking (resource page and home page story), and World Council of Credit Unions (resource page). In addition, ACCION, FINCA and Microplace all are planning One Hen Funds, and Microloan USA is recruiting college volunteers to present One Hen curriculum in middle and elementary schools.

One Hen's efforts to create community around the book, One Hen, and the onehen.org site, and to spread the teaching of microfinance and entrepreneurship to youth and educators continues to grow and reach across the U.S., U.K., Canada and over 40 other countries. There has also been adoption of curriculum by schools in Wellesley MA, Canton, MA, Waltham, MA, Westborough, MA, Boston, New York City, Dallas, Chester, UK, Menlo Park, CA, Gresham, Oregon, Toronto and Honduras. In addition, the Wellesley Rotary is funding 100 book scholarships in 2009 to western suburban and urban Boston schools, with 17 books already donated in Wellesley and downtown Boston.

Outreach to a dozen top teacher curriculum sites is being utilized. These include curriki.org, wikipedia, Kids Sites, KidZui, Kids Know it Network, Elementary-teacher-resources.com, PBS Teachers, TheTeachersCorner.net, Busy Teachers Café, Sites for Teachers, and KIVA Friends and KIVA School-to-School. As of Feb 9, 2009 there were 24,300 search results on Google for the book One Hen: How One Small Loan Made a Big Difference, and 32,600 for www.onehen.org. Perhaps more striking than the spontaneous rise in site traffic is the quality of comments that kids using the site are contributing to our "Share Your One Hen Experience" space. We are hearing that kids have really internalized the message of giving, are feeling empowered that they can do something themselves and, in many cases, are hosting kid-led fundraisers at their schools. In March, with the launch of the standalone virtual bead game, teacher/parent blog, Onehen newsletter and posting of videos of school events, we expect teachers, students and supporters to grow quickly both through viral and targeted messaging and marketing. ■

FEATURED CASE STUDY

Fly-Away Emergency VSAT and Enterprise Management Systems

A CASE STUDY PRESENTED BY:

UNICEF



INTRODUCTORY OVERVIEW

Created in 1946, UNICEF works in 190 countries through country programs and national committees, and employs approximately 10,000 staff members. UNICEF is mandated by the United Nations General Assembly to advocate for the protection of children's rights, to help meet their basic needs and to expand their opportunities to reach their full potential. The organization's purpose is to work with others to overcome the obstacles that poverty, violence, disease and discrimination place in a child's path. To achieve sustainable human development goals for the world's children, UNICEF must assure operational excellence with limited budgets in difficult, unpredictable and often dangerous field conditions.

The Project: UNICEF Fly-Away VSAT and Enterprise Management Systems, is core to UNICEF's mandate of responding to the humanitarian needs of children in emergency situations, whether natural or man-made. Responding to high-level emergencies in the early 2000s, and the increasing need for humanitarian workers to have rapid access to e-mail and applications, UNICEF pioneered the development of a cost-effective fly-away Emergency VSAT (satellite communications) kit, or office-in-a-box unit, now deployable in less than four hours anywhere in the world. The high availability and reliability of the solution is sustained by an Enterprise Management System (EMS), which provides automated monitoring and centralized management.

Today, UNICEF can rapidly set up, restore or scale up field offices and operational and communications infrastructures. Thus equipped, the organization has been able to deliver tangible results for children such as:

- Delivering emergency water kits to 5,000 families during the 2007 floods in the Democratic People's Republic of Korea
- Building 7,000 schools and hiring 30,000 teachers in Afghanistan
- Distributing 4,623 School-in-a-box kits in Liberia benefiting approximately 334,000 children
- Executing a campaign that delivered 13 million vaccine doses in Kenya
- Providing 40 per cent of the world's doses of children's vaccines
- Providing interagency connectivity allowing other agencies (WFP, HCR, WHO, World Vision, etc.) to implement their programs for children and other beneficiaries

Continued

FEATURED CASE STUDY

PRESENTED BY: UNICEF

THE IMPORTANCE OF TECHNOLOGY

UNICEF's IT is a critical enabler to its humanitarian programs, and a lifeline for children in need. By exploiting advanced information technologies, UNICEF has improved the services provided to vulnerable populations in some of the world's most challenging environments, including those plagued by natural and man-made disasters. In order to enable the effective delivery of humanitarian assistance, UNICEF must have access to programmatic, budgetary, supply, and human resource data via reliable telecommunications services. In emergency conditions, information and communication infrastructures must be available immediately, regardless of location. The first emergency communications kit comprised a small 64 kbps Inmarsat M4 mobile satellite terminal, laptop, radio and printer, which allowed initial responders to begin work immediately assessing needs and reporting their findings. However, the solution had its limitations. Low bandwidth allowed only one person to connect at a time, and the cost of satellite connectivity was high, running at nearly \$5.00 per minute.

The phase-one kit has since been upgraded to take advantage of the latest mobile satellite technologies such as the Inmarsat BGAN, which has higher bandwidth. Key telecommunications requirements for the second phase of emergency response included:

- A small and lightweight VSAT-based satellite terminal offering easy transport
- Broadband connectivity to support many users simultaneously
- Cost-effective and cost-predictable operation over the medium-to-long-term
- Ease of set-up and ongoing management
- The sharing of possibilities with sister UN agencies
- Ease of dismounting and re-use after emergencies are over

Solution: In 2003, UNICEF signed a supply contract with a global VSAT service provider. Within months, a number of UNICEF country offices were benefiting from fixed VSAT services, fixed-cost bandwidth and, in most locations, Voice over Internet Protocol (VoIP) services. UNICEF then worked with the satellite service provider to develop a quick-deploy—or fly-away—VSAT remote station solution. For ease of logistics, the fly-away VSAT kit was designed to be as small as technically feasible, with a modular or umbrella antenna and electrical equipment specially protected from water and impact. Likewise, the data networking components were chosen and assembled for ease of transportation and minimal space requirements. Through donor support, an upgraded version of the office-in-a-box application solution was created. In addition, UNICEF leveraged its existing EMS, which was built on HP management software, to monitor and optimize the health of the VSAT satellite communications system and office-in-a-box applications.

UNICEF's EMS provides a central point of control for managing all IT-powered business operations. In this way it reduces the need for highly skilled technical staff on location. The quick-deploy VSAT solution offers all the services a standard UNICEF field office would normally utilize. As the emergency situation scales down or shifts into recovery phase, the quick-deploy kit is replaced with a regular VSAT, and the fly-away kit is returned to UNICEF's warehouse for maintenance and preparation for another emergency.

FEATURED CASE STUDY

PRESENTED BY: UNICEF

To ensure that the fly-away VSAT is deployed in a safe and rapid manner by trained individuals, UNICEF, with donor funding, embarked on an ambitious training program, implementing emergency telecommunications training workshops in a number of countries. UNICEF invited candidates from a range of UN agencies and non-governmental organization (NGO) partners, including stand-by response partners such as the Swedish Rescue Services Agency (SRSA), Norwegian Refugee Council, Red-R of Australia and others. Since 2006, over 110 information and communication technologies professionals (ICT) from UNICEF, its sister organizations, and partners have been trained as emergency telecommunication responders, with many individuals certified in VSAT installation. The kit is constantly being refined with lessons learned from field use and the availability of new technologies.

BENEFITS

The UNICEF Fly-Away VSAT and EMS solutions, which are deployable—i.e. unpacked, installed and operational—in less than four hours, allow UNICEF and its partners to quickly benefit from all essential ICT solutions that an emergency field responder requires for efficient and secure operation in any emergency location, ensuring the best possible field project implementation. This directly impacts the women, children and other vulnerable populations that receive UNICEF assistance. UNICEF's fly-away technology has been used in many major emergencies, including the 2004 tsunami, the Kashmir earthquake, unrest in Haiti, and the Kenyan election violence. Many of these were inter-agency environments. The fly-away VSAT kit, with its fixed and low-recurring usage cost, allows an operation to quickly migrate from the initial and more rapidly deployable—but extremely high usage-cost mobile solutions—such as Inmarsat BGAN-based solutions. This has the direct benefit of reducing the operational cost of an emergency intervention. It also facilitates the implementation of services in operational areas where otherwise-high costs may have prohibited such interventions. For example, the fly-away VSAT and its services were deployed to five locations in the Kashmir earthquake region, coverage that previously would have been prohibited by high usage costs.

During one week in August 2007, torrential rains battered nine provinces in the Democratic People's Republic of Korea, including the capital city, Pyongyang. By the time flood waters receded, at least 454 people were dead, 156 were missing, nearly 170,000 were displaced, and almost 1 million were directly affected. Many more people were subsequently touched by this cataclysm, as basic infrastructures such as schools, health centers and water supply networks were in disarray.

In its role as emergency cluster leader in nutrition, water, sanitation/hygiene, and education, UNICEF utilized the fly-away VSAT and EMS to meet its emergency commitments, and within hours provided the information and communication infrastructure to its staff, the Korean government, the World Health Organization and other relief agencies needed to deliver emergency services. This included the quick delivery of medicine kits to affected hospitals and health centers, the provision of extra nutritional supplements to women and children, the delivery of emergency water kits to 5,000 families, and a supply of chlorine and water pumps to the flood ravaged areas. UNICEF and the Ministry of Education also joined forces to reopen schools. The immediate and ongoing response to the floods was guided by

Continued

FEATURED CASE STUDY

PRESENTED BY: UNICEF

UNICEF's Core Commitments for Children in Emergencies. The Core Commitments outline the minimum requirements for responding—within 48 hours—to situations of sudden or chronic instability in seven main areas:

- Assessment and advocacy
- Health
- Nutrition
- Water
- Sanitation
- Hygiene
- Child protection
- Education
- HIV and AIDS

ORIGINALITY

UNICEF consistently seeks to take advantage of the most advanced, lightweight and efficient connectivity solutions to ensure flexible, rapid and cost-effective delivery of services in the complex emergency arena. In the initial phase of an emergency, where the lack of logistics and clarity on an operational scale often prevent progress, and a geographical impact is frequently felt, mobile/portable-based satellite solutions such as Inmarsat BGAN are still typically required. These allow for quick impact and short-term operations. However, as operational needs ramp up to support the shipping and distribution of emergency supplies, the phase-one kit can be seamlessly upgraded with the fly-away VSAT. As the emergency situation evolves, the VSAT kit can be replaced with a less costly regular VSAT. This ability to seamlessly scale its response as operational and financial requirements dictate, makes UNICEF's approach especially functional and affordable. While the quick-deploy VSAT equipment is more costly than the standard fixed VSAT, it is 10 to 20 times less expensive than other similar satellite solutions on the market today. For example, its usage cost is 100 times less expensive than a comparative bandwidth offering using mobile satellite technology (such as Inmarsat BGAN).

At the same time, the solution is as reliable as its more costly counterparts and as any standard VSAT system, which assures high availability and continuity of emergency services. Also noteworthy is the solution's ease of deployment. Other similar VSAT satellite solutions are time-consuming and technically difficult to install. The fly-away VSAT pioneered by UNICEF can be set up quickly and easily by local staff with moderate telecommunications knowledge. As a result, UNICEF is freed from reliance on highly-skilled telecommunications specialists who are often difficult to locate in emergency situations. The fly-away emergency VSAT has been so successful in the field that it is now used by UNICEF country and regional offices for primary connectivity. In addition, the fly-away VSAT is used for backup connectivity should a regular VSAT go down.

FEATURED CASE STUDY

PRESENTED BY: UNICEF

DIFFICULTY

In the first few days of an emergency, finding technical experts on location capable of installing a complex information and communications system can be difficult. To address this expertise issue, UNICEF designed the fly-away VSAT and office-in-a-box to be easier and faster to install than other solutions on the market. A central IT function supporting UNICEF's global operations uses HP management software to monitor and manage all IT-powered operations, including the fly-away VSAT kit. Again, this reduces the need for highly skilled technical experts at the emergency site. In addition, UNICEF trained over 110 ICT professionals from UNICEF, its sister organizations and partners as emergency telecommunications responders, with 30 individuals certified in VSAT installation.

Initially, the business side of UNICEF was not familiar with the importance of information technology in emergency response, nor did it immediately see the ways in which IT could contribute organizational and social value. Food, water, medicine, educational materials—these were the things the organization understood and focused on. Without a reliable information and communication infrastructure, UNICEF could not assess requirements, procure needed supplies, or deliver assistance to populations in need. The UNICEF ICT organization worked closely with the business over a nine-month period to win support for the fly-away VSAT. In the process, they also shifted perceptions within the organization by demonstrating how IT could deliver even stronger results for the world's children.

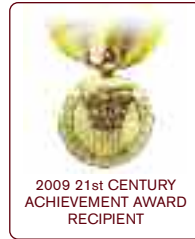
SUCCESS

As the lead agency in data communications for UN humanitarian responses, and as the supporter of its Core Commitments for Children in Emergencies, UNICEF has provided advanced wireless and emergency telecommunications training, built telecommunications infrastructure to support other agencies in emergencies, and to date has trained 110 staff members as ICT specialists. UNICEF, its sister agencies and partners embraced the fly-away VSAT almost immediately, as the solution proved itself in emergency situations time and time again. For example, the solution was demonstrated in emergency responses in Bangladesh, the Democratic Republic of the Congo, Mozambique and Pakistan. The project has been so successful, it is now a major means of connectivity for UNICEF's day-to-day operations. ■

TRANSCOM Regulating and Command Control Evacuation System TRAC2ES

A CASE STUDY PRESENTED BY:

United States Transportation Command, Distribution Systems Program Management Office



INTRODUCTORY OVERVIEW

When government agencies require strategic transportation, they rely on USTRANSCOM. A critical function of this U.S. military organization is patient evacuation, which is a complex, logistical challenge where timeliness is essential. TRAC2ES, an acronym for the TRANSCOM Regulating and Command and Control (C2) Evacuation System, is a unique and highly effective patient in-transit visibility system. The mission of the system is to combine transportation, logistics, and clinical decision elements into a seamless patient movement automated information system. It is a web-based system that matches sick or injured personnel to the optimal bed destination via the most expeditious transport, and tracks and coordinates their movement throughout the U.S. military's network of healthcare facilities worldwide.

Prior to the development of TRAC2ES, the transport of wounded and sick soldiers was often fraught with a multitude of errors and delays. Missteps during Operation Desert Storm highlighted the serious need for improved coordination of medical care for injured soldiers. Many of the wounded in that conflict were taken to the wrong hospital or sent to the wrong country. Patients who needed specialized care sometimes ended up in facilities that didn't provide that specialty. Often it was difficult to determine a patient's whereabouts. It was apparent that the patient-movement process needed to be much more efficient, which led to the implementation of TRAC2ES.

The first real-world test of TRAC2ES occurred immediately following the tragic events of September 11, 2001. Two months after initial fielding, this system was supporting Operation Enduring Freedom via fixed and deployed medical sites. TRAC2ES performed as designed in direct support of operations Enduring Freedom and Iraqi Freedom by providing 100 percent patient in-transit visibility enrooted for over 11,500 patients. Approximately 1,500 of these patient movements were Operation Iraqi Freedom battle injuries moved from USCENTCOM to USEUCOM. Today TRANSCOM's ability to move wounded forces with overwhelming speed and efficiency is unmatched. We have the ability to move a patient anywhere in the world in less than 24 hours.

THE IMPORTANCE OF TECHNOLOGY

TRAC2ES provides the capability to visualize, assess, and prioritize patient movement requirements, assign proper resources, and distribute relevant data needed to deliver patients efficiently. The system automates the processes of medical regulation (assignment of patients to suitable medical treatment facilities) and aeromedical evacuation during peace, war, and contingency operations. TRAC2ES

automates Global/Theater Patient Movement Requirements Center operations at HQ USTRANSCOM, HQ USPACOM, and HQ USEUCOM. The system replaces two legacy systems: the Defense Medical Regulating Information System, and the Automated Patient Evacuation System. These systems were not integrated and could not provide functionality required for an integral part of the Global Transportation Network (DoD's transportation automated information system) and the Theater Medical Information Program (DoD's deployable medical automated information system).

TRAC2ES supports the concept of focused logistics by fusing information, logistics, and transportation technologies to provide rapid medical regulation and patient evacuation during times of war and peace. It reduces logistics and enables a deployed force to be more efficient in protecting lives. When wounded soldiers require immediate medical attention, it is critically important to quickly determine their condition and move them into the transport system where they can be moved to the proper facility for treatment. Lives depend on this technology. The system consists of an Oracle database running WebFOCUS for business intelligence (BI) capabilities. The WebFOCUS data reporting and analysis tool provides leaders at all levels with decision support information affecting patient safety and movement efficiency. Operational decision support and post-event analysis now enhance patient outcomes and provide critical data that is used to diminish injury severity and improve treatment.

The system also provides critical reporting capabilities for information that goes all the way from senior command officers to the President and Congress. Reports can include data such as the number of patients and movements, the number of missions, and the costs. More detailed reports can follow the status of patients from the beginning of transport to the outcome of treatment and what has happened in the process. The goal is to provide good medical care, not simply move people around. The concern for quality of care and resources expended are the same as for any other healthcare facility. Approximately 2,500 users have access to the system, which provides three different domains through which to access personal, medical, and movement data.

Ad hoc reporting occurs through an interface that shields the user from the data but gives a visual means to determine what kinds of data they need for the report. Users select the records they need to look at, then extrapolate and chart the data. The visual interface builds a SQL query on the database. Users from a wide range of functions have access to the system, ranging from the patient movement clerk, whose mission it is to get the patient moved based on the doctors orders, to the doctors and nurses who determine the patient's eligibility to fly, to the supporting agency personnel who arrange the aircraft and determine when the flight will leave and where it is going. Crews waiting at the aircraft can access TRAC2ES to check the condition of patients and verify their arrival times. The TRANSCOM commander has access from anywhere through a global patient movement center where he/she can track movement and watch the mission as it unfolds. Timers built into the system analyze how long it takes from start to finish. TRAC2ES not only helps our operations to be effective and efficient, but also provides the critical metrics needed to make sure we are maintaining our goal of patient safety.

Continued

FEATURED CASE STUDY

PRESENTED BY: UNITED STATES TRANSPORTATION COMMAND,
DISTRIBUTION SYSTEMS PROGRAM MANAGEMENT OFFICE

BENEFITS

The patient's safety and quality of care is foremost in our mission. We are further developing a piece of the system that would manage safety issues and track the outcome of problems related to safety and quality of care. Travel time used to be our biggest limitation, but the new system provides data to all pertinent personnel, enabling them to assess the situation, get crews and aircraft moving, and get the patients where they need to be to save lives. Today we can move a burn patient from Iraq to the burn center in San Antonio in much less than 24 hours. TRAC2ES is capable of assessing and prioritizing requirements, assigning proper resources, and distributing relevant data in real time to efficiently deliver patients. The appropriate patient movement plan is critical to positive outcomes for sick and wounded warriors and involves several factors, such as patients' urgent medical needs, available facilities, in-transit visibility, and enterprise-wide cost and performance analytics. TRAC2ES ensures that USTRANSCOM will continue to provide an extremely effective mobility capability. We have transformed our distribution network with an extensive information technology backbone. Our operations are more efficient, and we are minimizing suffering, improving care and saving lives as a result.

Prior to the implementation of TRAC2ES, the functionality of the two legacy systems we were using was very limited, and there was no interconnectivity. We needed one system for all of DoD on one platform. TRAC2ES ties into other systems, and we now have complete in-transit visibility, so while patients are moving we know when they entered the system and when they left. Commanders can know at all times where their soldiers are. Even before we schedule transit, we can determine whether moving patients will make their conditions deteriorate.

Military operations in Iraq and Afghanistan have experienced a large number of severe burn trauma casualties from improvised explosive devices (IEDs). The following case involving a young soldier who sustained injuries common to the battlefield in Iraq illustrates the direct involvement of our military surgeons using TRAC2ES to provide continuity of care and rapid evacuation to expedite advanced patient care. The patient was a 21-year-old active duty Army Specialist who sustained blast and burn injuries related to a car bombing (a vehicle-borne IED), which destroyed the vehicle in which he was traveling and killed two of his fellow soldiers. He sustained deep partial and full thickness burn injuries to his face, bilateral upper and lower extremities, and 30 percent of his torso. He also demonstrated symptoms suggesting inhalation injury, and radiographs confirmed the suspicion of a minimally displaced femur fracture.

He was initially treated by a military corpsman near the scene of injury and was rapidly evacuated to the 31st Combat Support Hospital (CSH) headquartered in Baghdad. Following appropriate treatment the patient remained in the Intensive Care Unit (ICU) at the CSH for approximately six more hours awaiting the next available air evacuation mission to Ramstein AFB. A registered nurse provided care and monitoring during the helicopter flight from the CSH in Baghdad to the airfield at Balad where an Air Force Critical Care Air Transport Team (CCATF) including critical care physician, flight nurse, and respiratory technician assumed responsibility for the patient. At Balad, the patient was examined by CCATT personnel and accepted for transfer on to Landstuhl Regional Medical Center (LRMC), Germany, under the care of the CCATT.

FEATURED CASE STUDY

PRESENTED BY: UNITED STATES TRANSPORTATION COMMAND,
DISTRIBUTION SYSTEMS PROGRAM MANAGEMENT OFFICE

Approximately 12 hours after wounding, the patient boarded a C-141 aircraft for a 5.4 hour flight to Germany, arriving at Ramstein AFB where he was transported by ambulance to LRMC and admitted to the ICU. Using TRAC2ES the military team transmitted vital patient information from the CSH in Baghdad to surgeons at LRMC and the USAISR Burn Center in San Antonio, TX. Timely transmittal of this information allowed for the rapid mobilization and deployment of the U.S. Army Burn Flight Team, which arrived at LRMC shortly after the patient arrived in the ICU. The Burn Flight Team initiated advanced burn center level care in Germany. Approximately 10 hours after his arrival at LRMC, the patient and six other casualties were ready for transport to the Burn Center with the U.S. Army Burn Flight Team. During the 12.5-hour-long flight, the patient was continuously monitored and reassessed for any changes in status. In San Antonio an ambulance transported him to Brooke Army Medical Center and the USAISR Army Burn Center.

The soldier was admitted directly to the Burn ICU, a 12-bed critical care unit dedicated to the care of burn patients. Specialty teams provided immediate input and recommendations for treatment based upon injuries identified. The morning following his arrival at the Burn Center (72 hours post-injury), the patient was taken to the operating room for further treatment of all wounds, followed by skin grafting. He was able to depart for home on convalescent leave approximately seven weeks following injury. The journey of this patient through the evacuation channel serves to illustrate the very effective system used to rapidly assess, treat, and transport critically injured burn trauma patients from the theater of operations back to definitive care at the military's burn center. The well orchestrated process of communication and evacuation offered by TRAC2ES provides unprecedented rapidity of casualty movement to the U.S. Army Burn Center while providing state of the art critical care.

ORIGINALITY

TRAC2ES fulfills a very specific need. In many ways it is the only system of its kind. Within the DoD, however, we are on the leading edge with respect to information technology. We are also working with our coalition partners to allow their systems to connect with our system. With protections for our data, we will provide them access to the system's functionality. We are using business intelligence (BI) technology in innovative ways to coordinate patient movement on a global basis. Patient safety is essential and this system helps ensure that patients won't be adversely affected by a long flight. Dispatchers use the BI environment to collect data on the condition of the patient so the flight surgeon can determine if he/she is ready to be transported. Once that decision has been made, the system helps execute the move. An Air Force system locates the aircraft and crew to care for the patient. We can also dispatch a mobile team for the exclusive care of the patient, amounting to an ICU in the air. With TRAC2ES functionality we are able to verify patients' urgent medical needs and available facilities, while maintaining in-transit visibility and determining enterprise-wide cost and performance analytics.

Continued

FEATURED CASE STUDY

PRESENTED BY: UNITED STATES TRANSPORTATION COMMAND,
DISTRIBUTION SYSTEMS PROGRAM MANAGEMENT OFFICE

DIFFICULTY

Funding is always a challenge, but we overcame that issue because the need was so great. After the system was developed, we had planned to take some time to test it, but we were forced into full utilization after the U.S. started sending military personnel to Afghanistan and Iraq. One significant obstacle that we had to overcome involved deploying forces in areas where there was no Internet access or limited bandwidth. To overcome this obstacle we developed a standalone application called TRAC2ES Mobile, which runs on a portable computer. This allows us to input data in remote locations and then relay that information as soon as a connection is available. We can download the data into the system directly or export a file and e-mail it to another mobile application. Overcoming limited connectivity is an important factor in our success. These mobile systems are now active in many places where we encounter Internet access issues.

SUCCESS

TRAC2ES has been instrumental in supporting other agencies, organizations, and communities in crisis situations other than war. We have coordinated events, such as hurricane relief, with FEMA and Health and Human Services. We have helped local authorities move patients out of the way of hurricanes, resolve logistical issues, provide a team to check facilities and bed availability, and move citizens to another receiving site when necessary.

While some training has been required, our audience of users has readily embraced TRAC2ES. Often the people needing to access the information are operations people, not database users. The learning curve does not pertain to the application itself, but to the wider concepts of how data is stored today, how to specify the required data, and how to apply it. ■

FEATURED CASE STUDY

ClinicStation (Electronic Medical Record System)

A CASE STUDY PRESENTED BY:

The University of Texas M. D. Anderson Cancer Center



INTRODUCTORY OVERVIEW

In five years, leading-edge medical centers will look much like the University of Texas M.D. Anderson Cancer Center in Houston looks today. The cancer center, ranked in 2008 by U.S. News and World Report as the nation's top hospital for cancer care, has built a visionary electronic medical record (EMR) system—the first of its kind anywhere in the world—that seamlessly integrates clinical and research information. The system, called ClinicStation, redefines healthcare record keeping and represents a major advance in the healthcare industry. The new system is pioneering in seven important ways:

- It is the first EMR system to provide an interoperability foundation between clinical and research information, a capability that will significantly improve both patient care and research. The best decisions can be made about a patient's treatment utilizing the latest cancer research.
- The cancer center is the first hospital to fully deploy custom-built EMR technology from scratch on such a large scale: it involved 100 developers, encompasses 70 modules and now processes up to 4,000 service calls per second during peak periods, and approximately 325 million calls per month.
- The system uses a full Service Oriented Architecture (SOA) and the Microsoft .NET Framework, and is one of the most fully implemented SOAs in the healthcare industry.
- ClinicStation provides an integrated view of each patient that's available to authorized participants in the clinical and research chain. Most hospitals keep medical images and data in separate systems; at M.D. Anderson, separate systems are presented through SOA as an integrated working environment.
- The new system is flexible, growing and changing to meet M.D. Anderson's needs without hampering daily operations. Uniquely, physicians and others in the healthcare chain provide the leadership when it comes to introducing new capabilities.
- It demonstrates that the interoperability and flexibility made possible by SOA have the potential to improve any industry challenged by information maintained in disparate systems.
- Already ClinicStation is serving as a model. M.D. Anderson allows other institutions to view and learn from the system, promoting M.D. Anderson's role as a leading teaching institution.

In 1999 M.D. Anderson established itself as a leader in the use of electronic medical records when it built its original ClinicStation, a system that gave physicians and other healthcare workers convenient and timely electronic access to patient records. In 2003, the legacy ClinicStation was recognized by a Computerworld Honors Laureate award. Still not satisfied, however, in 2007 the cancer center envisioned a significantly improved system that would provide a host of new capabilities, like the ability to integrate research data, access data from virtually every electronic source within the institution, and enable the integration of both outpatient and inpatient data.

Continued

FEATURED CASE STUDY

PRESENTED BY: THE UNIVERSITY OF TEXAS M. D. ANDERSON CANCER CENTER

Because no commercial software offered such capabilities and interoperability, M.D. Anderson took the unprecedented step of developing the customized application itself. Today the SOA environment encompasses all of M.D. Anderson's patient data, including everything from patient diagnosis and treatment to clinical trials research and pharmaceutical data. No other system is as comprehensive or built to so easily enable the development of new capabilities suggested by healthcare providers. ClinicStation boosts workflow, making it possible for physicians to handle more patients, and because it maintains so much information, it greatly reduces the time spent looking for data or images. Patient care has also been improved. Physicians now can make faster and better-informed decisions from any location, 24/7. By integrating clinical and research data, ClinicStation is making an invaluable contribution to M.D. Anderson's battle against cancer. It serves as a model for any healthcare institution because the future of medicine will require the linking of clinical and research data, and the incorporation of new data forms that have been found with genomic analysis.

The field of medicine is constantly changing. New data models, new treatments, new discoveries of biological processes, and new genetic relationships are all emerging, and M. D. Anderson is leading the way with an EMR system that is responsive to them all.

THE IMPORTANCE OF TECHNOLOGY

Because of its unique and sophisticated needs, M. D. Anderson chose to build an EMR system in-house, with a Service Oriented Architecture (SOA) to connect and display data using the Microsoft .NET Framework. The .NET Framework provides a programming model and runtime environment for Web services, Web applications, and smart-client applications. The cancer center selected Microsoft because it wanted a set of technologies to provide a foundation for the integration of numerous existing systems, many of which are commercial software applications.

“Such an ambitious project was only feasible with tools that weren't available even three or four years ago,” says M.D. Anderson Vice President and Chief Information Officer, Lynn Vogel. M. D. “Anderson needed an integrated set of technologies that would support continued, disciplined software development, and be flexible enough to serve as the foundation for its IT strategy for years to come. The challenge was to connect 60 different back-end systems into a single comprehensive presentation and analytic capability, while creating an environment that facilitates the addition of modules now and in the future.”

Adds Chuck Sutor, Director of EMR Development and Support, “The cancer center's IT department had two technical goals. First, we wanted to make sure the architecture would support us for a good long time to come. Second, we needed an infrastructure that could guarantee performance, scalability and reliability.”

The system needed to support not only growth in the numbers of patients served and the enormous amount of data and radiology images gathered to treat each cancer patient, but also potential new technologies and functionalities. The choice of SOA was critical to the success of the new EMR system. SOA, which treats services as components that work together to accomplish business goals, enables interoperability for the exchange of both data and images between the clinical and research departments. It also provides the flexibility to easily customize and add features as the needs of M.D. Anderson—and the field of medicine more broadly—change. SOA enables a common access framework for all current

FEATURED CASE STUDY

PRESENTED BY: THE UNIVERSITY OF TEXAS M. D. ANDERSON CANCER CENTER

and potential sources of patient data. M. D. Anderson takes a best-of-breed approach that gives different departments the prerogative to choose commercial software applications that address their specific needs. Now the data from these systems appears to the clinician as a single working environment. The early version of ClinicStation, with its presentation of various types of data, had anticipated the eventual move to SOA. While many organizations have expressed interest in SOA, most still are in the initial stages of planning, prototyping, or perhaps setting up a single application. At M.D. Anderson, however, the new ClinicStation is not just an application with SOA. It is the foundation of a service-oriented enterprise.

ClinicStation's success refutes popular industry assertions that SOA cannot support large organizations. The proof is that on a routine basis, there are 7,000-8,000 ClinicStation users. The system serves about 13,000 unique users per month and up to 4,500 users simultaneously. Among the innovations of M.D. Anderson's new EMR system is the development process itself. The software development methodology, like the EMR system, is flexible, highly secure, and scalable to support future growth. The cancer center used a software factory concept that allows M.D. Anderson developers to build and customize the software when commercial software doesn't meet their unique needs.

BENEFITS

ClinicStation represents a major advance for M.D. Anderson's patients, caregivers and the research community. In the past, physicians endured a lengthy process of tracking down and retrieving patient data or radiology images. Time delays slowed the process of treatment, sometimes stalling important medical decisions. Meanwhile, difficult data access hampered the ability of consulting physicians to collaborate on patient cases. The process of incorporating research data into the care process was equally challenging. As a result, M.D. Anderson's top researchers were unable to fully benefit from the knowledge gained in the clinical realm, and clinicians could not take advantage of research findings that would help them deliver the best possible patient care.

“With ClinicStation, M. D. Anderson has improved the accuracy of its data and the quality of caregivers' decision making. It has provided a scalable foundation for continued high-performance growth. It has increased the productivity of its medical staff and lowered costs. At the end of the day, all of these benefits really accrue to the patient,” says Dr. Kevin McEnery, Professor of Diagnostic Radiology at M.D. Anderson. Historically, if one physician wanted to consult another, they'd have to be in the same physical location. Now, they can consult over the phone, while looking at the same data and images on their computers, even across state, local or international boundaries. Because the system also provides links for appropriate resources outside the facility, it is not just M. D. Anderson medical staff who benefit. Referring physicians and patients have their own portals to relevant data. Vogel recalls one situation where an M. D. Anderson patient was hospitalized in London and the physicians were able to share electronic images as part of a joint consultation. In this example, it turned out there was no serious complication, Vogel says, so the patient was able to be discharged, rather than having to be operated on due to a lack of information.

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FEATURED CASE STUDY

PRESENTED BY: THE UNIVERSITY OF TEXAS M. D. ANDERSON CANCER CENTER

According to Sutor, “Our care pattern involves intense two-day or three-day encounters with patients, who see various specialists and get all the diagnostic tests they need, but physicians want to have instant access to new information, because if newly created data were not instantly available, it would slow down the decision-making process in this series of appointments. This system makes everything instantly available to everyone with a need to know.”

In the past, patient charts were so heavy that patients at times required wheel chairs to carry them from one place to another during the testing and consultation process. Wheel chairs are no longer needed because charts are available electronically for physicians and caregivers. The system has delivered many important benefits. Among them:

- Data accuracy. When a physician looks at image data or clinical data in ClinicStation, he or she is looking at the most up-to-date data, in the originating system.
- Flexibility. Adding new systems and data sources is extremely easy. That flexibility is facilitated by the SOA framework, because it is not necessary to move data around.
- Increased performance. A single server on the new architecture can easily handle the load of the entire 11-server Web farm in the old architecture.
- Stability. A custom monitoring solution helps the IT department see developing problems and resolve them before they affect users.
- Increased productivity. The flow between the hospital and all of the clinics is much faster.
- Reduced costs. By some internal estimates, every physician who uses ClinicStation saves a half-hour a day, every day.

Dr. Garrett Walsh is Professor, Thoracic & Cardiovascular Surgery. In his words, “ClinicStation allows us to compare radiographs, previous CAT scans or MRIs to measure tumor response to see if they are improving with treatment or not. The computer will link the images and we can go down slide by slide, slice by slice and make decisions as to whether tumors are growing or not. That was virtually impossible before, even with hard copy films, because you would be looking at one film trying to compare it to the other and getting out your ruler. ClinicStation gives us the ability to magnify images, rotate images and use all sorts of imaging alterations to better define what is going on in someone’s chest, brain, abdomen or long bone. We, as surgeons, are extremely dependent on having reliable radiographs available at all times. Fortunately, ClinicStation has been an extremely reliable system for us. I could not imagine practicing medicine without ClinicStation.”

Dr. Ron Walters is Professor, Breast Medical Oncology. He says “ClinicStation is very much my lifeblood as far as everything we do in the clinic and also as far as research goes. Whether I’m at home or at work, I can look ahead to see the schedule for the next day, anticipate the problems I might have, know who’s coming in, what kind of situation they are in, and then map out how that day is going to go so that it doesn’t hit me by complete surprise in the morning when I come in. One of the biggest disadvantages that the outside world suffers from is the cross-coverage for other physicians, or even getting adequate follow-up for my own patients when I am offsite. Because ClinicStation is web-based, I am able to perform almost everything I do from home, except, of course, examine the patient. This includes responding to

FEATURED CASE STUDY

PRESENTED BY: THE UNIVERSITY OF TEXAS M. D. ANDERSON CANCER CENTER

questions, looking up medications, ordering medications, writing out chemotherapy orders—anything that needs clarification is easily done at home or actually from any place where, with proper security, I have access to ClinicStation.”

Dr. Randall E. Millikan is Associate Professor, Genitourinary Medical Oncology. As he puts it, “The business of academic oncology is about making it possible for the next generations of patients to not have the same prognosis that today’s patients have. This requires advanced information technology, especially in this current era when research information and genomic information is exploding. This is a huge challenge. What’s ironic is that it is easier to measure the expression of 500 genes in a 100-tumor sample than it is to characterize in a structured way patients, their clinical follow-ups, and their clinical outcomes. This is because the clinical side of the house lags far behind in the ability to generate structured information. So people who work at M.D. Anderson who just can’t stand not knowing what causes cancer and how to cure it, need ClinicStation in order to do this work. Through its Outbound module, currently under development, M.D. Anderson is planning to add online access for patients and their referring physicians to ClinicStations, resulting in direct access to virtually all the contents of online medical records.”

ORIGINALITY

One of the major breakthroughs with ClinicStation is that its SOA provides the foundation for the integration of research and clinical data, as well as inpatient and outpatient data. This is the first time a hospital or research institution has gained such a capability. The new system solves the interoperability problems that have plagued institutions with siloed sources of data. Today, all of a patient’s information is available to every authorized caregiver, physician, researcher, radiologist, lab technician, pharmacist and others. For the first time, providers have complete and convenient electronic access to a wide range of patient information. With the legacy system, physicians and others could do little more than view information using different passwords, presentations and navigation tools. Now they can create information, add orders for treatment, and fully interact with the data and images while the data remains in the source system. These are significant achievements in healthcare and they ensure that M.D. Anderson remains a premiere and visionary cancer treatment and research facility.

ClinicStation fosters unmatched levels of collaboration, increases the pace of research and patient care, strengthens decision-making, streamlines workflows, lowers costs and improves the patient experience. The system’s use of SOA is unique in the healthcare industry. No other hospital here or abroad has used the innovative technology at such a scale or with such success. Among the many benefits, SOA helps deliver unprecedented data accuracy. Every time you move a piece of data from point A to point B, there is a risk that you will lose the data, or that point B will become out of synch with point A, explains CIO Vogel. The SOA framework, where services expose or present data, and then consume data, eliminates these problems. When a physician looks at patient data in ClinicStation, he or she is really looking at that data as it exists in the host system. Most hospitals use commercial EMR systems and don’t perform in-house development of this magnitude for such a mission-critical application.

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FEATURED CASE STUDY

PRESENTED BY: THE UNIVERSITY OF TEXAS M. D. ANDERSON CANCER CENTER

Not only did M.D. Anderson undertake the unusual challenge of creating custom-built technology, it also innovated a development model that is unique in the healthcare industry. M.D. Anderson's software factory model started out with the challenge of re-platforming a legacy system, and has expanded into a sophisticated development model for adding functionality to the EMR platform through multiple parallel development efforts. The aim is to deliver new capabilities to physicians, nurses and clinicians as fast as possible. And it is working beyond anyone's expectations. Unlike commercial systems, which typically require feature prioritization across multiple customer sites, ClinicStation was designed so that M.D. Anderson's own internal resources can add the capabilities. The company created what it calls a flexible virtual repository that makes adding new systems and new data sources extremely easy.

"That flexibility is facilitated by the SOA framework, because we don't have to move data around," says Vogel. The new architecture also introduces significant new safeguards. For example, M.D. Anderson has used Microsoft Operations Manager 2005 to integrate a custom monitoring solution into ClinicStation. This helps the IT department identify potential system issues and resolve them before they affect users. And because the new system demonstrates the potential for SOA to scale to serve the needs of a major institution, it sets a new standard, and in the process shows how the technology can power a service-oriented enterprise in any industry. M.D. Anderson has also won a number of awards for its innovative use of technology.

DIFFICULTY

Building the new and highly complex ClinicStation EMR system over the course of an 18-month transformation period required overcoming numerous challenges. Perhaps the biggest obstacle was the fact that the new system needed to be developed without disrupting the legacy system and its operations, even as the legacy system continued to be enhanced with new functionality every three months—functionality that needed to be available in the new, re-architected system as well. It is always difficult to build a system to the scale required by M.D. Anderson. That challenge was multiplied when the institution made the daring decision to use custom technology and start from scratch. It meant scaling up from a three-person development team to an army of 100 developers at the height of the program. The dimensions of the program were staggering and unmatched by any hospital here or abroad: no fewer than 60 back-end systems needed to be connected into a single comprehensive, SOA.

At the same time, developers needed to create a process for adding individual modules now and in the future. When the effort began, ClinicStation had about 30 modules. Today it has expanded to encompass 70 modules, including:

- **Order Set Management:** This module automatically creates, manages and routes chemotherapy order sets to the appropriate recipients along with the patient's medical context, increasing efficiency, reducing adverse events and improving overall patient safety.
- **Structured Clinical Documentation (SCD):** This module addresses one of the most challenging areas in medicine—adding structure to clinical documentation that was previously only captured in free-text format. SCD enables the capture of this information in a discrete manner to support critical care decision analysis, while improving accuracy and speed for data entry by physicians so that they can spend more time on patient care.

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- **Medication Reconciliation:** This module accurately and completely reconciles medications across the continuum of patient care, decreasing the potential for medication errors.
- **Nursing Needs Assessment:** This module allows a nurse to document and automatically route a patient's need for—or request from—the ancillary services of the institution (e.g., Social Work, Nutrition, Physical and Occupational Therapy, Wound Ostomy and Continence, Chaplaincy, Speech and Audiology, Case Management, etc.), improving the overall patient experience.

The new ClinicStation system now has triple the functionality of the legacy system, and it was all introduced in eight separate releases. M.D. Anderson's SOA permeates the historical wall that has separated research and clinical care departments, and has allowed the development of processes for integrating inpatient and outpatient data as well as radiology images and data. It has also entailed building a system that would accommodate emerging clinical and research needs like personalized genomic medicine, in which clinicians and researchers will draw heavily from a patient's genetic makeup in the development of both diagnoses and treatment regimens. Genetic data represents a major departure from the type of data historically used to assess patient conditions.

The new system needed to be constructed to accommodate this move towards personalized medicine, which requires gathering and tracking a complex database not only of clinical data, but of genomic data for each patient. Another major difficulty: incorporating images into the system, which is a challenge developers with commercial vendors have struggled with for years, but one M.D. Anderson was able to overcome by relying on SOA. And the very decision to pioneer SOA in healthcare created its own major hurdle. Developers could not look to trailblazers experience for guidance—M.D. Anderson was the trailblazer.

The major obstacle to ClinicStation was the bold decision to defy healthcare industry convention as well as M.D. Anderson's history and build its own EMR system from scratch. M.D. Anderson turned its back on 20 years of investing in its legacy architecture for the promise that a new SOA would dramatically change the way it delivers cancer treatment and help researchers eliminate cancer. The standard in virtually all of the healthcare industry today is to purchase commercial application suites from one of a small number of companies, which base their applications on architectures that were introduced 15 to 20 years ago. In every case, these companies have been challenged to incorporate new forms of data, such as images, into their base products, and none have yet done so seamlessly.

M.D. Anderson views image integration as only the first example of significantly greater challenges already presented by the introduction of genomic or personalized medicine. Given the thin margins that commercial healthcare software companies must work on, they are understandably reluctant to re-architect their systems to take advantage of the many benefits of SOA; M.D. Anderson had no such limitation. And since cancer medicine in many cases is leading the medical revolution toward greater and greater incorporation of genomic data, it was imperative that M. D. Anderson find a way to overcome challenges facing other providers. This forced the decision to implement in-house development and the commitment to SOA. The hospital's executive management embraced the challenge, made the commitment to move up the learning curve to find out what SOA was all about, recognized the benefits, and as a result has fully supported creating an SOA-based ClinicStation from the ground up.

Continued

FEATURED CASE STUDY

PRESENTED BY: THE UNIVERSITY OF TEXAS M. D. ANDERSON CANCER CENTER

SUCCESS

“Because we are a cancer center, things that happen here are likely to be harbingers of change that will happen across the field of medicine generally in the next couple of years,” says CIO Vogel. “As you get into genomic medicine and personalized medicine, what used to be research will increasingly be part of the clinical process. So the ways we are seeking to link research and clinical data will also become appropriate in other fields of medicine. Similarly, the inpatient and outpatient worlds are becoming part and parcel of the same process and package of care. These developments mean that the IT implications of what we are doing reach beyond cancer centers and out into the business world.”

Though many organizations talk about using SOA, most are in the initial stages. They are planning, prototyping, or perhaps setting up a single application. At M.D. Anderson, however, ClinicStation is not just an application with SOA. It's the foundation of a service-oriented enterprise. And the interoperability of its IT environment will allow the institution to change with the times, a critical capability for any complex service-oriented enterprise. With the success of its state-of-the-art EMR system, M.D. Anderson has gained widespread attention from counterpart medical institutions, which are eager to discover how they can replicate that success. Invitations to make keynote presentations at national meetings ranging from bioinformatics conferences to SOA-focused forums are becoming routine. By inviting competitors to view the pioneering system, M.D. Anderson is making it possible for other hospitals and organizations outside of healthcare to learn from its lessons. Ultimately, this is the goal of any prominent teaching institution.

The new ClinicStation has become an instant success with physicians and all members of the healthcare process, who have readily embraced an interactive system in which all of a patient's real-time information was easily available and could be used within a single presentation environment. A key advantage of ClinicStation over the previous system is that users decided what ClinicStation would do. Instead of radically altering workflow processes, the new system accommodated them. Because the end users controlled what is in the system, adoption has been widespread. This represents a contrast to so many commercial systems in hospitals, which have often failed or achieved much less than desirable physician adoption rates.

Another measure of success is the continued demand for more capabilities. As many as 8,000 users rely on the system at any given time. ClinicStation has become core to the treatment of the nearly 80,000 patients served by the nation's top cancer treatment facility each year. Patients are benefiting from faster treatment and better-informed treatment decisions. And, as one clinician noted, “ClinicStation is simply the way we practice medicine at M. D. Anderson.” But it is essential to keep in mind that the ultimate beneficiaries are not only today's cancer patients but the millions who will be served in the future as research continues working toward a cure. ClinicStation is contributing to M.D. Anderson's growth. The institution continues to expand dramatically, says EMR director Suitor: “In every measure—number of patients seen, clinic visits, surgeries, and revenue, it grows every year. While I don't think we can claim ClinicStation is the only cause of that growth, it is certainly a significant contributor.” ■

THE COMPUTERWORLD
HONORS PROGRAM
2009

THE 21ST CENTURY ACHIEVEMENT AWARDS



THE 2009 AWARD RECIPIENTS

In April of 2009, thirty three CIO-level distinguished judges on ten panels — one panel for each of 10 industry categories — completed their review of the case studies submitted by The Computerworld Honors Program's Laureates for the Class of 2009. Based on this review, they named 50 Finalists as guests of honor at ceremonies at the Andrew W. Mellon Auditorium in Washington, DC, on June 1, 2009.

At these ceremonies, the Computerworld Honors Program is proud to announce that following 10 Finalists are recipients of the program's top honor to organizations: The Computerworld Honors Program's 21st Century Achievement Award.

BUSINESS & RELATED SERVICES

MIQS

for Disease Manager Plus

Nominated by Sybase

EDUCATION & ACADEMIA

Career Education Corporation

for Virtual Campus for American Intercontinental University, Colorado Technical University and International Academy of Design & Technology

Nominated by EMC

ENVIRONMENT, ENERGY & AGRICULTURE

Austin Energy

for Utility of The Future

Nominated by IBM

FINANCE, INSURANCE & REAL ESTATE

se2

for 403(b)connect

Nominated by Accenture

GOVERNMENT

Assistant Secretary of Defense (Program Support)

for Synchronized Predeployment and Operational Tracker (SPOT)

Nominated by Booz Allen Hamilton

HEALTHCARE

The University of Texas M. D. Anderson Cancer Center

for ClinicStation (Electronic Medical Record System)

Nominated by Accenture

MANUFACTURING

Intelligent Hospital Systems

for RIVA (Robotic IV Automation)

Nominated by Sybase

MEDIA, ARTS & ENTERTAINMENT

One Hen, Inc.

for Onehen.org

Nominated by Sapient

NON-PROFIT ORGANIZATIONS

UNICEF

for Fly-Away Emergency VSAT and Enterprise Management Systems

Nominated by HP

TRANSPORTATION

United States Transportation Command, Distribution Systems Program Management Office

for TRANSCOM Regulating And Command Control Evacuation System TRAC2ES

Nominated by Information Builders

THE 2009 FINALISTS

In April of 2009, thirty six CIO-level distinguished judges on ten panels — one panel for each of 10 industry categories — completed their review of the case studies submitted by The Computerworld Honors Program's Laureates for the Class of 2009. Based on this review, they named these 50 Finalists as guests of honor at ceremonies at the Andrew W. Mellon Auditorium in Washington, DC, on June 1, 2009.

BUSINESS & RELATED SERVICES

Merck & Co. Inc

for MVSP (Merck Vaccine Saving Plan)

Analytical Tool

Nominated by HCL

MIQS

for Disease Manager Plus

Nominated by Sybase

Sabre Holdings

for Sabre Air

Nominated by NIIT Technologies

Sky Research

for SAN deployment

Nominated by NetApp, Inc

Vanu, Inc.

for Infrastructure Sharing and Bringing

Telecommunications to Poor and Rural Areas

Nominated by Morgan Stanley

EDUCATION & ACADEMIA

Career Education Corporation

for Virtual Campus for American Intercontinental University, Colorado Technical University and International Academy of Design & Technology

Nominated by EMC

Columbus City Schools

for All School Improvement Plan (ASIP)

Consolidation Project

Nominated by Information Builders

Fairfax County Public Schools, Fairfax Network

for Flight School TV series and website

Nominated by Booz Allen Hamilton

Garvan Institute

for Centralized Medical Research Database

Nominated by Sybase

Royal Institute for Deaf and Blind Children

for Providing deaf and blind children in remote areas access to quality education through video conferencing

Nominated by Polycom

ENVIRONMENT, ENERGY & AGRICULTURE

Austin Energy

for Utility of The Future

Nominated by IBM

Energy & Combustion Services (ECS)

for eFLEET

Nominated by Sybase

P&G

for Visualization Collaboration and Virtual Reality Technology

Nominated by HP

Pão de Açúcar

for Retail Sustainability — Green Store

Nominated by Accenture

Xcel Energy, Inc

for SmartGridCity

Nominated by Accenture

THE 21ST CENTURY ACHIEVEMENT AWARDS

THE 2009 FINALISTS

FINANCE, INSURANCE & REAL ESTATE

Bancolumbia, Technology Group
for Bancolumbia Data Center Consolidation Initiative
Nominated by Unisys

Credit Suisse
for CS Equities Test Center
Nominated by Cognizant

First American
for First American Financial Transformation
Nominated by Sapient

PriceMetrix Inc.
for ValueOne Project
Nominated by Morgan Stanley

se2
for 403(b)connect
Nominated by Accenture

GOVERNMENT

**Assistant Secretary of Defense
(Program Support)**
for Synchronized Predeployment
and Operational Tracker (SPOT)
Nominated by Booz Allen Hamilton

**Defense Information Systems Agency
(DISA) Interdiction Support Branch,
Department of Defense (DoD)**
for Anti-Drug Network (ADNET) Program
Management Office (PMO)
Nominated by Booz Allen Hamilton

**Division of Workers Compensation,
Department of Industrial Relations,
State of California**
for Electronic Adjudication Management System
Nominated by Deloitte

Tribunal Electoral de Panama
for Election System
Nominated by Sybase

Turkish Republic of Ministry of Justice
for National Judiciary Information System
Nominated by IBM

HEALTHCARE

Cherokee Health Systems
for Cherokee Health Systems Telehealth Program
Nominated by Polycom

**Defense Health Services Systems
(DHSS)**
for Clinical Data Mart (CDM)
Nominated by Informatica

EuResist Network GEIE
for EuResist
Nominated by IBM

**The University of Texas M. D.
Anderson Cancer Center**
for ClinicStation (Electronic Medical Record System)
Nominated by Accenture

**UK National Health Service Blood
& Transplantation**
for Organ Donation Electronic Offering System (EOS)
Nominated by Sapient

MANUFACTURING

ASUSTEK COMPUTER INC.
for ASUSTEK EEEPC
Nominated by Seagate

Ingersoll Rand
for Business and Technology
Transformation Initiative
Nominated by Deloitte

Intelligent Hospital Systems
for RIVA (Robotic IV Automation)
Nominated by Sybase

THE 21ST CENTURY ACHIEVEMENT AWARDS

THE 2009 FINALISTS

Johnson Controls Inc
for Genesis Program: Enhancing Business
Flexibility and Productivity with Process
Harmonization
Nominated by Infosys

Textron Inc.
for Spend Information Management (SIM)
Implementation
Nominated by Infosys

MEDIA, ARTS & ENTERTAINMENT

**Adrienne Arsht Center for the
Performing Arts of Miami-Dade
County**
for Non-Profit Performing Arts Center Builds a
Future-Proof Wireless Networking Infrastructure
Nominated by 3Com

**Cooperating School Districts of
Greater St. Louis**
for New Links to New Learning
Nominated by Polycom

Library of Congress
for Library of Congress Experience
Nominated by Sapient

National Library of Scotland
for National Repository Begins to Bring
Hundreds of Years of the Written Word Online
Nominated by Hitachi

One Hen, Inc.
for Onehen.org
Nominated by Sapient

NON-PROFIT ORGANIZATIONS

Massachusetts General Hospital
for MGH TeleStroke Program
Nominated by Polycom

National Center for Genome Resources
for Alpheus — Online Genome Sequencing
and Analysis
Nominated by Sybase

New York Public Library
for Metrics On Demand (MOD)
Nominated by Information Builders

Sparrow Health System
for Sparrow Technology Transformation
Nominated by Cisco

UNICEF
for Fly-Away Emergency VSAT and Enterprise
Management Systems
Nominated by HP

TRANSPORTATION

**Centre for Railway Information
Systems**
for Crew Management System
Nominated by IBM

City of Ottawa, OC Transpo
for SmartBus
Nominated by Sybase

ITT Corporation
for ADS-B Program
Nominated by Sun Microsystems

**North Carolina Department
of Transportation**
for Wearable Inspection Grading Information
Network System WIGINS
Nominated by Sybase

**United States Transportation
Command, Distribution Systems
Program Management Office**
for TRANSCOM Regulating And Command
Control Evacuation System TRAC2ES
Nominated by Information Builders

AWARD RECIPIENTS, 1989 - 2008

The following Computerworld Honors Program Laureates were first selected by the Program's thirty-eight distinguished judges as Finalists, and then chosen for further recognition as recipients of the Program's 21st Century Achievement Award.

From 1990 until 2001, their case studies were archived by both The Computerworld Honors Program and the National Museum of American History in Washington, D.C., a part of the Smithsonian Institution. Finalists selected for further recognition during that first decade of the Honors program were designated as recipients of Computerworld Smithsonian Awards.

With the new millennium, Laureates' case studies become part of the broader, worldwide collection archived on the world wide web and also presented, in a variety of formats, to archives, museums, universities and libraries in each of the more than 56 countries on six continents represented by the Program's Laureates.

BUSINESS & RELATED SERVICES

2008

Deaf Link, Inc.
Video-based Sign Language Interpretation

2007

QlikTech International
Business Software that Saves Lives

2006

BellSouth Corporation
BellSouth Amber Alert Field Notification

2005

Acxiom Corporation
Customer Information Infrastructure

2004

Exostar
Securing Military-Grade Collaboration Platform

2003

Wireless & Satellite Networks
Zamora Hot City

2002

Silent Runner, Inc.
Silent Runner, Inc.

2001

Sendmail, Inc.
Internet Platform for e-Communications Applications

2000

eBay
Online Auction

1999

Federal Express
Internet Ship

1998

Amazon.com, Inc.
Amazon.com Website

1997

The Johns Hopkins Health System & The Johns Hopkins Medicine Center for Information Services
The Johns Hopkins Electronic Patient Record

United Parcel Service (UPS)
Networking into the Millennium

1996

Custom Clothing Technology Corporation / Levi Strauss & Co.
Personal Pair Program

1995

MCI Telecommunications
networkMCI SmartPop

1994

Mervyn's, Inc.
Retail Inventory Management Systems

1993

McKesson Drug Company
Acumax

1992

Kmart Corporation
KIN II

1991

Frito-Lay, Inc.
Hand-held Computer Application

1990

Berkeley Systems
outSPOKEN

1989

Bell and Howell Company
The Image Search Plus System

EDUCATION & ACADEMIA

2008

Arizona Telemedicine Program
T-Health Institute

2007

Defense Acquisition University
DAU Datamart

2006

Columbia University School of Nursing
Nurse Practitioner PDAs

2005

Australian Government, Department of Defence
Learning Management System

2004

Massachusetts Institute of Technology (MIT) and Sapien
OpenCourseWare (MIT OCW)

2003

Michigan State University
LON-CAPA Courseware System

2002

African Virtual University
The African Virtual University

2001

The Bridge School
Augmentative & Alternative Means of Communication (AAC) & Assistive Technology (AT) Applications

2000

Montgomery County Public Schools
The Early Childhood Technology Literacy

1999

MaMa Media, Inc.
MaMaMedia Internet-centered Products for Young Children and Their Families

1998

JASON Foundation for Education
The JASON Project

1997

Susan Abdulezer
The Virtual Alphabet Book

1996

New York City Public School for the Deaf
Street Signs: A City Kids Guide to American Sign Language

1995

University of California, Los Angeles
The UCLA Science Challenge

1994

University of California, Los Angeles
Rebuild Los Angeles

1993

Center for Applied Special Technology
Gateway Programs

1992

Ohio's Center of Science and Industry
Mission to Mars

1991

The Lab School of Washington
Multimodal Interactive Stories

1990

The JASON Foundation for Education
The JASON Project

1989

Orangeburg School District 5
Teaching Students to Become Adept at Using the School Systems' Computers

ENVIRONMENT, ENERGY & AGRICULTURE

2008

Alfred Wegener Institute for Polar and Maritime Research (AWI) & Center for Marine Environmental Sciences
Worldwide Geo-Scientific Research Data Sharing System: PANGAEA

2007

BP
Hurricane Management System

2006

U.S. Green Building Council (USGBC)
USGBC Boosts Green Building with LEED Online Certification Process

2005

Broward County Environmental Protection Department, Florida
Creation of a New Mobile Inspection and Monitoring System

2004

Wildlife Center of Virginia
Online Teaching and Training Programs

2003

Earth Simulator Center
Earth Simulator Project

THE 21ST CENTURY ACHIEVEMENT AWARDS

AWARD RECIPIENTS, 1989 - 2008

2002

Rhinowatch
First-Ever Full Census of the White Rhino

2001

Walker County Public Schools
Eco-Connections Environmental Studies Program

2000

Department of Primary Industry & Fisheries,
Australia
Weeds Mapping & Management System

1999

National Weather Service
Weather Interactive Processing Systems (AWIPS)

1998

U.S. Environmental Protection Agency
Envirofacts Warehouse on the Internet

1997

The Peregrine Fund
The Harpy Eagle Conservation Program

1996

Farmland Industries, Inc.
AgInfo Geographic Information System

1995

Consortium for International Earth Science
Information Network (CIESIN)
CIESIN's Gateway

1994

The Nature Conservancy
The Natural Heritage Network

1993

Environmental Resources Information Network
Environmental Resources Information System

1992

Wilderness Society
Endangered Ecosystems Mapping Project

1991

Research Alternatives, Inc.
Emergency Information System

1990

Environmental Systems Research Institute
ARC/INFO

1989

Sierra/Misco, Inc.
Passaic River Basin Early Flood Warning System

FINANCE, INSURANCE & REAL ESTATE

2008

State Street Corporation,
Global Infrastructure Services
Zero Footprint, Maximum Impact

2007

Advance America
Advance America Grows with Oracle Enterprise Grid

2006

Chicago Stock Exchange
Grid Project

2005

Sprint
Industry Solutions

2004

Depository Trust and Clearing Corp
RDC Rollout

2003

Sumitomo Mitsui Banking Corporation
USA Patriot Act Compliance Solution

2002

Cigna HealthCare
Transformation

2002

HDFC Bank Ltd
Unified Enterprise Management

2001

Oatfield Estates
Elite Care Assisted Living Units

2000

Proton World International, Belgium
Electronic Purse System

Nationwide Building Society, United Kingdom
Iris Recognition

1999

Mastercard
Secure Global Electronic Commerce

1998

Fannie Mae and Finet Holdings Corp.
Internet-Enabled Homeownership

1997

Flagstar Bank, FSB
LIVE (Lenders Interactive Video Exchange)

THE 21ST CENTURY ACHIEVEMENT AWARDS

AWARD RECIPIENTS, 1989 - 2008

1996

First National Bank (FNB) South Africa Limited
Finger/Hand Print Recognition for Electronic Banking

1995

New York Stock Exchange, Inc.
Integrated Technology Plan

1994

National Association of Securities Dealers (NASD)
Distributed Association Member Support

1993

Johnson and Higgins
J&H Info/Edge

1992

American Express Company
Worldwide Credit Authorization Risk Management System

1991

Society for Worldwide Interbank Financial
Telecommunication
SWIFT Telecommunication Network

1990

Swiss Options and Financial Futures Exchange
SOFFEX

1989

Fidelity Investments
FIX and FAST

GOVERNMENT & NON-PROFIT ORGANIZATIONS

2008

Byrraju Foundation
TeleMedicine Intervention

Department of Homeland Security, Customs and
Border Protection
Customs Modernization

2007

Department of the Interior-Navajo Nation
Internet to the Hogan

Medical Missions for Children
Transferring Medical Knowledge from ThoseWho Have It to
ThoseWho Need It Using Technology

2006

New York City Police Department
Crime Data Warehouse

2005

Aidmatrix
Global Relief Network

2004

City of Cape Town
SAP ERP Implementation Program – Project Ukuntinga

2003

Network for Good
Network for Good

2003

CyberSoft
VEDOP, the Electronic Tax Filing System in Turkey

2002

Oklahoma State Department of Human Services
Oklahoma e-CHILDCARE

2001

America's Second Harvest
ResourceLink.org Web-based Tracking System

2000

Independent Electoral Commission, South Africa
Electoral Operations

1999

Lucent Technologies
911 Database

1998

Focus: HOPE
Center for Advanced Technologies

1997

Massachusetts Department of Revenue
Telefile & Imaging: Revolutionary Tax Processing

1996

Mercy Ships
Crew and Donor Management System

1995

Norwegian Police Data Processing Services
Police Operations Support (POS) System

1994

Massachusetts Executive Office of
Environmental Affairs
Environmental Protection Integrated Computer System (EPICS)

1993

Los Angeles County Department of Public Social
Services
Automated Fingerprint Image Reporting & Match System
(AFIRM)

1992

Georgia Institute of Technology
Centennial Olympic Games Proposal 1996

THE 21ST CENTURY ACHIEVEMENT AWARDS

AWARD RECIPIENTS, 1989 - 2008

1991

De Anza College
Bay Area Coalition for Employment of Persons with Disabilities

1990

Ministry of Interior, Thailand
Integrated Population Demographics System

1989

BI Incorporated
Electronic Monitoring Devices
University of Illinois, Chicago
The Missing Children Project

MANUFACTURING

2008

Embraer
In-Flight Test Engineering Database

2007

Varian Medical Systems
A Revolution in Cancer Radiation Therapy

2006

Ethicon Endo-Surgery, Inc.
Enterprise Data Warehouse

2005

Cambium Forstbetriebe
Log Tracking System

2004

Kirchner Corporation
Extended Distribution System with Mobile PDAs Offering Both Off-line and Real-time Wireless Capabilities

2003

GE Silicones
Global ERP Transformation

2002

Agilent Technologies
"One I.T."

2001

NTT DoCoMo, Japan
i-mode Mobile Internet Service

2000

Danfoss Drives, Denmark
Fully Automated Document Factory

1999

Georg Lingensbrink GMBH & Co. (Libri), Germany
Books on Demand

1998

Genentech, Inc.
Final Purification Expansion

1997

Buckman Laboratories, Inc.
Knowledge Sharing

1996

Parametric Technology Corporation
Pro/ENGINEER Fully Associative, Feature-Based Parametric Solid Modeling Technology

1995

Boeing Commercial Airplane Group, 777 Division
Computing and the Boeing Design

1994

Convex Computer Corporation
Integrated Business Applications

1993

United Technologies Corporation, Sikorsky Aircraft
Computer Integrated Manufacturing Planning and Control

1992

Aeroquip Corporation
Quote Buildup

1991

Raychem Advanter
Automated Manufacturing of Aluminum Adapters

1990

The Lubrizol Corporation
AI System Generates and Distributes MSDS's

1989

University of Iowa Center for Simulation and Design
Optimization of Mechanical Systems

MEDIA, ARTS & ENTERTAINMENT

2008

Cleveland Metroparks Zoo
Interactive Distance Learning with Cleveland Metroparks Zoo

2006

NZZ Neue Zürcher Zeitung AG
Archive 1780

2005

Turner Broadcasting System, Inc.
Optimizing Digital Media

THE 21ST CENTURY ACHIEVEMENT AWARDS

AWARD RECIPIENTS, 1989 - 2008

2004

Apple Computer
Reshaping the Global Music Industry Through the Introduction of its iPod and iTunes Music Store

2003

E! Networks
Digital Asset Information System (DAISY)

2002

MaMaMedia Inc.
The MaMaMedia Peace Project

2001

The Jim Henson Creature Shop
Henson Digital Performance Studio

2000

Real Networks
Internet Media Innovations

1999

Starbrite Foundation
Starbrite World

1998

P.S. 41, Brooklyn, NY
Kid Witness News

1997

Rock the Vote
1-800-REGISTER

1996

Pixar Animation Studios/Walt Disney
Feature Animation
"Toy Story"

1995

America Online Technology
Network Communications and Systems Programming

1994

Industrial Light and Magic
Special Effects and Computer Graphics in "Jurassic Park"

1993

The U.S. Holocaust Memorial Museum
Multi-Media Interactive System

1992

Avid Technology, Inc.
Avid Media Composer

The MIT Media Laboratory
Synthetic Performers

1991

The Tenderloin Times
Computers Produce Four-language Newspaper

1990

Personics Corporation
MusicMaker

1989

Uplinger Enterprises
Live Aid

MEDICINE

2008

EMRI
for Emergency Response System in India

2007

The Danish National eHealth Portal
Sundhed.dk

2006

Duke University Health System
ORview Perioperative System

2005

Northern Lights Health Region
Health Care 'Anytime, Anywhere'

2004

United Devices
For Smallpox Research Grid Project

2003

Brigham and Women's Hospital, Surgical Planning Laboratory
3-D Surgical Planning Visualization

2003

Lexicon Genetics Incorporated
The Integration of Gene-based Drug Discovery Projects with Financial Processes

2002

Bristol-Myers Squibb
SMART-IDEA Project

2001

Medtronic
Patient Management Network

2000

The National Marrow Donor Program
STAR® - Search Tracking & Registry

THE 21ST CENTURY ACHIEVEMENT AWARDS

AWARD RECIPIENTS, 1989 - 2008

1999

Pfizer
Clinical Trials Data Management

1998

Maimonides Medical Center
Integrated Health Care Delivery Solution

1997

InterMountain Health Care
Quality Care Tracking Project
United States Environmental Protection Agency
Supercomputer Simulations of the Human Lung

1996

Texas Department of Health (TDH)-
Immunization Division
ImmTrac: A Statewide Immunization Tracking System

1995

PharMark Corporation
RationalMed®

1994

Veterans Administration Medical Center
Functional Electrical Stimulation

1993

Rensselaer Polytechnic Institute
Adaptive Current Tomography (ACT)

1992

Integrated Surgical Systems, Inc.
ROBODOC Surgical Assistant™

1991

The Joint Center for Radiation Therapy &
Stereotactic Radiosurgery
XKnife, The Stereotactic Radiosurgery Program

1990

Purdue University
Supercomputing Solves the Structure of a Virus

1989

LC Technologies, Inc.
The Eyegaze Computer

SCIENCE

2006

National Cancer Institute (NCI)
Cancer Biomedical Informatics Grid, or caBIG™

2005

European Southern Observatory
Data Flow System of the European Southern Observatory

2004

Virginia Tech
Developing a 2,200 Processor Supercomputer Created with a
Cluster of 1,100 Apple Macintosh G5 computers

2003

Institute of Atmospheric Physics (IAP)
Atmospheric Research

2002

U.C. Berkeley
SETI@home Project

2001

CERN, Switzerland
Datawarehouse

2000

Hawkes Ocean Technologies (HOT)
Deep Flight Project

1999

CTI, Inc.
Radioscope Delivery Systems

1998

University of California, Berkeley's Search for
Extraterrestrial Intelligence (SETI) Program
Search for Extraterrestrial Radio Emission from Nearby
Developed Intelligent Population (SERENDIP) Project

1997

Center for the Analysis and Prediction of Storms
and The Pittsburgh Supercomputing Center
Severe Storm Forecasting

1996

Center for Light Microscope Imaging &
Biotechnology
Imaging Technology

1995

Fox Chase Cancer Center
Cooperative Human Linkage Center

1994

Los Alamos National Laboratory
Parallel Ocean Program (POP)

1993

The Pittsburgh Supercomputing Center
Supercomputer Simulation of Enzyme DNA Interaction

1992

Stanford Medical School
The Human Genome Project, The GenBank Computer
Resource

THE 21ST CENTURY ACHIEVEMENT AWARDS

AWARD RECIPIENTS, 1989 - 2008

1992

Westinghouse Electric Corporation
University Supercomputing Centers

1991

NeXT Computer, Inc.
"Zilla" (Community Supercomputer)

TRANSPORTATION

2008

BNSF Railway Company
Locomotive Engineer Fuel MVP Program

2007

Trans Link Systems
Trans Link Systems smart card (OV-chipkaart)

2006

Zipcar
Car Sharing

2005

OnStar
Advanced Automatic Crash Notification (AACN)

2004

California Department of Transportation, District
4 Maintenance
Bay Area Incident Response System (BAIRS)

Southwest Airlines

Supply Chain Optimization Project

2003

American Express Corporate Travel Solutions
TravelBahn

2002

Travelocity.com
Travelocity.com

2001

OnStar
Virtual Advisor

2000

Delta Air Lines
Delta Technology Customer Care System

1999

Continental Airlines
Commercial Use of LADGPS (Local Area Differential Globe
Positioning System)

1998

Science Applications International Corporation
Vehicle and Cargo Inspection System (VACIS)

1997

Hong Kong International Terminals Limited
Productivity Plus Program (3P)

1996

General Motors Corporation
OnStar

1995

AlliedSignal, Inc.
Forward-Looking Windshear Weather Radar System

1994

QUALCOMM Incorporated
OmniTRACS

1993

Baystate Shippers, Inc.
COMMAND System

1992

Federal Express Corporation
Ramp Management Advisor System (RMAS)

1991

United Parcel Service
International Shipments Processing System (ISPS)

1990

Federal Express Corporation
COSMOS II Positive Tracking System

1989

American Airlines
SABRE Reservation Service

THE 2009 PROGRAM JUDGES

Each of the Computerworld Honors Program's ten award categories is judged by a separate panel. All thirty-three executive IT management-level judges are selected based on achievement of high distinction in their relevant field. Panels include a wide range of executive IT management experience in diverse industries and include chief information officers, vice presidents of information technology, deans of institutions of higher learning and industry journalists.

BUSINESS & RELATED SERVICES

Wendell Fox
Senior Vice President, IR NA Lodging Field Services, Marriott International
Dale Frantz
Chief Information Officer, Auto Warehousing Co.
Tony Fuller
Vice President and Chief Information Officer, Rent-A-Center, Inc.
Michael Hugos
CIO at Large, Center for Systems Innovation

EDUCATION & ACADEMIA

Ann Agee
Chief Information Officer, University of Massachusetts Boston
Joanne Kossuth
Chief Information Officer, Franklin W. Olin College of Engineering
Earl Monsour
Director, Strategic IT, Maricopa Community College District

ENVIRONMENT, ENERGY & AGRICULTURE

Rich Gius
Vice President and Chief Information Officer, Atmos Energy Corporation
Marie Mouchet
Vice President and Chief Information Officer, Southern Company Generation and Southern Nuclear
Mark Showers
Former Chief Information Officer, Monsanto
Mike Twohig
Senior Vice President and Chief Information Officer, Clean Harbors Environmental Services

FINANCE, INSURANCE & REAL ESTATE

Nida S. Davis
Chief Technology Architect, Federal Reserve Board of Governors
Rick Peltz
Senior Vice President and Chief Information Officer, Marcus & Millichap
Chris Saneda
Senior Vice President and Chief Information Officer, Virginia Credit Union
Vernon Turner
Senior Vice President, IDC

GOVERNMENT

Cora Carmody
Senior Vice President, Jacobs
Jamie Holcombe
Vice President, Information Systems, Universal Service Administrative Company
Bryan Sastokas
Chief Information Officer, City of Coral Springs
Mike Theis
Chief, Cyber Counterintelligence, National Reconnaissance Office

HEALTHCARE

David Dully
Chief Technology Officer, Baptist Health
Mike LeRoy
Senior Vice President and Chief Information Officer, Detroit Medical Center
Dennis L'Heureux
Chief Information Officer, Rockford Health System
Patrick Moroney
President, Barnier Group
Jay Srin
Chief Innovation Officer, UPMC Health Plan
Peter Young
Chief Innovation Officer, MedImmune

MANUFACTURING

Jon Elassler
Senior Vice President and Chief Information Officer, Timken Company
Jeff Kubacki
Chief Information Officer, Kroll
Joe Puglisi
Vice President and Chief Information Officer, Emcor Group

MEDIA, ARTS & ENTERTAINMENT

Don Tennant
Senior Editor-at-Large, Computerworld
Yuri Aguiar
Senior Partner and Chief Technology Officer, Ogilvy & Mather Worldwide

NON-PROFIT ORGANIZATIONS

Julia King
Executive Editor, Computerworld
Greg Smith
Vice President and Chief Information Officer, World Wildlife Foundation

TRANSPORTATION

Ben Berry
Chief Information Officer, Oregon Department of Transportation
Nick Goss
Chief Information Officer, Destiny USA
Bonnie Henn-Pritchard
Assistant Vice President, Technology Services, BNSF Railway
Patrick Wise
Vice President, Advanced Technology, Landstar

THE LAUREATES 2009

BUSINESS & RELATED SERVICES



ADOBE SYSTEMS

London, United Kingdom

Matrix single-dealer trading platform, created with Adobe Flex Client Technologies

APARTMENT INVESTMENT & MANAGEMENT COMPANY (AIMCO)

Denver, CO, United States

AIMCO HMS IT Transformation

How do you think Information Technology will be different in 2020?

The Technology and useability of new applications will continue to enhance and support efficient business operations.

BT FINANCIAL

Sydney, Australia

Business Service Management

How do you think Information Technology will be different in 2020?

I think we will see further rationalisation of hardware and software suppliers, a drive to return to in-house IT teams with complimentary co-sourcing, and a greater reliance on closer vendor/supplier partnerships. I really hope that IT process automation will be at the forefront of driving IT service efficiency.

What does being a part of the 2009 Computerworld Honors Program mean to you?

I and my team are extremely honoured that something we have approached as a necessary piece of work is seen as an innovative or leading edge project. Just being nominated is something of which we are extremely proud.

CITY SECURITIES CORPORATION

Indianapolis, IN, United States

Mobile Contact List for Smartphones is the Right Insurance for Busy Financial Institution

How do you think Information Technology will be different in 2020?

I believe IT will be extremely commodity based. Solutions will be pre-packaged with abilities to easily tweak/customize to fit the business model that a company uses. Of course 11 years from now is a long time from now and with the velocity of changes in IT, it is difficult to predict what the landscape will look like this far into the future.

What does being a part of the 2009 Computerworld Honors Program mean to you?

The Computerworld Honors Program provides many areas of value to a broad audience. For City Securities, the value of participating in the program is company recognition and pride in achieving successful IT solutions that are adding value to the company, which are worthy of sharing with others.

COPPIN STATE UNIVERSITY

Baltimore, MD, United States

Storage Infrastructure Project

How do you think Information Technology will be different in 2020?

Technology will be more portable and mobile. In addition, technology will continue to spread around the world having a positive impact on countries and people in need.

What does being a part of the 2009 Computerworld Honors Program mean to you?

The Computerworld Honors Program provides recognition and affirmation of how our work in the IT department is having a positive impact on our unique student population. It provides not only recognition of innovative uses of technology but also how technology can be used to have a positive impact on people around the world making it unique amongst IT industry awards. The award also provides recognition of the partners that we choose to work with.

ENBRIDGE, INC.

Arlington, VA, United States

eLink Enterprise People Portal

HBO+EMTB

Sydney, Australia

Managing Digital Data

How do you think Information Technology will be different in 2020?

I think mobility will continue the trend towards lighter, faster, highly functional devices. With the advent of integrated cameras in your mobile there is hardly a moment in history that goes unrecorded. Developments in storage will need to meet the demands of all this data. Could we be looking at a terabyte of storage on your hand-held device? And SANs comprising of 100TB drives or more? I think a lot of us in IT are concerned for the environment and I'd like to think that the technology we will be consuming by 2020 will have lower energy requirements and require less cooling in the data center. Communications, our definition of broadband, is likely to transform. 10 years ago broadband was 128k. Today, its easily 100 times that and more. My guess is that mobile

broadband will be what we consider LAN speeds today and internet in 2020 will be affordable at speeds as fast as light, which I am sure the Generation Z people will complain about being slow.

What does being a part of the 2009 Computerworld Honors Program mean to you?

I was just doing my job when we embarked on this project and although I knew it was an essential step for the company its been an excellent experience to see first hand just how important the impact has been. Its a great honor being considered for the Computerworld Honors Program and to have the good that the team and I and other IT professionals endeavor to do for our users and organizations that we work for recognized.

HBOS PLC

Halifax, United Kingdom

BPMS Core Platform

HM REVENUE AND CUSTOMS

Westminster, United Kingdom

Data Centre Transformation

INDIANA OFFICE OF TECHNOLOGY

Indianapolis, IN, United States

Upgrading IT for taxpayer benefits

LINKSHARE

New York City, NY, United States

Data Infrastructure

LOOMIS

Houston, TX, United States

Loomis Synergy Tracking System

How do you think Information Technology will be different in 2020?

As the cost of bandwidth drops ever lower and available bandwidth—both wired and wireless—soars, the information access and information processing capabilities available to people will dramatically increase. We will carry devices that will connect us to any information we want and display it vividly. E-books, mobile 2-way video, ubiquitous presence awareness will allow (force?) to participate in the information culture 24/7. The IT function of 2020 will likely not be the monolithic group we operate today. The ability to buy commodity services like storage and processing

“from the cloud” will relegate IT infrastructure to a utility function akin to buying electricity. On the other hand, firms will increasingly need to knit disparate systems and disparate processes together across departmental, geographic and even company boundaries. This will elevate the architecture and data management functions into key corporate services, reporting to the highest levels. And programming—the art of decoding user requests and translating those requests into concrete tools—will move closer to the end-users and away from “central IT.” Our challenge as IT professionals over the next decade will be to lead this change towards more central governance at the same time we disband our infrastructure organizations and morph our development organizations into end-user functions.

What does being a part of the 2009 Computerworld Honors Program mean to you?

Being part of the 2009 Computerworld Honors Program means the importance of technology to our firm and to our entire industry is being recognized. The IT and business teams at Loomis have spent countless hours designing and building a new generation of processes and tools that improve the safety of our customers and employees; improve our “Green” posture; provide better information and provide it faster; reduce losses and thefts; and reduce operating costs. We’re also building on this technology platform to deliver new products that help our customers save money and reduce risk. This is the beginning of an industry transformation, and as part of the business/IT team that’s leading that transformation I’m gratified that Motorola and Computerworld have given us the chance to be recognized for our vision, our investment and our success.

MERCK & CO. INC

Sumneytown Pike, PA, United States

MVSP (Merck Vaccine Saving Plan) ANALYTICAL TOOL

MIQS

Boulder, CO, United States

Disease Manager Plus

How do you think Information Technology will be different in 2020?

We would not venture to predict the future of Information Technology eleven years hence. As physicians, caregivers, and citizens we can but express hope that radical new thinking will allow the wide deployment of patient-centered coded medical record systems, tuned to care of the patient. For too long, computing in medicine one of the most complex of human endeavors has failed to deliver on its many promises to improve care of patients and the lot of those whose calling it is to tend them. Overcoming this unfortunate legacy will require not only creative new approaches to the electronic medical record but major changes in the appreciation of what an optimally designed record can achieve for

patients, for caregivers, for the institutions and the business of medicine, and for all those who pay for the cost of caring for the sick.

What does being a part of the 2009 Computerworld Honors Program mean to you?

A great honor for our Company, and humbling for those of us who have long worked to create this new electronic medical record and to demonstrate its power to improve the care of patients and, at the same time, to decrease the cost of medical care. The results that have been documented in the medical literature and referred to herein would not have been possible without the cooperation and fruitful discussions with many colleagues. Nor would they have been possible without the hard work, devotion, and suggestions for improvement of the many caregivers who used the software in caring for their patients.

MOREFIELD COMMUNICATIONS

Camp Hill, PA, United States

Morefield Communications Realizes Immediate ROI and Avoids Costly Upgrades

NATIONWIDE

Columbus, OH, United States

Nationwide Revenue Connection Program

PAYMARK

Auckland, New Zealand

National real time payment system

SABRE HOLDINGS

Southlake, TX, United States

Sabre Air

How do you think Information Technology will be different in 2020?

An account debit is made at a bank’s computer system hundreds of miles away just as Hannah steps out of her taxi and, subconsciously, hears the sounds of her favorite 00’s music subside. A new passenger enters the cab, which automatically adjusts the climate control and seating to meet his needs. The sound of Top 20 music can be heard as the car door closes behind him and the vehicle pulls away. Hannah walks toward the store. Her personal trailer®, a secure electric cart that is linked to her via an invisible leash built on Bluetooth technology, follows close behind. A group of teenagers wearing t-shirts, sporting Liquid Ink® videos of the latest Chinese 3D cartoons, glide past her on magnetic skate boards. As she enters the

store she selects from a list of optional and staple items she has consumed since her last outing, then approaches the grocery aisles which have been customized for her, and the store’s efficiency to only show those items she has a better than 10% probability of purchasing. This probability, the content of the advertisements she sees, even the music selection she listened to on the ride over, are all drawn from an organically evolving Personal Area Network which constantly builds and records her personal preferences - and even predicts when they might be about to change. The goal of technology in 2020 is to be unnoticed - a seamless extension of one’s own personality. Presentation is the differentiator today, everything else just works. Everyone designs. Few program. No one owns a computer anymore. Just as no one in the last century owned a power generator, they simply plugged an appliance into an electrical outlet connected to a distant utility, so people in 2020 connect wirelessly to a computer source they never see.

What does being a part of the 2009 Computerworld Honors Program mean to you?

We are honored to be nominated for this distinguished program. At Sabre Holdings, we continually strive to lead in the travel marketplace by delivering innovative, cutting-edge travel solutions. To be seen as a technology leader by other members of the technology community provides us with a sense of accomplishment. We appreciate being recognized for leading in the marketplace, consistently exceeding our customers’ expectations, and for pushing the limits of technology in building new products and services.

SCALABLE DISPLAY TECHNOLOGIES

Cambridge, MA, United States

From Many One – Mainstream Introduction of Automatic Stacking for 3D and Brightness to Mass Market

SECURITY BENEFIT CORPORATION

Topeka, KS, United States

Hot Site Business Continuity

How do you think Information Technology will be different in 2020?

Ten years ago, who among us could have imagined all of the advances in Information Technology that we have seen to date? Likewise, it’s very difficult to predict how things will evolve over the next ten. Everything will be faster, smaller, with exponentially more capacity to process and store information. Bandwidth will evolve with demand to instantaneously access multi-media information from point-to-point anywhere around the globe.

What does being a part of the 2009 Computerworld Honors Program mean to you?

It means an opportunity to garner some meaningful recognition for our IT team for an outstanding achievement. The Honors Program is a well established, well respected venue for recognizing achievement in our industry and it would be awesome for our team to be recognized.

SKY RESEARCH

Ashland, CO, United States

SAN deployment

How do you think Information Technology will be different in 2020?

Advances in parallelization of hardware (and software to take advantage of it) will enable real time and/or near real time processing of data providing almost instantaneous information from collected data. Wireless Internet connectivity will be available with sufficient bandwidth to allow data collected in the field to be streamed directly to central storage areas for processing. The possibility exists for direct communication between the human brain and the computer, eliminating the need for keyboards and mice and completely altering the way in which we interact with computers and networks and radically changing and improving our access to information.

What does being a part of the 2009 Computerworld Honors Program mean to you?

This is a tremendous opportunity to showcase the work Sky Research is doing to remove the danger created by unexploded military ordnance and underscore the importance of Information Technology in that process.

SNAPLOGIC

San Mateo, CA, United States

KQED Interactive

SPICE COMMUNICATIONS LTD (AN ASSOCIATE OF IDEA CELLULAR LTD), PUNJAB

Punjab, India

Call Center Data Warehouse

SUNGARD

Chertsey, United Kingdom

Infinity

How do you think Information Technology will be different in 2020?

We believe that by 2020 most organizations will partake of technology solutions acquired "through the cloud" - that most will not run their own data centers but will outsource those requirements to large Internet providers. Software will be modular in nature with the ability to customize a composite application that fits specific business requirements. The lines will blur between the business and IT departments with the next wave of technology savvy employees. Technology will become even more ubiquitous and central to increases in productivity and efficiency.

What does being a part of the 2009 Computerworld Honors Program mean to you?

It has been said that the next great challenge to the IT world will be social - in how we change our relationship with technology to build better companies, better communities and eventually a better world. We view this as an opportunity to share with a wider audience some of the lessons that we have learned building on an open source model and creating an example of a more open-access marketplace. To be nominated to participate in the 2009 Computerworld Honors Program is a great honor for SunGard.

TELVENT

Madrid, Spain

Service Management

How do you think Information Technology will be different in 2020?

If broadband communications maintain the same growing path, it will come a moment when it won't be necessary to distribute resources from your disk to your ERP as almost everything will be in a cloud (Cloud Computing). Final users will have the opportunity to manage IT services as a puzzle and the companies ability to capture add value from IT will be enhanced dramatically.

What does being a part of the 2009 Computerworld Honors Program mean to you?

We would be very proud to have our hard work recognised and to share our experience with as many other companies as possible. In the current economic climate, people are looking for ways to become more agile and to make the most of their IT budgets and that's exactly what we have done with this project. Not only have we saved a lot of money, we have also improved the quality of the service provided to our clients and our competitiveness on the market. This IT project has positively impacted the ability of Telvent to offer a better service to our current clients and gain new ones.

THAMES WATER

Reading, United Kingdom

Asset Data Services

UNIVERSITY OF PITTSBURGH

Pittsburgh, PA, United States

Application Virtualization for Effective Software Delivery

US ONCOLOGY

The Woodlands, TX, United States

US Oncology Patient Management Project

How do you think Information Technology will be different in 2020?

With another generation of non-savvy computer users removed from the work place, I anticipate changes in the services provided by IT Help Desks. I see an increase in the utilization of internet self-service and online training and less phone calls and face-to-face service. I also anticipate a change in management style where written communication becomes more critical as manager see less and less of their employees. The ability to provide and communicate clear and concise deliverables will be critical as well as gathering and reporting metrics that support the completion or failure to meet deliverables and timelines. I hope to see IT work environments where stress has been reduced and management and employees have achieved a better balance between work and life. Of course, I expect data storage requirements to be massive as we continue to produce and collect more and more relevant data related to our respective businesses and more and more written communication methods develop and become popular like texting, blogs and instant messaging are today. I would foresee compliance requirements around the need to capture communications using voice-activated devices as well in 2020.

What does being a part of the 2009 Computerworld Honors Program mean to you?

It is an honor to be considered and have the nomination from Deloitte accepted. It is an opportunity to share the efforts of US Oncology and the impact we are having on cancer care in America. Our company has many passionate people surrounding this mission so it is an honor to be recognized for a project we truly feel benefits our patients. It is also an opportunity to bring more awareness to the US Oncology brand which is a key initiative of the company. Our headquarters are located in the Houston area, but our name is not as recognizable as MD Anderson when you think about cancer care even though we

service more patients. We have cancer centers in communities throughout the United States, but they are known based on their local name like Rocky Mountain Cancer Centers or Virginia Oncology Associates rather than US Oncology. We are taking steps so that in the future cancer patients will think of US Oncology as their one stop for information as well as seek an oncologist from the US Oncology network for their treatment.

VANU, INC.

Cambridge, MA, United States

Infrastructure Sharing and Bringing Telecommunications to Poor and Rural Areas

How do you think Information Technology will be different in 2020?

To date, all wide area wireless systems have been built using the same premise. Separate infrastructure and mobile devices that are each built to a pre-agreed standard. The value of building to a pre-agreed standard is that you can have comfort that two devices from different manufacturers will talk to each other. But predefined standards have tremendous limitations. Each standard, using the best technology of the day, is designed to work under some set of worst case conditions around interference, congestion and user requirements. The problem is that under most circumstances users do not find themselves in worst case conditions. Vanu believes that in the future, software radio will eliminate these problems, and make standards obsolete. Today, software radio is practical for the infrastructure, but battery life limits its application to handsets. It always takes more power to build something flexible and reprogrammable rather than fixed and dedicated, but as batteries and low power processors improve, acceptable software radio handset battery life will be achievable. Once you have software radio on both ends of the link, infrastructure and mobile, you have the ability to dynamically optimize the transmission scheme and also to upgrade to new standards through software downloads, eliminating the costly, and lengthy, equipment replacement cycle. A key technology of wireless networks going forward will be the ad-hoc mesh network, allowing devices to relay traffic via peer devices to connect to the Internet rather than relying upon direct communication with infrastructure. Such self-organizing networks will provide seamless coverage in those areas with the highest density of users, where much smaller cells - based on today's emerging femtocell technologies - will exploit spatial reuse to provide a high bandwidth, high performance network.

What does being a part of the 2009 Computerworld Honors Program mean to you?

The Computerworld Honors Program is a great opportunity for Vanu to raise the profile of its solution in the IT world. In the radio world, our unique approach is well known and is being closely watched by the incumbent telecommunications equipment vendors. The system is less well known in the IT industry. This is ironic, because the system affords participants in the IT industry the opportunity to enter a new market, the radio access network, which historically has been the province of a small number of companies. This industry has also historically been protected by significant barriers to entry such as proprietary interfaces between certain system components. With its solution, Vanu moves the wireless communications world closer to that of the IT and computing world. Vanu is seeking to write software for systems that are developed and manufactured by third parties in accordance with open interfaces. The Computerworld Honors Program is an opportunity for Vanu to promote its vision of the future of this market within an influential group of IT executives.

THE COMPUTERWORLD
HONORS PROGRAM
2009

THE LAUREATES 2009

EDUCATION & ACADEMIA



BERRIEN REGIONAL EDUCATION SERVICE AGENCY (BERRIEN RESA)

Berrien Springs, MI, United States

Berrien Regional Education Service Agency Videoconference Program

How do you think Information Technology will be different in 2020?

Videoconferencing in particular needs to grow to the point where it is as easy as a phone call and works cross-vendor without dialing challenges. I hope that this technology will be that easy in 10 years.

What does being a part of the 2009 Computerworld Honors Program mean to you?

Its an incredible honor to be nominated, and to have the opportunity to network with other nominees and award winners.

CAREER EDUCATION CORPORATION

Colorado Springs, CO, United States

Virtual Campus for American Intercontinental University, Colorado Technical University and International Academy of Design & Technology

How do you think Information Technology will be different in 2020?

In 2020, information technology will differ in two areas: better building blocks and more savvy users. As a result, IT will shift from serving its historic functions (e.g., coding, testing, supporting), to focus on business process improvement and value-added functionality enablement. Through 2020, the building blocks of technology will continue to improve in functionality, ease of use, scalability, interoperability and cost. This is perhaps the natural evolution in the maturity of a relatively new industry. Much of the industrys past innovation was a result of new software and hardware components to fill a gap in users needs. As these holes continue to be filled, the innovation efforts can become more focused on refashioning building blocks so they can be utilized in new/different ways for diverse users. While this will present a new challenge the best way to use the technology available users will evolve to use existing technologies innovatively, rather than build new technologies as done in the past. Between today and 2020, users will develop an increased understanding and ability to use technology. We are already beginning to see this in the social networking and education industry. Mash-up applications are being created, and schools are finding it difficult to keep-up with tools that faculty and students bring to the classroom. The integration of these mash-ups is

still at its early stages and, as this evolves, the ability of the users will continue to fill their needs using best-of-breed technology. As a result of these trends, there will be an increased demand and expectation for IT to become faster and more efficient in delivering value to the business and the users. This will perhaps merge the IT function to be much more part of the business, rather than a service function.

What does being a part of the 2009 Computerworld Honors Program mean to you?

Technology has certainly changed our lives through increased productivity. But the ability to use technology to facilitate and enhance connections between an instructor and student improves our society and culture in many ways. The Virtual Campus and the Virtual Commons are key elements to CECs mission of bringing higher education opportunities to people in underserved communities and to individuals with too many responsibilities and too little time to attend traditional colleges and universities. Being part of Computerworlds Honors Program would be a great third-party validation from a highly respected source of IT industry intelligence of CECs pioneering use of technology. Looking to the future, inclusion in this elite program would work to reaffirm and energize our strategic intent to accelerate the development and implementation of technology solutions that can further enhance CECs ability to provide accessible, flexible and high-quality education.

CHICAGO PUBLIC SCHOOLS

Arlington, VA, United States

Web strategy, design and implementation

CHUO UNIVERSITY

Tokyo, Japan

IT Infrastructure Replacement of the Kourakuen IT Center

How do you think Information Technology will be different in 2020?

More secure and reliable high speed wireless mesh network systems with pico-scale computers and mobile PC terminals.

What does being a part of the 2009 Computerworld Honors Program mean to you?

It is meaningful to participate in a worldwide honor program by sharing the ideas of conquering the coming future energy crisis.

COLUMBUS CITY SCHOOLS

Columbus, OH, United States

All School Improvement Plan (ASIP) Consolidation Project

COPPIN STATE UNIVERSITY

Baltimore, MD, United States

Business Intelligence for Key Performance Indicators for Operations

How do you think Information Technology will be different in 2020?

Looking back 11 years, there were still typewriters on some desks, the internet was in the early stages of most campus wide deployments and institutions were struggling with meeting the information needs of the institution. In 2020, we will see computing technology pushed into more and more devices, all of these devices will be networked together and institutions will still be struggling with meeting the information needs of the institution. At Coppin State, we are preparing to continually improve our IT infrastructure by being on the forefront of the technology curve. By continuously review opportunities from both large vendors like Microsoft and Oracle and small entrepreneurial firms like iStrategy, Coppin will stay on the cutting edge of technology and reporting.

What does being a part of the 2009 Computerworld Honors Program mean to you?

We are pleased for even being nominated for such a prestigious award. Being part of the 2009 Computerworld Honors Program brings recognition to Coppin State University, and offers an opportunity to tell our story to the global community. It is also a validation of our efforts that we are moving in the right direction. We thank you for offering us such an opportunity.

FAIRFAX COUNTY PUBLIC SCHOOLS, FAIRFAX NETWORK

Annandale, VA, United States

Flight School TV series and website

How do you think Information Technology will be different in 2020?

In 2020, technology in education will be more integrated and more mobile than ever. Highly-evolved mobile devices will house e-textbooks, e-books, e-newspaper and e-magazine articles, notes, and high-definition media, as well as

having wireless internet, webinar and HD video-conferencing capabilities. An innovative global wireless infrastructure will open the floodgates of information across cultural, social and economic lines. A student's access to information will no longer depend on a dedicated internet connection at home, or on the bandwidth of that connection. This evolution will eliminate the digital divide currently caused by the disparity of socio-economic circumstances worldwide. Students will carry in their pockets the largest virtual library of learning on the planet...a library available from any location 24/7...a library that is part of a global community of learners. Like a massive RSS feed, teachers will be able to post new information on class websites and student devices will pull relevant articles, textbooks and media clips as resources for daily assignments. Teachers could create individualized instruction for student abilities, so that Student A's download might differ from Student B's. Virtual office hours would include videoconferences with students or parents, referencing documents or test results that could be pulled up on the same secure mobile device. Devices with all-time, anywhere access and conferencing capabilities will mean a deeper connection among global communities. Students in Fairfax County can link to and study with students in Japan in real-time, increasing the understanding of different languages and cultures. Students would also have unprecedented access to resources around the world by being able to conference, in video and audio, with any expert on any topic in any location. As communities across the globe learn to harness sustainable resources, so will we learn, in 2020 technology, to harness and share our most important global resource: knowledge.

What does being a part of the 2009 Computerworld Honors Program mean to you?

Computerworld's 2009 Honors Program was billed as "a search for new heroes," and if being selected to submit this Case Study places us among those who could be called heroes, then we are deeply honored. We have submitted our work to awards competitions before, but this opportunity is unique in that it is not enough to create the technology. It is not enough to be part of the IT revolution. What Computerworld requires is that the technology we create change lives and make our communities better. It is a higher calling because it recognizes that the power of technology does not lie in the coolness of the gadgets and gizmos and formats and codes and industry standards. The power of technology lies in its ability to empower people. We believe that we have done that with our project. We believe that we have educated and inspired children with the product we created. The opportunity to be part of this program means that the leading source of technology news and information across the globe places a humanitarian value and importance on projects like this one. It not only validates our work, but will inspire us to keep striving to create products that make our communities better. We are humbly grateful for the opportunity to participate in such a worthy competition.

FOOTHILL-DE ANZA COLLEGE

Denver, CO, United States

College Police Department Protects Campus with Video Surveillance

How do you think Information Technology will be different in 2020?

Technology will be intuitively more user friendly, leveraging on users everyday tasks. Artificial Intelligence will also play a major role, where applications will know or anticipate a users input. Computing speed and large scale memory/storage will reduce the time to complete tasks and make tasks seamless for the user. The use of biometric inputs will be used for more than just security applications, allowing for the user to directly interact with the computing device at several levels. VR will allow for many new uses and be a very common in a wide variety of everyday applications and devices.

What does being a part of the 2009 Computerworld Honors Program mean to you?

Participating in the Computer World Honors Program is a wonderful opportunity. As an organization that is not normally associated with the IT world, it is truly an honor to be nominated. Law enforcement has been traditionally slow to adopt new technology and those organizations tend to be several years behind the IT curve and not on the bleeding edge. To be recognized for utilizing a state-of-the-art IT solution, signal that some in law enforcement are beginning to recognize that they must go outside their comfort zone and engage vendors and solution providers to meet the critical needs in todays safety and security environment. With the current budget constraints, agencies must strive to identify solutions to timely issues that are cost effective and will provide a significant ROI. The CW Honors Program recognition will demonstrate to other law enforcement agencies that they should not fear technology, but should rapidly embrace the COTS solutions available and work with integrators to marry a multitude of products to meet the needs of the organization. Being recognized by such a prestigious award is just the start for additional new and original uses of IT in real-world environments, where data can save a life, prevent a crime, or convict a criminal.

GARVAN INSTITUTE

Sydney, Australia

Centralized Medical Research Database

INDIANA UNIVERSITY OFFICE OF THE VICE PRESIDENT FOR INFORMATION TECHNOLOGY

Bloomington, IN, United States

Serving town, gown and the world: Indiana University's Intelligent Infrastructure

How do you think Information Technology will be different in 2020?

In the coming decade, technology innovation, improvements and advancements will transform technology services from the edge to the cloud creating a utility-like service. IT silos, islands and independent shops will no longer focus valuable staff time and resources on the management of physical assets but rather will benefit from leveraged IT for those needs and will be able to focus those same resources on the value add to their area. As the economic situation of the global economy continues to be a motivating force in business decisions, technology will become more standardized, centralized, virtualized and streamlined. The use of technology will continue to be a critical component of the business of an organization but organizations will drive economies of scale out of IT as they would do in any other portion of the organization. Always available, always flexible and always expandable, IT on demand will be the norm and the expectation of the end customer. Using these strategies today to build the foundation, consumers will continue to expect more flexibility out of the devices and services they use. In 2020, they will expect ubiquitous and free access to high speed networks, environmentally friendly IT that improves their quality of life.

What does being a part of the 2009 Computerworld Honors Program mean to you?

With over 20 years of history, the 2009 Computerworld Honors Program is a prestigious and industry leading event. Leaders in IT look to accomplishments made by recipients to help better inform their future strategies, level tactical implementations and benefit from proven IT approaches. Being a part of such a credible and relevant program is an absolute honor in the IT field.

INTERNATIONAL SCHOOL BANGKOK (ISB)

Nonthaburi, Thailand

International School Bangkok Shores Up Storage Environment*How do you think Information Technology will be different in 2020?*

The ubiquitous nature of technology will make technology seem invisible as technology will in fact be a part of every aspect of life. Each technology component will be fully integrated with all other components. Technology will become the sum of the total separate, but interrelated parts, rather than measuring each component individually. The use of web-based applications will decrease the users sense that a particular technology belongs to one machine or box. The same data and applications will be available everywhere. The sense of separateness that a calendar has will be lost as it also integrates with shopping lists, air-conditioners and lighting controls. Will an integrated calendar application be seen as a calendar or as a personal hub through which many aspects of daily life are controlled? The role of the computer will decrease in importance. Storage will be remote, internet connection will be everywhere, and applications will be largely web based. The computer will become a portal through which convenient, integrated time saving applications are accessed. Need to cook a meal tonight? The online menu integrates with your online supermarket ordering system. Add this to your calendar and the house temperature, lighting and mood music will be automatically integrated to create a whole experience. As the wide use of technology integrates itself into all aspects of life personal privacy will be infringed upon. The amount of data kept and connected back to the general population will increase and will be used to monitor, control, predict, and influence. The sense of being anonymous that we can now still have will be lost. As with the development of all technologies since the industrial revolution, current technology use and development brings with it dangers, responsibilities and positive and negative influences on society.

What does being a part of the 2009 Computerworld Honors Program mean to you?
Being involved in the Computerworld Honors Program brings with it many opportunities. Of course, the opportunity to be recognized is wonderful, and truly appreciated. Who would not want to be recognized by ones peers for outstanding work in your field? We innovate, take risks, strive for excellence, bring dreams into reality, and positively influence our industries. More important than the opportunity for recognition though, is the reflective process you go through as you apply for inclusion in the Honors Program. In

reflecting you self evaluate, you test past hypothesis against current data. Did you really succeed, and to what extent did you succeed. Did you measure up to your own definition of excellence, and if you did, what opportunities have you opened up for your organization in the future. The Computerworld Honors Program gives us a measure of how successful we were and helps to define those future opportunities. After all, we all live for the future and for the opportunities that past decisions have given us.

PERRY LOCAL SCHOOLS

Perry, OH, United States

A Portable Education*How do you think Information Technology will be different in 2020?*

I believe that Information Technology will be different in 2020 in a variety of ways. First, I believe that with the "shrinking" of technology that the devices that will be used for computing and communication will be as small as a wrist watch. Second, with the development of infrared technology that information will be able to be viewed/projected without plug in tools like projectors. Social networks like facebook and Second Life will be the new face of business. Business will truly be 24/7.

What does being a part of the 2009 Computerworld Honors Program mean to you?

I am honored to be nominated for the Computerworld Honors Program because it is my belief that technology will shape the future for the students I serve. It is my hope that my leadership and vision in the area of technology will provide the necessary opportunities for teachers and students so that our millenials are prepared to function in a future we know doesn't exist yet.

PETERBOROUGH VICTORIA NORTHUMBERLAND CLARINGTON CATHOLIC DISTRICT SCHOOL BOARD (PVNC)

Peterborough, Canada

Fast Forward*How do you think Information Technology will be different in 2020?*

The changes in the last ten years have been tremendous, and I expect the pace of change and innovation to only increase. Mobile devices, just beginning to make their

way into the classroom, will be as commonplace as the pencil is today (and teachers will incorporate them as they would a pencil, as a tool). The notion of privacy will have been abandoned, and a rich global village will emerge where young people nurture their virtual reputation the same way adults manage their physical reputation today. Educational software as we know it will be extinct, replaced with online experiences tailored to each student by a database of past work, gaming logs, assessment data and direct teacher input. The data collected on each student will be analyzed in real time, compared automatically with research and best practices and teachers will have easy access to possible strategies to differentiate instruction and targeted learning strategies for their students. Teachers will welcome the world into their class, their comfort with technology allowing them to create rich learning opportunities for their students, effortlessly weaving a videoconference to Beijing into their lesson on China or sharing a wiki on farming with a similar community in Russia. The tools will be similar, i.e. centred on communication and collaboration, but teachers will have the confidence and creativity to use them in ways we have not yet imagined.

What does being a part of the 2009 Computerworld Honors Program mean to you?

Many teacher laptop initiatives have come before the Fast Forward project but few, if any, have seen the incredible results this project has garnered. We have worked hard to provide a great solution for our teachers, focusing on infrastructure, security, management, mobility and especially professional development. These are topics ComputerWorld reports on regularly and as such, recognition in the Honors Program would be a great honour and affirmation of a project of which our school board is very proud. The alternate strategy we could have used with our Fast Forward project could have included investing in our wide area network ahead of teacher training, but that would not have yielded the returns and proof cases which support this being an effective project, and illustrate so clearly to senior administration that this is a worthwhile project. Given what other innovative projects existing in Academia today, this relentless focus on impacting instruction and bridging the divide between teaching and the 21st Century Learner is in my opinion what sets us apart, and why this nomination is such an honour.

ROYAL INSTITUTE FOR DEAF AND BLIND CHILDREN

North Rocks, NSW, Australia

Providing deaf and blind children in remote areas access to quality education through video conferencing*How do you think Information Technology will be different in 2020?*

By 2020 we envisage that the model of service delivery pioneered by RIDBC Teleschool will be commonplace. The current concept of a "media center" will mature to include the integration of the home television, the home computer, high definition videoconferencing cameras and other auxiliary equipment such as diagnostic instruments for a telemedicine appointment. The home living room will become the focal point for interactions linking families to unlimited services and people. The use of the media center will reduce travel time, increase access to services, provide greater flexibility in scheduling appointments and increase connectivity among networks of friends and family.

What does being a part of the 2009 Computerworld Honors Program mean to you?

RIDBC Teleschool is honored to be recognised for our efforts in using technology to support families in rural and regional areas. The Computerworld Honors Program highlights organisations whose use of technology makes a significant contribution to society. We are proud to be included in that category. Service delivery via videoconferencing is a feasible model that can be used to provide invaluable services not only to children with a disability but to any member of the community. As part of the 2009 Computerworld Honors Program we hope our experience will inspire more organisations to embrace technology as a means of providing their services more effectively to a greater number of clients.

SUNY UPSTATE MEDICAL UNIVERSITY

Syracuse, NY, United States

Staying Connected is Good Medicine*How do you think Information Technology will be different in 2020?*

Information Technology will continue to accelerate and integrate new technologies especially in the field of healthcare and education. These environments can benefit immensely if they can stay attuned to these changes bridging the barriers of liability and confidentiality. Equipment will be more compact making it more mobile. Bandwidth will be more robust making applications more accessible to the rural communities via wireless technology. As we move forward with the Golisano Childrens Hospital, we are very optimistic that this application will be accessible from every child's hospital room and will be able to connect to any classroom.

What does being a part of the 2009 Computerworld Honors Program mean to you?

Being nominated for this award is an unbelievable honor. This gives us a wonderful opportunity to share our experience with peers across the nation. We have been fortunate to be able to provide this additional form of education to the children within our hospital and have seen first-hand the benefits this has provided these children.

TULANE UNIVERSITY

New Orleans, LA, United States

Optimizing the University Document Services Center*How do you think Information Technology will be different in 2020?*

In 2020, I expect information technology to be much smarter, faster, cheaper and mobile. For example, specific to my work at Tulane, I envision a day not too far in the future where an academic advisor away from their desk and in a conference room across campus could use a netbook or iPhone to securely pull a students record out of the Universitys enterprise content management system. Then have the ability to send the document from their phone to the printer in the room. The iPhone could acquire the printer, send the printer path to DocuShare and automate the download to the printer all within a matter of minutes. Instant access to the information needed to guide students both in academics and financial situations is the lifeblood of higher education. Our faculty and

staff needs to be able to retrieve and share business critical documents in seconds to keep pace with students and achieve university growth targets. Information technology is quickly reaching the tipping point where documents are ubiquitous, available wherever you are in the office or on the go, whenever you need it outside of work hours or even going back to decades past, without IT assistance or high costs.

What does being a part of the 2009 Computerworld Honors Program mean to you?

Having Tulane Universitys Document Services Center recognized as part of the Computerworld Honors program means a great deal. Its an industry acknowledgment that the best technology projects are not always initiated and implemented within an IT department, but by other business units that recognize how the deployment of smarter technology can improve the way they get work done. I often read that IT departments are fighting with the rest of the company for resources such as budget for projects, support for process and technology changes and to foster adoption of new tools. But that need not be the case. Like Tulane, business units can take control of their technology needs and collaborate with the IT department to share expertise and create solutions that are more customized, efficient and cost effective.

UNIVERSITY OF BIRMINGHAM

Birmingham, United Kingdom

The University of Birmingham Upgrades Wired Network Infrastructure and Installs Campus-Wide Wireless**UNIVERSITY OF PITTSBURGH**

Pittsburgh, PA, United States

Emergency Notification System

THE COMPUTERWORLD
HONORS PROGRAM
2009

THE LAUREATES 2009

ENVIRONMENT, ENERGY
& AGRICULTURE



AUSTIN ENERGY

Austin, TX, United States

Utility of The Future

CITIZENS BANK

Riverside, RI, United States

Green IT

How do you think Information Technology will be different in 2020?

Information Technology will continue to evolve in the infrastructure space. Greater synergies will be achieved as it will be understood that the data center is indeed an integral part of product delivery. The global community will realize that a Green approach can not be successful without the participation of the global community. Benefits will be offered or mandated by the global or individual communities and governments. Tax incentives will be offered to corporations that focus on and reduce their carbon footprint. Penalties will be leveled on corporations that infringe upon the environment without regard to constant improvement. Thus, pressure will be felt from government and local communities to become a good corporate citizen. Facilities and Systems infrastructure will report to each other and better adapt. More organizations will reap the benefits of power monitoring and improving infrastructure resiliency. We will be better able to track, report and react.

What does being a part of the 2009 Computerworld Honors Program mean to you?

Being a part of the 2009 Computerworld Honors Program will further strengthen the pride team members have received knowing they will have a positive effect on the environment while increasing the revenue of their company. Previously independent work silos now working jointly will be validated as a winning approach to business development. Winning this award will confirm the true win/win approach to operating a business. This is the snowball effect. The team will continue to roll out and stay focused on creating project efficiencies that have a positive impact on the environment and the business. Often a team can have great players. However, it is rare occurrence when the coach can mold the players into a cohesive organization. Winning this award will foster great pride to all team members and further strengthen the determination to constantly improve business practices in concert with protecting the global environment.

COMMONWEALTH OF PENNSYLVANIA - OFFICE OF ADMINISTRATION, OFFICE FOR INFORMATION TECHNOLOGY

Harrisburg, PA, United States

Commonwealth of Pennsylvania Shared Services Initiative

How do you think Information Technology will be different in 2020?

Looking more than 10 years into the future of IT is a challenge even for analysts who make their living doing so. Technology at all levels will move beyond facilitating and speeding transactions and offer even more seamless and comprehensive ways to understand, analyze, use, and visualize information. Information will become an even greater foundation of all learning, creative and productive processes. The increasing efficiency and portability of IT devices as well as the ubiquity of well synthesized information will allow employers to radically change their workplaces, eradicating desk-based work and integrating previously unrelated functions into new professional disciplines. It will be part of the business and government mainstream that IT ceases being viewed as something 'unto itself' and will be planned and budgeted for on the short-term more like a utility and on the long-term more like a capital expense.

What does being a part of the 2009 Computerworld Honors Program mean to you?

Government IT professionals are often besieged on two fronts: by other private-sector IT professionals who view government service as a step down from "real" IT work and by policymakers who view IT as a large budgetary line-item ripe for cutting. Being part of the Computerworld Honors program would allow OA/OIT's professionals to make a bold statement about the scope, scale, leadership, sophistication and impact of their work. Moreover, it will help all government IT professionals make a stronger case to all policymakers that IT investments are investments in citizen services.

COUNCIL ROCK SCHOOL DISTRICT

Newtown, PA, United States

Go Green

How do you think Information Technology will be different in 2020?

Matt Frederickson: "I believe that there will be virtually no separation of IT and education in terms of day-to-day processes. The line will be blurred to the point that it's hard to tell where normal tools or processes end and technology begins. Kids don't think about technology. Using their cell phones for texting isn't technology to them. Having IM on their computer isn't technology to them. That kind of separation doesn't exist in the mind of kids. In 2020 I don't think there will be any separation at all."

What does being a part of the 2009 Computerworld Honors Program mean to you?

Matt Frederickson: "For our school district, this recognition validates that the things we are doing can reach and help more educational institutions around the world. We hope that what we have accomplished can change the outlook for schools that are facing terrible economic pressures and looking for programs that can make a real difference to their futures. From an individual standpoint, this is recognition that technology is a true partner in education and the environment, and the three working together can create meaningful, sustainable changes in our educational systems, in the lives of our children, and in the health of our planet."

ENERGY & COMBUSTION SERVICES (ECS)

Pinetown, South Africa

eFLEET

P&G

Cincinnati, OH, United States

Visualization Collaboration and Virtual Reality Technology

PÃO DE AÇÚCAR

São Paulo, Brazil

Retail Sustainability – Green Store

ROCKHURST UNIVERSITY

Kansas City, MO, United States

The Green Campus

How do you think Information Technology will be different in 2020?

We believe that the future of computing will be more cloud computing and that devices will continue to get smaller and smaller. The personal PC will probably be more like the size of your iPhone but have some projection capabilities to allow for larger screens and larger projection keyboards to type on. The corporate network will probably be reduced to a small data center and everything will be wireless over a faster 3G type connection that will blanket the entire city. Since most service will be in the cloud it will eliminate the need for a lot of the switches, firewalls, routers, and wireless access points that we use today.

What does being a part of the 2009 Computerworld Honors Program mean to you?

Rockhurst University is extremely pleased to have been nominated for such a prestigious award. We feel that even though we are a smaller private University, we have an extremely talented and well-rounded IT staff. We try to push the envelope when it comes to technology. We firmly believe that technology is the future not only for big businesses, but also for education. We work extremely hard to deliver the best technology to our students and provide them the IT resources they need to be successful. Here are some other examples of large IT initiatives we have accomplished in the past: In 2005, Rockhurst we installed a wireless network covering inside all academic and residential buildings, as well as outdoors across the entire campus. As a result of this project, Rockhurst University was named No. 26 on Intels 2005 Wireless College Campuses list. In 2006, Rockhurst began providing laptops to all faculty and staff to replace their desktop systems. In 2006, Rockhurst replaced all lab printers with Xerox multifunction devices and introduced the Equitrac pay for print system. Prior to this change, boxes and boxes of paper were being wasted with large numbers of unclaimed print jobs, a problem that was both financial and environmental for the University. In 2007, Rockhurst implemented a new SAN with 8 TB of disk space in coordination with VMware to replace and consolidate outdated server hardware. In 2008, Rockhurst implemented VDI and thin clients to replace all lab computers on campus. In 2009, Rockhurst moved all student e-mail to the Microsoft hosted solution called Exchange Labs. Students went from having 30mb e-mail storage to 10GB e-mail storage. In 2009, Rockhurst implemented a Campus Portal from CampusEAI for all students, faculty and staff with integrated single-sign on for all applications. Thank you for your consideration.

THAMES WATER

Reading, United Kingdom

Traffic Management Act

US ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF ENFORCEMENT & COMPLIANCE ASSURANCE

Washington, DC, United States

Integrated Compliance Information System (ICIS)

XCEL ENERGY, INC

Denver, CO, United States

SmartGridCity

How do you think Information Technology will be different in 2020?

Information technology in 2020 will be markedly different than it is today. SmartGridCity provides a glimpse of what the future IT landscape might look like. It is a landscape shaped largely by the need to manage extraordinarily large volumes of information. The average size of customer data warehouses in data-intensive industries has grown six-fold in the past five years. Growth of structured and unstructured data volumes will continue at a breathtaking pace. That is already evident in SmartGridCity, which uses sensors and embedded devices to generate and deliver real-time information on a continual basis. With the traditional electrical grid, Xcel Energy read meters once per month. With the smart grid, it can read meters every 15 seconds. This means the utility generates up to 45 times as much information every second as it did under the old system. To accommodate vast amounts of data and high volumes of complex queries, real-time data warehouses will be the norm. Many of the key technologies are already in place to support the development of these data warehouses, including network bandwidth that supports near real-time transfer of data and faster and cheaper computer hardware and storage. Ultimately, however, real-time data warehouses will not be sufficient to manage the anticipated volumes of real-time information (such as that produced by sensors and GPS-enabled devices). Using that quantity of data effectively will require highly scalable analytical techniques, flexible infrastructures that integrate with mobile, in-home or in-industry devices, and service-oriented architectures that connect different types of data, whether structured or unstructured and regardless of its degree of granularity.

What does being a part of the 2009 Computerworld Honors Program mean to you?

We believe that SmartGridCity will transform the way energy is distributed, managed and used. While we are encouraged by the broad interest this project has garnered over the past year, we are constantly on the lookout for opportunities to expose an ever-wider audience to the reality of smart grid technologies and to the potential for these technologies to transform the utility industry. Being part of the Computerworld Honors Program validates our innovations in information technology in a powerful way and allows us to present our important work to those at the heart of the worlds ongoing IT revolution.

THE COMPUTERWORLD
HONORS PROGRAM
2009



THE LAUREATES 2009

FINANCE, INSURANCE
& REAL ESTATE

THE LAUREATES: FINANCE, INSURANCE & REAL ESTATE



BANCOLOMBIA, TECHNOLOGY GROUP

Medellin, Colombia

Bancolombia Data Center Consolidation Initiative

How do you think Information Technology will be different in 2020?

Information Technology is alive, breathing and evolving by the day. The year 2020 is difficult to envision because of the speed in which technology changes today. However, we believe technology will enable us to be even smarter by 2020 smarter in the way we work, in the way we communicate, in the way we create, in the way we learn, in the way we produce, in the way we use information, in the way we relate, think and entertain in the way we do everything. Computing power and functionality will not be an issue, but information will. The physical and digital worlds will collapse and converge, and with them, the information. Technology will facilitate how we understand, analyze, use and visualize information. Information technology will not replace human relations. It will definitely make us smarter, making us use parts of our brains never used before. But as a prerequisite, we need to work together so it is used to do good and for helping those close to the gap between those who have and those who do not. Bancolombia is hopeful that by 2020, as a region, Latin America will emerge as a leader in Information Technology. We are dedicated to knowledge sharing as a fundamental best practice and will continue to pursue relationships with other leaders in the global IT community so that we can learn as well as teach others. The regions economies are becoming further integrated with other regions, as leaders rather than satellites, and our emerging markets will continue to development despite the global economic troubles. The technology that will support our industries, such as financial services, will inevitably become more sophisticated and secure. We hope to develop our IT sector, so that companies like Bancolombia, can be seen as models of excellence.

What does being a part of the 2009 Computerworld Honors Program mean to you?

Being part of the 2009 Computerworld Honors Program has many special and important meanings to us and is an honor for the entire IT team. While Bancolombia is certainly a leader in the financial services industry of Colombia, it is also a relatively small organization with a regional scope and success story. Therefore, to be honored for our accomplishments in Information Technology among some of the largest global enterprises is a profound achievement. The IT Group is proud to represent Bancolombias commitment to innovation and uniqueness, and hope that other areas of the world will see the significant

contribution that Latin America can and will continue to make to the global business community. It is a message that, yes, we are on the right track. It rewards two and a half years of very hard work and the many sacrifices of a very special and committed group of people. This is recognition that we are on the right track because we are among the best the best in the way we have envisioned our strategy, our working model and the projects we are executing. But mainly, it recognizes the way we are working as a team today. For a technology group in Colombia and a group that belongs to the financial sector at this precise moment, it is also a booster to our morale, a shot of adrenaline to our team that motivates us to continue working and making the efforts we need to make the next two or three years to finish our transformation. Its truly an honor.

BARCLAYCARD US

Wilmington, DE, United States

Leveraging Data Deduplication Technology for Improved Disaster Recovery

CREDIT SUISSE

New York, NY, United States

CS Equities Test Center

FIRST AMERICAN

Santa Ana, CA, United States

First American Financial Transformation

ICICI BANK LTD, INDIA

Mumbai, Maharashtra, India

Data Warehousing Implementation and Business Intelligence

mitsubishi UFJ SECURITIES INTERNATIONAL PLC (MUSI)

London, United Kingdom

Rates Trading Group Infrastructure

NORTHEAST DELTA DENTAL

Concord, NH, United States

Meeting Backup and Recovery Needs with Data Deduplication Technology

PEMCO MUTUAL INSURANCE COMPANY

Seattle, WA, United States

PEMCO Testing Project

How do you think Information Technology will be different in 2020?

By 2020, there will be few places where there is no interactive screen available to entertain and sell us goods and services. IT operations and infrastructure will no longer be part of the average organization, having been outsourced to what is today referred to as the cloud. Custom code will only be written for experiences that define an organizations persona. The majority of development (common applications) will take place within packaged service providers providing what is now known as SaaS. Identity will be contained in a device; Americans will have given up their anonymity for the customized experience with their merchants and to stay in constant contact with their friends and entertainment sources. Commerce will be driven off of entertainment and any experience not driven from the perspective of entertaining the user will fall out of existence.

What does being a part of the 2009 Computerworld Honors Program mean to you?

I do believe it creates value for PEMCO.

PRICEMETRIX INC.

Toronto, Canada

ValueOne Project

How do you think Information Technology will be different in 2020?

IT is going to increasingly dominate the discretionary spending of corporations on the productivity of their resources. I believe the greatest advances will be experienced in the application of predictive analytics to support corporate, individual, and government decisions. Behavioral economists are discovering that humans do not make decisions in strict accordance with the economically rational man model. They often appear to make decisions irrationally meaning in an as yet to be explained manner. The ability to predict this consumer irrationality will prove to be very powerful in defining product

features, service levels, and responses to events to better satisfy societys needs. The ability of IT to drive predictive analytics that improve human assessments of situations (i.e. medical diagnoses, military predicaments, group behavior such as riots or voting, or simply the act of driving a vehicle) will undeniably result in increased social welfare.

What does being a part of the 2009 Computerworld Honors Program mean to you?

I am excited about the opportunity to learn from a set of business leader peers in a forum dedicated to honoring technological contributions to society. Indeed, participating is both an honor and acknowledgement of success, which can be inspiring to my employees and technology professionals anywhere. Leadership is often lonely, and the ability to collaborate with leaders and firms that have set new standards of excellence has to benefit those open to new ideas and interested in solving the next big problem, in whatever vertical or country it may be found. I see many of us (the participants and sponsors) as ambassadors for the application of technology to advancing social welfare. Thank you for the opportunity.

SE2

Topeka, KS, United States

403(b)connect

How do you think Information Technology will be different in 2020?

We will continue to see an expanded use and acceptance of Web 2.0 technologies within companies. The key question we should be asking is - "How will Web 2.0 affect the end customer interface with organizations?" There will be an expansion of sales and marketing opportunities through social networking communities. Companies positioned to participate and even help support these networks will prosper. In the financial sector, we will continue to see a tightening of controls and compliance solutions, introduced by both private and public sectors. We need order restored in the marketplace and it will take years of hard work to totally gain back the World's confidence. The knowledge and experience required to support legacy platforms is gradually moving into retirement. Some time during the next decade, insurance and financial service organizations will need to replace or eliminate 30 to 40 year old legacy platforms. The cost and complexities to maintain these platforms will be more than companies can financially support. It's no longer a choice, its a reality.

What does being a part of the 2009 Computerworld Honors Program mean to you?

The Computerworld Honors Program celebrates the betterment of society through technology. Recent headlines report on the failures of major financial institutions and revelations of fraud by trusted investment advisors. Meanwhile, government officials warn of the danger posed by the erosion of public confidence in the economy. The opportunity to participate in the 2009 Computerworld Honors Program with a submission that has contributed to improving the financial system and providing a sound basis for investor confidence gives se2 great satisfaction. Moreover, we are honored to be in the presence of other esteemed organizations which are sharing their technology advances. Finally, should se2 receive recognition, this would help validate the importance of se2's solution to society in these uncertain economic times.

STATE STREET CORPORATION, GLOBAL INFRASTRUCTURE SERVICES

North Quincy, MA, United States

IT Infrastructure Transformation 360

THE COMPUTERWORLD
HONORS PROGRAM
2009



THE LAUREATES 2009

GOVERNMENT

THE LAUREATES: GOVERNMENT



ASSISTANT SECRETARY OF DEFENSE (PROGRAM SUPPORT)

Washington, DC, United States

Synchronized Predeployment and Operational Tracker (SPOT)

How do you think Information Technology will be different in 2020?

In 2020, our world will be more dependent on information technology. Users will no longer focus on where their data is stored and where applications are hosted. Rather, they will consume IT services on demand from the cloud that provides capacity and capabilities when and where they need it. This will cause a fundamental shift in focus from building and sustaining the physical infrastructure and managing the virtual implementations that support automation of business processes into newly emerging application and computing patterns. Understanding and communicating this change to users will be critical to information technology professionals who will be required to recraft their skills to remain relevant to their organizations.

What does being a part of the 2009 Computerworld Honors Program mean to you?

The Computerworld Honors Program recognizes exceptional technological innovations that solve real-world problems and impact multitudes of people. The Program also acknowledges the men and women who develop and hone the technology to the benefit of its users. This program provides industry and government the opportunity to jointly recognize the shared partnership needed to drive successful programs. It provides us the unique opportunity to document our successes and share them with other colleagues across government and industry.

CDC

Atlanta, GA, United States

National Healthcare Safety Network

How do you think Information Technology will be different in 2020?

We can only hope that IT will provide more easily scaled solutions with robust support for rapidly changing business rules.

What does being a part of the 2009 Computerworld Honors Program mean to you?

The NHSN is honored to be considered by the Computerworld Honors Program.

CITY OF PORTLAND, OREGON

Portland, OR, United States

Enterprise Business Solution project

How do you think Information Technology will be different in 2020?

User expectations and the pace of change will bring incredible changes and opportunities in information technology over the next decade. Some of the differences I expect to see are: Complete and easy integration of systems- Handheld and wireless devices will interface with ERP systems for remote data collection and data look up. Electronic data filing and storage-Employees and citizens will easily access information any time of day. E-Government matures-Electronic transactions will be easy and common place for all types of business saving paper and travel. Hardware becomes sustainable-Materials and processes for reducing waste and reusing parts will become standard practice. Alternative energy sources used-Systems will be powered by solar, wind and other "green" sources of energy. More workers telecommute-Advances in teleconferencing and connectivity will allow more workers to work from home or remote locations saving energy and time.

Governments share systems and collaborate-Efficiencies and cost savings will be gained by establishing data centers and sharing expertise. Physically challenged workers and citizens have access-Seniors and others with physical limitations will have new and improved tools to access and use information. One example might be voice activated devices. Real time information for governance-New and better tools will allow citizens to respond in real time to choices posed by elected officials regarding budgets, construction projects, program alternatives and more. The blog phenomenon will be organized to create effective forums-Creativity, idea sharing and information will flow easily among interested and contributing parties to boost civic engagement, learning and research.

What does being a part of the 2009 Computerworld Honors Program mean to you?

First, I would like to thank you for sponsoring this program. It is a wonderful way to recognize the best efforts in technology and promote networking.Participation in this program provides an excellent forum to share positive stories and accomplishments in information technology. The City of Portland's EBS Project has been transformational. From the business process improvements to the organizational change, it has been a challenging yet exciting undertaking. Having a place to present the results and receive validation of our success in extremely valuable for our citizens and elected officials. For the employees who worked on the project it provides recognition and acknowledgement of the value of their contributions.

COLLIN COUNTY DISTRICT COURTS

McKinney, TX, United States

Felony Video Plea Program

How do you think Information Technology will be different in 2020?

I believe technology will be the driving force for innovations in the years to come. The world's dependency on technology will grow as will the demands the consumer will make on technology developers.In the realm of the court system I think technology will revolutionize the way the court system functions. I envision "virtual court" where no one associated with the case will actually appear in a courtroom, but rather will appear by video conference. I believe the evidence reviewed by the court which has been traditionally documentary evidence will evolve to almost exclusively to digital evidence. The innovations will impact the courts in many positive ways by more rapidly processing a case through the system, saving attorney's costs and fees because the attorney no longer has to travel to get to court and the courts will benefit by having immediate access to people and documents.The technology will hinder many aspects of the court system as well. The use of technology often blocks the formalities of the courtroom, hinders a persons ability to "confront their accuser" and limits the prestige of the rule of law we have become accustomed.All in all, society will benefit greatly from technology in and outside of the court setting. In any case of change and innovation certain aspects of the process will be forever lost. Sometimes this is to the benefit of society and sometimes it is not.

What does being a part of the 2009 Computerworld Honors Program mean to you?

It is an honor to be part of the 2009 Computerworld Honors Program. We are proud of what we were able to accomplish when we put aside the desires of individuals and focused on the benefit to our organization and the taxpayers we serve.It is a great pleasure to be recognized for innovation and, especially, innovation originating from a governmental entity. People hear so often and experience so often the inefficiencies of government and government waste. Here, we have been able to make government more efficient and save taxpayer dollars. Finally, it is our hope that the recognition we have received by being a part of this Honors Program will help send a message to all levels of government that innovation, savings and technology can be accomplished simultaneously. Thank you for your recognition and consideration.

COLORADO DEPARTMENT OF HUMAN SERVICES

Denver, CO, United States

AFCARS Tracking

DEFENSE INFORMATION SYSTEMS AGENCY (DISA) INTERDICTION SUPPORT BRANCH, DEPARTMENT OF DEFENSE (DOD)

Falls Church, VA, United States

Anti-Drug Network (ADNET) Program Management Office (PMO)

How do you think Information Technology will be different in 2020?

In 2020 who can say what the information technology landscape will look like? Considering that today information technology is drastically different than it was in 1998, its a safe assumption that it will further progress in leaps and bounds at hyper speed in the next 11 years. It is likely that IP computing and the advantages of the cloud will largely affect how information technology is designed, delivered, implemented, and utilized. Furthermore, the popularity of social networking, user-generated web-content, and web 2.0 technologies will be game changers if they have not been already. Many aspects of daily life, business or otherwise, will be enhanced by the functionality of information technology. In 2020 the physical office will be close to irrelevant. Sure, most folks will still commute to work in order to preserve their daily customs and rituals, but teleworking, unified communications, and collaboration technologies will be seamlessly integrated into the enterprise landscape. The ability to access people and information across global networks will occur with instantaneous speeds because of global network enhancements backed by presence information on all business and personal entities. Home lives and socializing will continue to evolve with the advancements in social networking and inter-personal e-communications. With the ever expansive information technology realm in the cloud, people will be able to reach each other at any time from a multitude of devices tethered to any number of networks, access information on any subject, and utilize information technologies to digitally enhance their everyday lives and actions.In short, the advances in information technology in the next 11 years will streamline current information

technologies to use less power, take less time for processes, take up less space, and communicate with an infinite number of entities across vertical markets, the global enterprise, and homes everywhere.

What does being a part of the 2009 Computerworld Honors Program mean to you?

The Computerworld Honors Program is an extremely prestigious award program that recognizes the top innovators in information technology. To be eligible for recognition and to develop this case study is an honor in and of itself. With the diversity of information technology what it is today, to be considered unique, valuable, and beneficial on a societal level means that the technology weve dreamed, developed, and implemented has already left an impact and hopefully accomplished its mission and/or goals. That is satisfaction enough; however, to be chosen among your peers and inducted into the Laureates Class of 2009 means that the value of your project is relevant not just to your customers but also to the information technology community at large and benefit us all.

DIVISION OF WORKERS COMPENSATION, DEPARTMENT OF INDUSTRIAL RELATIONS, STATE OF CALIFORNIA

Oakland, CA, United States

Electronic Adjudication Management System

How do you think Information Technology will be different in 2020?

Information technology in the public sector always trails the private sector. From a Public Sector standpoint we see more and more push toward using COTS products instead of custom development, more products geared towards the public sector to enter the market place. We will also see a more enterprise wide strategy adopted by public sector agencies and states instead of several non-integrated disparate applications across programs. We will also see a lot of mobile computing being integrated into Public Sector applications and possibly a more mature web 2.0 technology. The adoption of cloud computing remains to be seen.

What does being a part of the 2009 Computerworld Honors Program mean to you?

Computerworld Honors is one of the most widely recognized awards. Especially with the challenges we faced around implementing a revolutionary system in the business of workers compensation, the effort put in by the DIR, DWC and the System Integrator team, recognition from computer world would be held in high esteem.

ERLANGER KENTUCKY POLICE DEPARTMENT

Erlanger, KY, United States

Searchable Crime Database

FEDERAL DEPARTMENT OF EDUCATION- FEDERAL STUDENT AID OFFICE

Washington, DC, United States

ISIR Analysis Tool

How do you think Information Technology will be different in 2020?

We anticipate that information technology will continue to become even more integrated into peoples professional lives in the future, which will further blur the various distinctions among being IT professionals, data analysts, managers and front line staff. With the increasing demand to do more with less, we will see an emerging need to push decision making down through all types of an organization. The companies that effectively utilize information technology to make those fast decisions in a smart way will succeed, while those that do not will fail. This selection process will spur even more progress as effective and original applications are copied by others.

What does being a part of the 2009 Computerworld Honors Program mean to you?

Having our teams dedication and innovation recognized is very gratifying. Teamwork in federal agencies is often overlooked and under reported, so it is an honor to be a part of the Computerworld Honors Program. We also hope that our efforts to foster similar analytical applications in other areas of Federal Student Aid will be furthered by public recognition of this program.

GEORGIA DEPARTMENT OF COMMUNITY HEALTH

Atlanta, GA, United States

Transparency Website for Healthcare Consumers

How do you think Information Technology will be different in 2020?

In 2020 Information Technology will be even more embedded in our daily lives and affect everything we do from commerce to family life to healthcare to participation in our democracy. Technology will enable new forms of collaboration, innovation, industries, and will

GOVERNMENT

transform our governments into even more active participants in our community, businesses, and social fabric. The mobile web and personal-aware devices will bring even more innovation through Information Technology that will transform our lives and society even more.

What does being a part of the 2009 Computerworld Honors Program mean to you?

Being a part of the 2009 Computerworld Honors program will formally recognize the value of collaboration between public and private organizations to develop an innovative solution for the benefit of Georgias health care consumer. The project has resulted in the creation of a tool that will empower consumers to make better informed choices about their health care. Receiving the 2009 Honors award will distinguish Georgia from other States for the innovation, creativity and value that Web site provides its citizens.

GEORGIA DEPARTMENT OF HUMAN RESOURCES, DIVISION OF FAMILY AND CHILDREN SERVICES

Atlanta, GA, United States

Georgia SHINES

How do you think Information Technology will be different in 2020?

Technology will continue to evolve to be more personalized, unitized, and will operate cross platforms. Technology will be personalized in that professionals will have the ability to tune solutions to meet particular needs. It will be unitized, in that discrete units will be exposed as services that can be leveraged in a variety of ways and repackaged in a variety of ways. And finally, platforms will increasingly leverage common processes that will further reduce the need to rebuild on new platforms, providing new ways to harvest IT investments, rather than rebuilding investments.

What does being a part of the 2009 Computerworld Honors Program mean to you?

Georgia SHINES is the culmination of 15 years of attempts to implement a robust child welfare solution for Georgia. With determination, a good foundation solution, sponsorship, and an organization that would not let the opportunity slip away again, we were able to implement Georgia SHINES. The Computerworld Honors Program is an opportunity for Georgia to not just say, we did it, but is an opportunity to say, we did it well and you can learn from our experience. We rebuilt from our previous challenges and have gone from laggards to leaders. We are proud, and we appreciate the opportunity to pause, take stock in our success, to communicate it, and then to continue the journey.

GOVERNMENT OF THE STATE OF BADEN-WUERTTEMBERG, GERMANY

Stuttgart, Germany

Abgeordneten-Informationssystem Landtag Baden-Wuerttemberg - Information system for the parliament of Baden-Wuerttemberg

MILITARY HEALTH SYSTEMS

San Diego, CA, United States

Nationwide Health Information Network-Connect

MINISTERIO DE HACIENDA DE COSTA RICA - MINISTRY OF FINANCE OF COSTA RICA

San José, Costa Rica

New Integrated Model of Digital Tax and Revenue Management

MINISTERIO DE TRABAJO E INMIGRACIÓN, INSPECCIÓN DE TRABAJO Y SEGURIDAD SOCIAL

Madrid, Spain

Integra

How do you think Information Technology will be different in 2020?

It will be closer to natural language, and it will be possible to ask the information system questions in a natural way including texts, graphs and geographical maps, as well as video and audio material. Surely, there will be another type of devices we cannot imagine now as an information interface.

What does being a part of the 2009 Computerworld Honors Program mean to you?

It is a nice incentive to know that a prestigious external institution recognises the work of modernisation that has been conducted over the last years.

PRINCE GEORGES COUNTY POLICE DEPARTMENT

Landover, MD, United States

Active Crime Reporting(ACR)

STATE OF FLORIDA OFFICE OF FINANCIAL REGULATION

Tallahassee, FL, United States

Regulatory Enforcement and Licensing (REAL) system

How do you think Information Technology will be different in 2020?

As a regulator, it is crucial that you see the big picture. REAL has provided this ability by transforming the existing set of patchwork systems and inefficient processes into a single database to support key business processes. We can now see, through the entity comprehensive view, all key regulatory data for a given entity. We can use this data to drive the regulatory program and best utilize the Office's limited resources. Over the next 10 years, technology will play an ever-increasing role in the work of regulators by providing them with more timely, more decisive information about the industries they regulate. As regulators refine their use of this data, they will be able to best utilize their limited resources in the areas that have the greatest impact on consumer protection. Rick White, Former Director of the Florida Office of Financial Regulation Division of Securities. The REAL project provided us the technical foundation on which to expand our data mining efforts. Over the next 10 years, I believe technology will continue to provide insight for regulators to spot trends in our complaint process to minimize violations of Florida Statutes in all areas of our regulatory responsibility. Alex Hager, Acting Commissioner of the Office of Financial Regulation

What does being a part of the 2009 Computerworld Honors Program mean to you?

Being a part of the 2009 Computerworld Honors Program would mean a great deal to our organization and the numerous personnel who were so heavily involved in making the project a success. The mortgage and securities industry, and those that regulate it, have received its fair share of press this year. We believe the journey we started nearly four years ago with our internal feasibility study and the thousands of hours spent since then as part of the REAL project (requirements definition, design development, training, process reviews, user acceptance testing, and system implementation, etc.) was all to further the work we do as regulators to ultimately protect the financial interests of Floridians. In short, to help

us license more efficiently and regulate as fairly as possible. To win the 2009 Computerworld Honors Program award would be a formal acknowledgment of our personnel's hard work and the tangible benefits to our licensees and the public that have been achieved as a result of the REAL project.

STATISTICS SWEDEN

Stockholm, Sweden

Systemutveckling i Praktiken (SiP) (System Development in Practice)

How do you think Information Technology will be different in 2020?

The soft part and usability of IT is becoming more of interest. Even though there will be new hardware innovations in the field of Information Technology, I think the softer parts will play an increasingly part even for the hardware. There will probably be designs that are supposed to fit several life styles and ages. The older generation will know more and be technology savvy which will augment the innovations for older people and their needs. Quality will be the key word, and quality has to reflect to what people want. Since quality becomes more important, I think the process of finding the requirements will increase in importance and of course the methods and models to support this process. There will be a lot of help for writing code so the job within IT will have a lot to do with configuration. The information must be easily accessed and the interaction with information will increase.

What does being a part of the 2009 Computerworld Honors Program mean to you?

Recognition of our work and that we are on the right track. It also has served us as a good reminder of what we actually have accomplished! We realized that we have done a splendid job, what we now take for granted, has served as the foundation for a lot of projects that in some way serves as follow-up projects to SiP. All the work we have put down into applications, guidelines, education and mentoring has played a significant role for Statistics Sweden and in the end for the citizens. That makes us proud!

TRIBUNAL ELECTORAL DE PANAMA

Ecuador, Panama

Election System

How do you think Information Technology will be different in 2020?

We look for additional checks and balances for IT in general and our system in particular. In Panamas Electoral Tribunal, we will engage in acquiring an additional module to the main

GOVERNMENT

system that will allow citizens to vote using a computer-based system. In addition, we are in the process of implementing software that will enable every citizen to audit the public financing that is made available to the political parties during and after the elections, providing more transparency and a citizens audit to the entire process as it happens.

What does being a part of the 2009 Computerworld Honors Program mean to you?

We will see this nomination and any possible award as a recognition made not only to our employees involved in the IT department and others that use the different technological instruments to provide a better daily service to the public in civil registry and ID areas, but as a recognition to the thousands of Panamanians that contribute to count the votes in each election, be it in the urban areas or remote and discomforted places. Our Electoral Delegates, which is a selected team of about 500 men and women that contribute as volunteers to mediate throughout the electoral process between conflicts among the political parties, the different groups within each party, or between them and the police forces and government authorities, are an essential part of our success for the peace and tolerance that prevails using preventive medicine. As a result, democracy grows and is enforced and able to generate a peaceful social environment that creates a better quality of life. A strong democracy is able to summon national and international confidence, economic growth, and projects a message to the international community saying that the country has achieved social tranquility. It also says that the Panama Canal used by countries of all over the world will continue to work properly and complete its mission without incident.

TURKISH REPUBLIC OF MINISTRY OF JUSTICE

Ankara, Turkey

National Judiciary Information System

How do you think Information Technology will be different in 2020?

It is believed that E-justice implementations will become a priority topic all over the world for the creation and maintenance of an independent, transparent, effective, accountable, modern and capable judiciary. In this context artificial intelligence can be used in judicial processes in the future. The idea of the replacement of judges by computers scares lawyers despite believing the benefits of technology. However, law is one of the fields of human activity that is most appropriate for the introduction of artificial intelligence because everything is determined with legal rules and regulations. In that case, all proceedings completed with the know-how of machines will be stipulated by lawyers. The ability to predict

the possibility of success in any kind of potential trial may prevent unnecessary proceedings. In this context it is tried to develop an Expert System Portal Development Project which aims to develop a web-based expert system portal within UYAP. In this Project, the user will access the information about which route to follow, how much fee to pay and how much money to spend during the course of law suits regarding the suit of damages involved. It enables the user to access the decisions from a suit for similar cases when s/he enters the key words and the required parameters that will appear on the screen concerning the law suit involved. Reports of similar cases will be extracted together with statistical information related; the number of lawsuits filed according to the topics; the duration of lawsuits; the number of claims that are accepted, partially accepted and rejected; the cost of the suit, the quantity of amendments, the amount of money paid to defendants

What does being a part of the 2009 Computerworld Honors Program mean to you?

As IT Department of Ministry of Justice of Turkey, we are very pleased and honoured to be a part of 2009 Computerworld Honors Program. Even though UYAP has received many awards both in Turkey and European Union, it has been the first time that UYAP has nominated in an intercontinental competition. We consider this event as an important opportunity for the promotion of UYAP all over the world as we believe that UYAP deserves to be known worldwide as a perfect e-justice solution. UYAP is thought to be a very good e-justice model for the judiciary of other states in the world. In addition to this, for us, being a part of the 2009 Computerworld Honors Program means opening up to the world and discover new partners on the way of sharing best practice of e-justice. This programme also paves the way for new collaboration and cooperation among the countries of world. As it is said in Turkish proverb "Knowledge could increase its value when it is shared with and transferred to others" we are very keen on sharing of our experience whoever demands and also learning other countries' solutions.

U.S. DEPARTMENT OF EDUCATION

Washington, DC, United States

College.gov

How do you think Information Technology will be different in 2020?

We believe that Information Technology will be less connected to computers and use more appliances and touch-screen operated devices -- mobile and even smaller devices will be big and we'll probably be able to actually conduct most types of transactions on them. Information Technology will probably be very voice-driven or driven by the use of fingers instead of a keyboard maybe well be at the level as portrayed in the Minority Report (the

movie) (e.g. the gesture-based computer interfaces). There will probably be a lot more use of virtual reality in general, especially in medicine (e.g., flexible electronic displays). There will probably be a lot less printed materials and more eBook reader use, or other ways of displaying information electronically, and the ability to move pictures/data around with our fingers. We think that the use of GPS will probably explode in ways we can't even imagine, for telling us where things and each other are. We might be able to take data provided and come up with new "mashups" and ways at looking at the same data in ways we can't envision. We think the trend of targeted marketing will expand and commercials will be very specific to our interests, according to what purchases we've made and our hobbies and interests.

What does being a part of the 2009 Computerworld Honors Program mean to you?
Being part of the 2009 Computerworld Honors Program would be a great honor. It would mean that we were successfully able to integrate business, technology and change management into our project.

UNITED STATES ARMY, PRODUCT MANAGER (PM) ACQUISITION BUSINESS (ACQBUSINESS)

Alexandria, VA, United States

**PM AcqBusiness Delivering the
Future Business System for the
Army Acquisition Community**

UNITED STATES PEACE CORPS

Washington, DC, United States

Global Unified Network

How do you think Information Technology will be different in 2020?

In addition to the ever-present evolution of cheaper and faster solutions, IT systems will be more seamlessly integrated and consolidated while also being distributed. There will also be more intelligence built into the systems, so they will be self-automated, self-monitoring and self-healing. The challenge for organizations is to collect data distribute throughout the world and align it in a cohesive, usable fashion. In addition, organizations need to leverage IT resources effectively. As a result, there will be more distributed resource sharing, commonly known as cloud computing, in which IT resources will talk to each other worldwide cooperatively to share resources. New data center architectures will create this intelligence and efficiency, such as data centers in the closet, and shared Storage infrastructures will allow greater consolidation as well as distribution of data. Overall, these new computing architectures will provide more intelligence, greater performance, better utilization of IT resources and greater information sharing while demanding less operational monitoring by IT staff.

What does being a part of the 2009 Computerworld Honors Program mean to you?

The Computerworld Honors Program is the most prestigious IT user award today, with over 20 years of historical perspective on the IT industry. Moreover, it is dedicated to IT innovators who use information to benefit society. The Peace Corps is well aligned to the ComputerWorld Honors Program, as it also is a renowned institution, dedicated to benefitting society, which traces its roots and mission to 1960, when then Senator John F. Kennedy challenged students at the University of Michigan to serve their country in the cause of peace by living and working in developing countries. We at the Peace Corps are honored to nominate our IT achievements for consideration for the Computerworld Honors Program. The spirit of the awards reflects our mission to use technology effectively to benefit worldwide societies. We thank Computerworld for providing recognition to IT pioneers whose charter it is to reach beyond typical corporate boundaries to greater societal good. Finally, Washington DC is a fitting stage for the presentation of these awards. The American spirit and quest for information technology that promotes positive social, economic and global changes is most appropriately celebrated at our nation's capitol, and reflects the importance and impact of the Computerworld Honors Program.

US GOVT - DEPARTMENT OF HEALTH AND HUMAN SERVICES (HHS), PROGRAM SUPPORT CENTER (PSC), INFORMATION & SYSTEMS MANAGEMENT SERVICE (ISMS)

Rockville, MD, United States

**Unified Financial Management
System (UFMS) Operations &
Maintenance (O&M)**

THE LAUREATES 2009

HEALTHCARE



BAPTIST HEALTH

Little Rock, AR, United States

Improving Hospital Quality and Outcomes Using Clinical Surveillance Technology

How do you think Information Technology will be different in 2020?

Faster, smaller, cheaper, more pervasive, and more heavily utilized. The combination of computing power, biotechnology, mobility, distance technology, and sensor technology will make the delivery of healthcare services in the United States unrecognizable from the care and services we provide today.

What does being a part of the 2009 Computerworld Honors Program mean to you?

It would be a nice recognition of the collaborative efforts made by our clinical users and IS staff and for BAPTIST HEALTH'S entire hospital industry. The technology solution that we've been nominated for really demonstrates how information technology can improve patient care and reduce healthcare costs. The healthcare industry needs more of these repeatable, successful applications.

BLACKBURN WITH DARWEN PRIMARY CARE TRUST

Blackburn, United Kingdom

Supporting Superior Patient Care

CHEROKEE HEALTH SYSTEMS

Talbot, TN, United States

Cherokee Health Systems Telehealth Program

How do you think Information Technology will be different in 2020?

Virtualization, Efficiency and Mobility seem to be the overwhelming trend. Devices are getting smaller and require fewer connections. Our workforce is becoming more mobile and their need for access to all mission-critical applications moves along with them. Seamless movement from office to the road will be essential. I hope 10 more years will be enough time to tackle the problem of getting power to devices without cords.

What does being a part of the 2009 Computerworld Honors Program mean to you?

Our organization has a history of innovation in our clinical models. We also have a reputation, in our limited circles of influence, for being leaders in health information technology. We have learned many lessons through trial and error and others through observation and

research. In non-profit community health and community mental health organizations, technology is not usually viewed as an essential part of care delivery but is only a necessity for the number-crunchers. Having an opportunity to use technology to actually DELIVER care, should be viewed as a victory for technical staff. In the past 11 or 12 years since we started dabbling in telemedicine, respect and acceptance for technical staff have grown dramatically. In the past, there were very few opportunities for MD and IT staff to participate in strategic planning. Now, our medical directors and IT staff regularly discuss ways to improve care delivery that is real progress. Being nominated for the Honors Program is confirmation that ALL positions within an organization really are a part of care delivery. Supporting computers for office staff is important and challenging but actually seeing your work being used with sick children brings a whole new level of satisfaction to our IT staff. As a member of management, I am thrilled that technical accomplishments in health care delivery are being recognized.

COMPUWARE CORPORATION

Detroit, MI, United States

Covisint Healthcare IT Initiative

DEFENSE HEALTH SERVICES SYSTEMS (DHSS)

Falls Church, VA, United States

Clinical Data Mart (CDM)

EURESIST NETWORK GEIE

Siena, Italy

EuResist

How do you think Information Technology will be different in 2020?

We believe current advances of technology in healthcare are just the tip of the iceberg. We are just beginning to uncover the full potential of technology in bringing value to patients and caregivers around the world. There are huge silos of information out there, waiting to be accessed and analyzed. Patients, researchers and caregivers are ready to embrace new tools that will defeat illness, save lives, improve quality of life and lower healthcare costs for everyone.

What does being a part of the 2009 Computerworld Honors Program mean to you?
The Computerworld Honors Program

recognizes innovation that promotes the use of information technology to benefit society. It is a unique opportunity to consider the impact of information technology in a broader sense and from a much larger perspective. To be part of this program is truly an honor. It is also an opportunity to share our success and contribute to the healthcare and life science industry.

GWINNETT MEDICAL CENTER

Lawrenceville, GA, United States

Electronic Medical Imaging

HIGHMARK

Pittsburgh, PA, United States

Highmark ePlatform project

How do you think Information Technology will be different in 2020?

The evolution of information technology will continue to drive our customer interaction models at an increased pace. Social computing and collaboration will be mainstream capabilities like websites are today--except that these capabilities will use interactive video which will be live and connected to our core computer systems like websites are today. The Avatar model of Second Life will become second nature to use, and the gap that exists today between that virtual world and our core computer systems will close. A brand new multi-dimensional world will exist inside and outside of corporate walls. Hardware will be cheaper and faster, and those cost models will evolve. However, the real difference is the way hardware will be used and the impact it will have on business-to-business and business-to-customer interactions.

What does being a part of the 2009 Computerworld Honors Program mean to you?

Being a part of the 2009 Computerworld Honors Program will provide a significant opportunity to highlight the commitment our company has made to provide innovative technology solutions that help our customers lead healthier lives. Moreover, the opportunity focuses national attention on Highmarks business and technology teams, which have been extremely successful for many years in working together to increase operational efficiencies and improve customer relationships. Computerworld magazine is respected as a reliable source for pertinent information on technology industry trends by a notable number of Highmarks customers. By being a part of the 2009 Computerworld Honors Program, Highmarks customers will have further validation that Highmark is focused on leveraging innovative technology practices to provide the highest level of service in the most cost-efficient manner. In these

challenging economic times, customers look for companies that are demonstrating tangible ways of driving costs down and product value up. Highmark is honored to be a part of this program and appreciates the local and national attention this participation can create in highlighting its commitment to continuous value-based innovation.

LODDON MALLEE RURAL HEALTH ALLIANCE

Bendigo, Australia

Providing critical care support to regional and rural areas of Victoria, Australia through video conferencing

How do you think Information Technology will be different in 2020?

With reference to the Loddon Mallee Virtual Trauma Critical Care Unit (VTCCU) project our vision for broadband/Information Technology in our organisation and member organisations over the next five years is: "To provide high speed broadband capacity to every hospital, community health centre, allied health agency (Pharmacist, Radiologist, etc) and clinician (GP, Specialist) to enable sharing of patient information." To implement a shared electronic patient record (SEHR)* To implement integrated software applications and enabling technologies to contribute to positive and sustainable health outcomes. * To change the model of health service delivery to allow clinicians to access patient information anywhere anytime on any device." To enable wireless broadband to remote mobile health workers to transfer patient information and images from the field to acute care hospitals so as receiving clinicians (e.g., emergency departments) are more informed about the patient before they actually arrive at the acute agency.

What does being a part of the 2009 Computerworld Honors Program mean to you?

Being a part of the 2009 Computerworld Honors Program allows us to promote leading edge technology to enable improved health outcomes for people living outside metropolitan areas. The 2009 Computerworld Honors Program offers a unique opportunity to highlight the community and healthcare benefits of the Virtual Trauma Critical Care Unit (VTCCU) project to a much wider audience. We would hope that other communities would take advantage of the various technologies used within VTCCU, and other related e-health projects, to help improve the health and well-being of people in their community.

MERCK & CO. INC

Whiteshouse Station, NJ, United States

Internet Search Implementation: Enhancing End User Experience

MERGE HEALTHCARE

Mississauga, Canada

Merge Healthcare Dials Up Faster Access to Medical Info with Advanced Medical Imaging Technology

QUESTDIAGNOSTICS INCORPORATED

Madison, NJ, United States

India Web2.0 portal development

SPECIALISTS ON CALL

Westlake Village, CA, United States

Expansion Project

How do you think Information Technology will be different in 2020?

Commenting of course only from the perspective of the technology affecting SOC's business and healthcare in general, we believe that the end-user (hospital cost) of remote connectivity technology will plummet, facilitating the entry into the market of low-cost managed services via which hospitals can very cheaply connect and draw efficiency upon remote resources. This will dramatically change and diminish the cost of connecting the remote resources and that in turn will focus attention upon the capture, retention and use, of those remote resources (the doctors, in our case). We also believe that this evolution will be set upon the national implementation of a standard format electronic patient record, which will be widely accessible to appropriate users, and this will further accelerate the use of interactive technologies to deliver patient care. As this occurs, the concept of Continuing Medical Education (or CME) will be disrupted and evolution of best medical practices will accelerate as no longer will an innovation discovered in 200X require 5 years of conferences and journal articles to start benefiting patients in Billings, Montana; instead, the non-connected portion of medicine will be forced to find new ways move state of the art practice from the phase of University discovery into the phase of common bedside practice those who don't speed their personal knowledge evolution will be out-competed by a more up-to-date physician intervening by remote technologies and videoconference.

What does being a part of the 2009 Computerworld Honors Program mean to you?

The opportunity to participate in this Honors Program has huge value for every member of the SOC team. As is commonly known especially in the technology world, building a business like SOC from concept to reality, which this team has done, requires an extraordinary, fundamentally underpaid effort from every member of the team 52 weeks per year for, in our case, three years. Their spouses, children, families and outside interests all participate in this sacrifice. The opportunity to sacrifice in the name of the care of patients who need it by putting their commercial skill sets to unique use has made the SOC opportunity all the more compelling, and the sacrifices of this team all the greater. In the cause of focus we have specifically avoid the limelight and the glory up until now; this award process and an award itself, will provide the first and the most well-deserved open recognition of the sacrifices and success of the SOC team as they have taken common technologies and cleverness and accomplished a unique success.

THE UNIVERSITY OF TEXAS M. D. ANDERSON CANCER CENTER

Houston, TX, United States

ClinicStation (Electronic Medical Record System)

How do you think Information Technology will be different in 2020?

By 2020, the use of information technology in healthcare will have improved significantly the quality of the decisions being made in the midst of a significantly more complex and data-rich working environment. M. D. Anderson already is laying the groundwork with its Services Oriented Architecture-based Electronic Medical Record. The interoperability built into this system will continue to enable very different types of clinical and biological data to be stored in numerous repositories, says CIO Vogel. It also will promote our progress in understanding how empirical data can be used to improve the quality of decisions needed for both the diagnosis and treatment of our patients. Between now and then, the hospital will continue increasing its understanding of how to manage the vast amounts of data being generated by genomic analysis and how to analyze that data to improve our understanding of biological processes and their relationship to the onset of disease. We must figure out how to develop compounds that promote prevention, and when disease is evident, how to attack and eliminate it. Information technology will never replace the role of the trained clinician or researcher, but by 2020,

HEALTHCARE

physicians can expect to have access to a wide-range of very complex data and tools, explains Vogel. This will include: electronically-collected data on the patients individual biology, health and disease; sophisticated tools to analyze that data and indicate possible underlying maladies and/or conditions that put the patient at risk; recommended pathways for treatment (including medications personalized to the patients diagnosis and specific biology); and predictions of outcomes based on historical experience and evidence. All of this adds up to a higher quality, more personalized medical care environment based on a foundation of sophisticated information technology which can already be seen in very early stages at M. D. Anderson.

What does being a part of the 2009 Computerworld Honors Program mean to you?

Being a part of the 2009 Computerworld Honors Program would provide recognition of the importance and central role that information technology can and must play in ongoing efforts toward higher quality and more personalized health care. The initial sequencing of the Human Genome in 2003 set the stage for both a broader and deeper understanding, not only of human biology, but the importance of a much more highly personalized approach to the diagnosis and treatment of patients. The tsunami of data that has been released and is now being generated almost on a daily basis threatens to overwhelm the analytic capabilities of our medical researchers as well as the decision-making processes of our clinicians. Nowhere are those challenges being met more forcefully than at M. D. Anderson. It has created, in conjunction with strategic partners like Avanade, commercial grade software development capabilities focusing on a unique Electronic Medical Record system. M. D. Andersons ClinicStation supports seamless access to patient data, and through a Services Oriented Architecture, provides a potential bridge between the fundamental areas of clinical and translational research and patient care challenge which has eluded commercial vendors in the healthcare information technology market. M. D. Anderson has been consistently recognized as the world leader in cancer prevention, cancer research, cancer care and education. Recognition by the 2009 Computerworld Honors Program would acknowledge that M. D. Andersons pioneering EMR work is on the same world-class level as its prevention, education, research and clinical care activities. This includes information technology investments in support of research and patient care, MD Anderson's vision (already being realized) for the integration of research and clinical practice supported by information technology and its commitment to an EMR system based on a fully implemented Services Oriented Architecture.

THERAPY PARTNERS

Guelph, Canada

Smartphones Help Community Healthcare Professionals Manage Patients at the Point-of-Care

How do you think Information Technology will be different in 2020?

Health records will be entirely automated. Cumbersome, inefficient paper-based processes will be eliminated. Information will flow seamlessly and accurately amongst all health sectors and providers. The movement of clients through hospital, home, long-term care facility etc will include an efficient transfer of medical information. The result of the successful development of the EHR will ensure optimum quality of care/service, clinical data accuracy, improved client safety, increased worker productivity and maximization of efficient utilization of health care funding. Health Care workers will direct and focus a maximum percentage of time and effort to provision of direct care and minimum percentage to administrative activities. Through mobile technology they will be 100 percent connected with timely access to information and tools to optimize delivery of health care services to clients. Every health care provider will be equipped with a mobile device.

What does being a part of the 2009 Computerworld Honors Program mean to you?

The 2009 Computerworld Honors Program provides the opportunity to increase the visibility of a successful project. It provides the opportunity to communicate to a broad range of other health care organizations successful, progressive ideas and programs. This visibility and recognition of success can inspire other organizations to follow suit and thereby set a new standard in the industry. In the reality of a climate of managed health resources and funding limits, demonstration of financial efficiencies may help secure additional funding for a greater number of health care organizations to provide more service. The Program provides the opportunity for recognition of innovation and progressive thinking by a health care organization dedicated to ongoing provision of quality health care services in challenging financial times.

TORONTO EAST GENERAL HOSPITAL

Toronto, Canada

Patient Care and Workplace Safety Project

How do you think Information Technology will be different in 2020?

Information Technology has always been a business enabler at TEGH. However, in hospitals the ability to take advantage of the full potential of Information Technology has been a complex process that mirrors the many dimensions of the hospital work environment. By 2020, IT will have enabled most business processes in hospitals and there will be a convergence of technology to streamline the end user experience. There will continue to be consolidation in the industry and this should assist with simplifying the IT environment from a support perspective. Highly specialized applications will be "plug and play" for easy installation and maintenance. This will allow hospital informatics teams to concentrate on support of more complex systems such as the CPOE, eMAR and documentation. Sharing health information along the continuum of care for patients will be the standard and most physician offices will also be automated. Standard messaging such as IHE should be adopted by healthcare vendors to facilitate this sharing of information.

What does being a part of the 2009 Computerworld Honors Program mean to you?

Toronto East General Hospital would be humbled and honoured to be a part of the 2009 Computerworld Honors Program. As an organization that has been a part of the East community of Toronto, Canada for over 80 years, this achievement would reaffirm our organizations commitment to quality care and exceptional service for our staff and patients. At TEGH, we care about the well-being of everyone in the facility, which is why we adopted this form of technology. We believe that in order to provide the highest quality of care, you must have the best team, facility and system to make tasks effective and efficient. Vocera has complimented every aspect of our organization. We would be able to celebrate the award with the Vocera team that made the project possible as well as the nearly 3,000 staff members who trust and use the device every day. Receiving this award would also mean international recognition for this exceptional technology and would provide new areas of health care with the ability to explore and adapt it for their own betterment. Toronto East General Hospital would openly offer collaborative support to other organizations and act as an accessible reference point along their journey.

HEALTHCARE

U.S. DEPARTMENTS OF DEFENSE AND VETERANS AFFAIRS

Falls Church, VA, United States

DoD/VA Healthcare Data Synchronization Program

UK NATIONAL HEALTH SERVICE BLOOD & TRANSPLANTATION

Watford, United Kingdom

Organ Donation Electronic Offering System (EOS)

How do you think Information Technology will be different in 2020?

Information technology will continue its march towards the user, delivered on mobile platforms, becoming ever more complex delivering ever more time saving functionality but paradoxically ever more easy to use. In healthcare, data integration will see more patient centric, person centric view of data and we will be challenged to develop applications that ensure the integration effort delivers value for money. Tasks that once were the domain of IT "experts" are increasingly being deskilled and put into the hands of users. The use of IT will become more and more intuitive with user interfaces being a major development area. More and more emphasis will be placed on integrating technologies, voice, data and video towards a seamless communications medium. This brings with it service challenges, voice services today are expected to work, are part of the "DNA" of business and failures are viewed as catastrophic whereas it seems acceptable to restart a computer or to lose a connection in a video conference for a time. As we come to rely on these converged services, not only in business but in everyday life, they will have to deliver the level of service and reliability that we have become accustomed to from voice services for decades. EOS provides the platform for future enhancement of organ offering and donation.

What does being a part of the 2009 Computerworld Honors Program mean to you?

We are truly excited to be part of this Honors program, and welcome the opportunity to share with others, across geographical boundaries, the success of the organ donation electronic offering system and how this will lead to saving more lives - a challenge facing all communities within all countries

UNIVERSITY HEALTHSYSTEM CONSORTIUM (UHC)

Oak Brook, IL, United States

Breathing New Life Into Critical Online Knowledge Base Applications

How do you think Information Technology will be different in 2020?

This is an exciting time to be in the Information Technology Field. I foresee several major changes within the industry over the next decade. First and foremost, I see commoditization of data center resources occurring. Storage capacity, processing power and memory resources will be modular in nature and available to applications in pools that can be quickly expanded. The obvious increases in density, power needs, and network speeds will inevitably continue. Ethernet over fiber is going to eliminate copper in the data center and reduce the overall cabling density. Virtualization of the application and web servers and eventually even the database servers will be the standard. Virtualization is necessary to reduce the power draw and physical space requirements necessary to support our applications going forward. Booting from the SAN which is related to the commoditization of storage will also be standard practice and will result in the elimination of isolated islands of local storage.

What does being a part of the 2009 Computerworld Honors Program mean to you?

Being nominated for a national award of this magnitude validates all the hard work and effort that our team has put forward. Being part of a team that is consistently able to deploy cutting edge technology quickly and successfully is reward enough. However, it means a great deal to be recognized by peers in the industry.

UNIVERSITY OF OTTAWA HEART INSTITUTE

Ottawa, Canada

Online patient database

How do you think Information Technology will be different in 2020?

The health care information need should continue to drive the technical solution, rather than the technology looking for a solution. This has been the key behind the success of PDMS. Identification that current health care solutions emphasized administrative data not clinical care pointed out an important area where PDMS could fill a need. The clinical need to record and access patient care data lead to development of a technical solution, not vice versa. Adapting to how the physician

practiced rather than trying to force a solution was another key success factor. Technology will allow a more seamless integration of health care information in the future. The balance between privacy and access to health care information will be an increasing dilemma in the future, but technology can be part of the solution. Just as with development of personal computers, access to personal health care data by the consumer will become an increasing trend of the future.

What does being a part of the 2009 Computerworld Honors Program mean to you?

Acknowledgment by the 2009 Computerworld Honors Program would give external recognition and validation. This would facilitate working with hospital administrators and improve access to funding opportunities in order to further implement and develop PDMS to achieve improved health care outcomes.

VIVID SOLUTIONS (FORMERLY THE NZ TELEPAEDIATRIC SERVICE)

Auckland, New Zealand

Developing a national telemedicine network

How do you think Information Technology will be different in 2020?

If we look at the advances made in the past 10 years, and the 10 years before that I find it hard to imagine what the next 10 will bring. The speed at which advances in IT happen seem to grow exponentially. The Internet has evolved and will keep doing so to a point that that it will be the key way through which people communicate and interact even more than today and for more things such as healthcare, work and leisure. The key to this enabling this is better and cheaper access to high speed broadband. By 2020 I would expect that the fastest speed today is a 10th of what is available then. The issue I see is having it available to all.

What does being a part of the 2009 Computerworld Honors Program mean to you?

It is fantastic to be nominated in the Computerworld Honors program. We are a small and hard working team that don't do what we do for awards or recognition but to be seen as doing something worthy of a nomination makes the hard work worthwhile. Being given the opportunity to be seen on a global stage will assist us in gaining ore support and buy in from the sector and in the current climate, any form of assistance is beneficial. I would also like to convey my thanks to Polycom for nominating us and to Computerworld for taking the time to read the case study.

WE CARE

Toronto, Canada

Mobilizing the Delivery of Home Care Services - Business Case Study

How do you think Information Technology will be different in 2020?

The appropriate use of technology will enable home care to be delivered in the most efficient and cost effective manner, alleviating some of the huge costs necessary to care with our aging population in acute care and long term care facilities. Technology will allow us to provide our clients with the sense of comfort and safety so they can continue to live longer in their own homes close to family and friends. With technology and appropriate verbal and data communication, we will be able to care for those leaving acute care hospitals more effectively, allowing them to recover more rapidly in the comfort of their own homes.

What does being a part of the 2009 Computerworld Honors Program mean to you?

To be recognized by the 2009 Computerworld Honors Program validates our significant investment in time and money to develop our technology. We have implemented technologies that support our Vision to be a leader in community care. Our investments have allowed us to be more efficient and cost effective, bringing us closer to our clients. We know our technology investments have and will continue to improve our quality of care, and we truly appreciate the opportunity to be recognized by the 2009 Computerworld Honors Program.

THE LAUREATES 2009

MANUFACTURING



APOGEE, INC

Minneapolis, MN, United States

Enterprise Systems Modernization Initiative*How do you think Information Technology will be different in 2020?*

I believe that Information Technology will play an ever-increasing role in both society and the business community in 2020. Despite the rapid rate of advancement behind hardware speed, software architecture and internet connectivity, communities and business alike are only beginning to truly tap the unprecedented resources technology provides. Nevertheless, looking to the past provides an easy understanding of the impact technology has on our lives. Little more than 10 years ago, cell phones were still a rare item. Today, you would be hard pressed to find a family without a cell in the hand of each member. Though it is impossible to understand the specific ways technology will impact the business community in 2020, one thing remains certain. If businesses hope to remain competitive, increase productivity and profitability - technology must continue to play an advancing, vital role.

What does being a part of the 2009 Computerworld Honors Program mean to you? It is a privilege to be involved in the 2009 Computerworld Honors Program. Not only is it a reputable, recognizable achievement - it is a rare opportunity to highlight Apogee's dedicated, professional team for their support of this important initiative. Most importantly, the 2009 Computerworld honors is a change to thank all levels of Apogee's business, from executive management to end-users throughout the organization for their continued understanding of the vital role technology plays in Apogee's success.

ASUSTEK COMPUTER INC.

TAIPEI, Taiwan

ASUSTEK EEEPC*How do you think Information Technology will be different in 2020?*

We can separate this topic into several technical viewpoints including: performance, display, power and materials. Performance-wise, the number of CPU computing cores might be much larger than what we currently use in a multiple basis. They might be created and configured in a totally different way, but would depend on how advanced quantum mechanics would be developed. Display-wise, foldable and paper-like full-color displays would be the mainstream display mode. Power-wise, natural resources (like solar power or wind power) and higher efficiency batteries will

be invented, and might be presented in other formats besides batteries or cells. For materials, more environmental-friendly or recyclable materials will be applied majorly in the IT industry.

What does being a part of the 2009 Computerworld Honors Program mean to you?

The 2009 Computerworld Honors Program means a lot to ASUS, and we appreciate that Seagate has nominated ASUS as part of the Honors Program. ASUS will try its best and showcase our innovation capabilities to be part of the Programs 21st Anniversary Laureates Medal Ceremony and Gala Awards Evening which will be held on June 1, 2009 in Washington D.C.

CELLULAR SPECIALTIES, INC.

Manchester, NH, United States

University of Phoenix Stadium*How do you think Information Technology will be different in 2020?*

Information Technology networks will differ much in 2020 from today's networks by seamlessly bridging wired networks with mobile devices. Cellular phones will handoff to wireless networks within buildings. Users will experience higher voice quality with less dropped calls. Streaming video will be the norm. Doctors will remote diagnose patients without leaving their office. Teachers will educate using distant-learning techniques. There will be thousands of wireless visual interactive channels providing on demand, real-time services: news, entertainment, security and banking needs. Hardware will be more software defined and networks self healing using mesh technology. Building out wireless networks will be top priority, connecting people and devices seamlessly together.

What does being a part of the 2009 Computerworld Honors Program mean to you?

Recognition of the incredible organization of people, processes and relationships CSI has created over the past 13 years by Computerworld is a validation of our collective passion and hard work. It is an honor bestowed upon all the outstanding staff at CSI and a compliment to our strong supply chain relationships and our intense customer satisfaction.

CRISTAL GLOBAL

Hunt Valley, MD, United States

Preparing for Globalization*How do you think Information Technology will be different in 2020?*

Increasing miniaturization and cost reduction will make much more information available to mobile users, freeing them from traditional times and places of work.

What does being a part of the 2009 Computerworld Honors Program mean to you?

MIC is proud to be recognized by a technology program that has such worthwhile goals to improve peoples lives.

INGERSOLL RAND

Davidson, NC, United States

Business and Technology Transformation Initiative**INTELLIGENT HOSPITAL SYSTEMS**

Winnipeg, Canada

RIVA (Robotic IV Automation)*How do you think Information Technology will be different in 2020?*

We are seeing migration of computing power to hand held devices, and this carries with it the growing expectations of interconnectivity. Along with decentralization, and cloud computing, there will be increasing trends to be always reachable, and always connected. Resulting in increasing complexity in day to day activities even now we are carrying technology, doing more, shortening the time between when a situations arises and our responses. Today people carry smart phones that allow them to be always connected, and always receiving data. This will continue and more of what people use desktop stations and laptops will be pushed onto mobile devices, and data will need to adapt to new representations. We as system developers need to address the need for data, people will need the right data to be presented to make decisions, as more content gets pushed to an individual the result will be increase in data volume. With more and more data coming to people, and there will be requirements on devices to allow filtering this information to have important and actionable information rise to focus. As device manufacturers we need to anticipate this trend and ten years from now, people will expect to receive the data they need even from fixed devices like RIVA pushed to them so they can make decisions, respond to situation, and command the devices regardless of their location.

What does being a part of the 2009 Computerworld Honors Program mean to you?

This would be an incredible honor and a vote of confidence that our RIVA solution really is world class and unique. The additional publicity and recognition would be a critical part of our strategy to continue to move late adopters to accept our technology as something that has been recognized by such a strategic award. This is a very sensitive time in our life-cycle with a couple of working installations and a number of hospitals who are looking for the final push to make the decision to implement our technology. For many of these Director of Pharmacy decision-makers, this award would help them with the justification that they would be seeking from their CEO, CIO and CFO that Intelligent Hospital Systems and the RIVA solution in particular have been recognized for their innovation and excellence in competition with other companies throughout the world.

JOHNSON CONTROLS INC

Plymouth, MI, United States

Genesis Program: Enhancing Business Flexibility and Productivity with Process Harmonization**MASCO BUILDER CABINET GROUP**

Adrian, MI, United States

Masco BCG Building Tomorrow Together**MINE SAFETY APPLIANCES (MSA)**

Pittsburgh, PA, United States

Mission: Efficiency*How do you think Information Technology will be different in 2020?*

Less overall people working in IT, but more experienced/talented people will be running the data centers in 2020. More people today view IT as a simple service and expect services to be online working 24X7. That will not change in the next 10 years and it will almost become second nature to have these systems/services running seamlessly. In order to provide these never off services, IT will need talented people to administer the growing data pools and services around the globe. Within the next five years the amount of data storage will dramatically increase and I can not even imagine the amount of data storage that will be online in 10 years. People will view IT the same way they do when they pick up a phone. The dial tone is expected, as well as all the services IT provides will be expected to work. The challenge (and the fun part) is to make these IT services sound like a dial tone. Anyone who has or does work in IT knows that it takes a group of talented people working with innovative equipment to make this happen. Im looking forward to the next 10 years.

What does being a part of the 2009 Computerworld Honors Program mean to you?

It means that I work with a great, talented group of people. Without the guys on my team, being able to pull off a project of this scale would not have been possible. I really enjoy my work in IT and Im extremely fortunate to be able to say that. Having the opportunity to share my experiences with my peers and to learn of their experiences via the Honors Program is exciting and fun. Being considered to be part of the 2009 Computerworld Honors Program is just icing on the cake.

TEXTRON INC.

Fort Worth, TX, United States

Spend Information Management (SIM) Implementation

THE COMPUTERWORLD
HONORS PROGRAM
2009

THE LAUREATES 2009

MEDIA, ARTS
& ENTERTAINMENT



ADRIENNE ARSHT CENTER FOR THE PERFORMING ARTS OF MIAMI-DADE COUNTY

Miami, FL, United States

Non-Profit Performing Arts Center Builds a Future-Proof Wireless Networking Infrastructure

COGETECH

ROMA, Italy

New betting and gaming distributed system

*How do you think Information Technology will
be different in 2020?*

We think that factors for IT evolution up to 2020 will be high performance technology available at low costs, extended network access, increasing performance but smaller chips. These elements will transform our way of life, making our daily activities easier. Personal e-Newspapers, cars connected to traffic control systems, wearable medical instruments to monitor our body and send data on our health directly to the medical control center. Cloud computing will multiply and the quality of the services provided on the New People will communicate in social networks and mobile devices will substitute the current concept of personal computers.

COOPERATING SCHOOL DISTRICTS OF GREATER ST. LOUIS

St. Louis, MO, United States

New Links to New Learning

*How do you think Information Technology will
be different in 2020?*

Our thought is that Information Technology in the area of video will become even more ingrained into the educational experience.

*What does being a part of the 2009
Computerworld Honors Program mean to you?*

We are delighted for the honor and we would enjoy disseminating all of our programs and successful experiences with a wider audience so that students could have higher achievement and more enrichment because of our dedicated and original work at CSD.

GSD&M IDEA CITY

Austin, TX, United States

Discrepancy Management System (DMS)

*How do you think Information Technology will
be different in 2020?*

I believe that there is going to be a technology shift in the hardware arena. As chips get smaller and smaller and nano-technology research yields faster computer chips, server rooms will become nearly obsolete. A single computer on a system administrators desk will be able to contain all of the virtual servers necessary to run a company. This will make disaster recovery and system redundancy as simple as having a few computers.

*What does being a part of the 2009
Computerworld Honors Program mean to you?*

Being nominated to be part of the Computerworld Honors Program is quite an honor. It feels really good to receive a nomination from a respected company like Microsoft for an application that we built, internally. We really appreciate the Computerworld created this program to reward exceptional work.

LIBRARY OF CONGRESS

Washington, DC, United States

Library of Congress Experience

*What does being a part of the 2009
Computerworld Honors Program mean to you?*
We are very excited to be participating in the Computerworld Honors Program. The Library of Congress is dedicated to enriching society through the sharing of knowledge and we are thrilled to be recognized by such a respected organization as we continue on our mission.

MANHATTAN SCHOOL OF MUSIC

New York City, NY, United States

Manhattan School of Music Distance Learning Program

*How do you think Information Technology will
be different in 2020?*

To answer this question, I would reflect upon the difference in Information Technology between the last 10 years (1999 and 2009) in order to extrapolate the immense possibilities laying before us in the next ten years. In the last decade, we have seen the transformative power of information technology in our collective personal, professional and societal lives. One only has to look at the pervasive and growing use of social media tools in recent times, to see that more and more people throughout the globe are transformed in how we communicate globally. I believe this trend will only increase and accelerate in the coming years. Wireless technologies will overtake wired resources; VoIP will supersede circuit based technologies; computer processing power will become evermore compact and cost-effective; interactive virtual environments will become truly immersive and 3-dimensional in nature and reality; handheld devices and PDAs will dominate our transactions; ostensibly, connectivity and access will become ubiquitous, and ideally this phenomena will enable new levels of equity in our society.

*What does being a part of the 2009
Computerworld Honors Program mean to you?*

I have had a deep and longstanding commitment to the creative use and development of collaborative information technologies to enable spreading the reach of the musical arts around the globe for the betterment of society. To be able to share one's love of music with a worldwide audience through the support of cutting-edge technology is a lifelong mission. The Computerworld Honors Program recognizes information technology professionals who use, develop and explore technology in many different fields and disciplines for the benefit of society, and to stand amongst those who also contribute and "make a difference" to the public is a truly satisfying and enriching accomplishment which can serve to inspire others to do likewise.

NATIONAL LIBRARY OF SCOTLAND

Edinburgh, United Kingdom

National Repository Begins to Bring Hundreds of Years of the Written Word Online

*How do you think Information Technology will
be different in 2020?*

In 2020, information technology will be almost woven seamlessly into daily life. With increased digitization of most of our historical and cultural assets, it should be possible to access artifacts from any culture in the world, from any device in the world.

*What does being a part of the 2009
Computerworld Honors Program mean to you?*

Being part of the program represents a major achievement for the Library and reflects the huge amount of work done by Library staff towards achieving the eventual goal of a Digital NLS. We believe the Library has a good vision for improving access to its wealth of knowledge and technology had made this possible. In Scotland we have the concept of cultural entitlement, where citizens have a right to access their culture through institutions like the Library. Technology makes this much easier, especially for those unable to reach the Library's buildings. We are delighted to take part in the program and having the opportunity to recognize those people and institutions from all over the world using technology to make this a better place to live.

NORTH CAROLINA STATE UNIVERSITY

Raleigh, NC, United States

NC State University Cloud Computing Services

ONE HEN, INC.

Arlington, CA, United States

Onehen.org

*How do you think Information Technology will
be different in 2020?*

Well if there is anything to Web. 3.0 our ability to search for information not yet catalogued will rise tremendously. And we believe even more people will be turning to the World Wide Web for information and inspiration. We'll be there.

*What does being a part of the 2009
Computerworld Honors Program mean to you?*

If the honors program can raise awareness of the One Hen curriculum with more schools, which in turn adapt and adopt our financial literacy curriculum, that will be the best payoff of all.

ROCK ANNEX

New York, NY, United States

High Availability Video Surveillance Solution

*How do you think Information Technology will
be different in 2020?*

When I think back 11 years ago, and the speed and power of the computing equipment then versus now, or even the rise of online delivery of music and video and the advancements in mobile telephony, I cannot even contemplate how the far computing technology will advance and be different in 2020.

*What does being a part of the 2009
Computerworld Honors Program mean to you?*

The Rock & Roll Hall of Fame Annex NYC is proud to be nominated for the Computerworld Honors Program. We look forward to bringing the excitement of rock and roll to live in this new venue and sharing our innovative technologies with the masses.

VICTORIA AND ALBERT MUSEUM

London, United Kingdom

The V&A Goes Virtual

*How do you think Information Technology will
be different in 2020?*

Technology in 2020 will be about quality of content and authority. Technology will no longer be talked about in the abstract, it will have achieved true maturity by becoming a seamless tool which underpins our lives but which is no longer visible due to its efficiency and good design. Data authority will be key in a world where there is a plethora of data from a number of disparate sources. Learned institutions will be looked to for authoritative views and facts will only be believed from know good sources. The role of the information technology professional will increasingly be involved with the protection of the organizational and individual identity and integrating data between well-formed and mature systems, most of which may be in the cloud.

*What does being a part of the 2009
Computerworld Honors Program mean to you?*

The Computerworld Honors Program gives recognition to the ambition of the V&A to provide international resources for the study and appreciation of art and design. It is an opportunity for us to increase awareness of the on-line resources we have created and our continuing investment in tools to enable us to open our collections to all. Unusually it recognizes the work carried out on infrastructure to support these ambitions.

THE COMPUTERWORLD
HONORS PROGRAM
2009

THE LAUREATES 2009

NON-PROFIT ORGANIZATIONS



THE LAUREATES: NON-PROFIT ORGANIZATIONS

NON-PROFIT ORGANIZATIONS

46664 - NELSON MANDELAS HIV/AIDS GLOBAL AWARENESS

London, United Kingdom

Birthdays Wishes Campaign

How do you think Information Technology will be different in 2020?

I believe that Information Technology in 2020 will be vastly different from that which we are experiencing in 2009. I believe that the crucial area of change will be in mobile internet. The main change will be the speeds which are attainable. At the moment 3G technology only allows 3-4Mbps but I would foresee a fast improvement on that figure quite possibly 100Mbps or more. Along with this speed increase would come an improvement in mobile internet coverage and an improvement in the cost to the consumer. The major factor here is that with increased take-up the cost per user can be reduced. The last major part of Information Technology's improvement in the next ten years is that with improved access and speed of mobile internet, the devices which enable access will become more powerful, in terms of sheer processing power, and as a more all encompassing part of our lives as the attempt to combine more and more devices into one single device becomes prevalent. Taking into account the increased speed, coverage and ability of mobile devices this would cause of shift in the manner in which users access information, content and communicated with others. The ability to download and watch high definition pictures on the move is not to be underestimated as an improved revenue stream for the entertainment industry. Ultimately the manner in which Information Technology progresses is a best guess scenario, but with judicious preparation it could usher in new, truly, mobile era.

What does being a part of the 2009 Computerworld Honors Program mean to you? Being part of the Computerworld Honors Program is a great privilege for everybody at 46664 as we are committed to increasing the power and scope of our message via any media possible. We release that the world of Information Technology is at the forefront of providing us with the ability to connect with many individuals around the world and this is why we strive to innovate for the betterment of society.

A SCHMAHL SCIENCE WORKSHOP

San Jose, CA, United States

Developing the Next-Generation of Scientists through Mobile Lab

AMMADO

Dublin, Ireland

The ammado giving circle heralding an enlightened age of giving

ANDERSON CENTER FOR AUTISM

Staatsburg, NY, United States

Providing Anderson Center for Autism with speed and reliability for backup and archiving

BROOKLYN HEALTH INFORMATION EXCHANGE (BHIX)

Brooklyn, NY, United States

BHIX

How do you think Information Technology will be different in 2020?

With local to national recognition of the need to change within the healthcare industry, information technology will likely be an increasingly important enabler of reform as policies, standards and best practices emerge. Specifically, information technology, through protocols and standards, will be an effective approach to breaking down the information barriers that exist between providers, payers, suppliers, pharma, and patients. Along with a ubiquitous information network enabling both access and application of technology to clinical decisions, patients are poised to be more interactive with managing both the quality of their healthcare along with the associated costs, through their access to additional information. Just as the Internet is continuing to bring forth new applications, the digitization and investment in health information infrastructure sets up the underlying network for modernizing the clinical and financial processes that remain archaic in 2009. Additionally, better health information access establishes better alignment between clinical quality and healthcare costs which sets up a framework over the next decade for improving health policy and reimbursement decisions as pay for performance concepts and business practices become industry standards rather than pilot projects.

What does being a part of the 2009 Computerworld Honors Program mean to you?

The Brooklyn Health Information Exchange (BHIX) is honored to be a nominee among the respected companies whose achievements have been recognized by the Computerworld Honors Program. This prestigious nomination authenticates the work we have achieved and inspires our future goals: enabling clinicians to provide efficient, coordinated care management for patients through a multi-dimensional health information exchange platform and supporting the adoption and integration of electronic health records into their practices to achieve interoperability. Being a part of the 2009 Computerworld Honors Program distinguishes BHIX and its strategic partners, as a leader in the field of health information technology and health information exchange, lending validity to our objective of transforming the delivery of healthcare in Brooklyn and in New York State.

GIRL SCOUTS OF THE USA

New York, NY, United States

Tiered Data Protection

How do you think Information Technology will be different in 2020?

There will no such thing as the "IT department". Technology will be so "consumerized" that all services will be provided by outside firms as commodities. Vendor management principles and service-level agreements (SLAs) will be standard practice and integral to all departments within a corporation. These principles will apply to technology vendors as well as other commodity vendors.

What does being a part of the 2009 Computerworld Honors Program mean to you?

As a not-for-profit, being part of the Computerworld Honors Program demonstrates that we can identify and utilize a leading-edge technology to benefit our business despite budget constraints. It also demonstrates that nearly a century-old organization can embrace a technology that positions it to modernize its information infrastructure to support the major organizational changes that are occurring.

MASSACHUSETTS GENERAL HOSPITAL

Boston, MA, United States

MGH TeleStroke Program

How do you think Information Technology will be different in 2020?

Wearable devices will be prevalent.

What does being a part of the 2009 Computerworld Honors Program mean to you?

The MGH Telestroke Program is extremely proud to be considered a pioneer in the field of telemedicine, and we are honored to be nominated for this prestigious award. Polycom's support of videoconferencing applications for healthcare has set them apart in the industry, and our collaborations with them over the past several years have been extremely successful.

NATIONAL CENTER FOR GENOME RESOURCES

Santa Fe, NM, United States

Alpheus - Online Genome Sequencing and Analysis

NATIONAL OFFICE OF THE PUBLIC PROTECTOR

Pretoria, South Africa

Investigation Case Management System

NEW YORK PUBLIC LIBRARY

New York, NY, United States

Metrics On Demand (MOD)

NON-PROFIT ORGANIZATIONS

OCEAN ALLIANCE

Lincoln, MA, United States

Safeguarding Scientific Research

How do you think Information Technology will be different in 2020?

IT infrastructure will become a commodity. The Network will provide a class of services in the cloud that you can connect to and pay as you go from any device. Your refrigerator, car, iphone, laptop, they will all connect to the internet, download and upload information and help us manage our lives better. All of this will be wireless at the endpoint and megaspeed connectivity in the core. Memory and storage will continue to drop in price and see the margin diminished to commodity levels, at which time you will no longer need personal storage, you will be able to have everything in the cloud, from your schedule, to your kids lunch menu through all your family pictures, because oh yes, your camera will be connected too.

What does being a part of the 2009 Computerworld Honors Program mean to you?

It is an opportunity to show how technology, science and research can work together to solve our problems. We can tell our story of how we gather data, store it, analyze it and have it whenever we need it to run analytics any way we need to. It provides a stage for small organizations like us that are out thinking big and doing big! The only way we could do it is through technology.

SPARROW HEALTH SYSTEM

Lansing, MI, United States

Sparrow Technology Transformation

How do you think Information Technology will be different in 2020?

In Healthcare the short answer is...everything. We not yet scratched the surface of what is possible, even using technology tools commonly found in other industries. 2020 will see the realization of fully integrated medical devices that will complete a CAT Scan or MRI and automatically update patient charts without intervention, where patients traverse the complex landscape of multiple providers, specialists and insurance companies, without effort or worry. Technology can never replace the care given by a physician or nurse...but it can streamline all the things that make practicing medicine a challenge (compliance, charting, financial analysis, billing, etc) and keep the clinicians at the bedside where they can do the most good. Technology will usher in a truly global medical community where the finest physicians and the latest medical techniques are available to clinicians with the

press of a button; where paramedics have seamless access to vital patient information on the scene of emergencies, where seconds can make the difference between life and death; where mobile patient care tools (available anytime from anywhere) will allow true home care to become a real option for any patient. The examples are endless, everything from neurosurgery to food service will benefit.

What does being a part of the 2009 Computerworld Honors Program mean to you?

As the financial crisis deepens, Healthcare (like most industries) is at a crossroads. One of the last great technology frontiers...it is an exciting and growing field where the stakes are as high as they get. It is our sincere hope that this honor will light a path for other organizations to follow. The nature of practicing medicine makes adoption and education two of healthcare's biggest challenges. Doctors and nurses can rarely set aside the demands of patient care long enough to afford the luxury of time to be trained on the use the latest applications. In the heat of battle, upgrading toolsets is usually put off until tomorrow (or the next quarter), when patient census is down. The problem of course, is that tomorrow rarely comes. When hospitals are honored for their innovation, it strikes a chord with administrators, physicians and communities that the very best care available can (and will) be achieved if we are willing to embrace new ideas and tools. This honor will help to draw a clear picture of what can be attained if health systems take the time and make the sacrifices necessary to improve their situation. We need that story told, especially in these tight financial times. Institutions need to see that investment in technology is essential for their patients, for their clinicians and for their bottom line.

(UCSF) UNIVERSITY OF CALIFORNIA, SAN FRANCISCO MEDICAL CENTER

San Francisco, CA, United States

Integrated Data Repository

UNICEF

New York, NY, United States

Fly-Away Emergency VSAT and Enterprise Management Systems

THE COMPUTERWORLD
HONORS PROGRAM
2009

THE LAUREATES 2009

TRANSPORTATION

THE LAUREATES: TRANSPORTATION



TRANSPORTATION

BNSF

Ft. Worth, TX, United States

Maintenance Excellence Dashboard**CENTRE FOR RAILWAY INFORMATION SYSTEMS**

New Delhi, India

Crew Management System*How do you think Information Technology will be different in 2020?*

The way technology is advancing with leaps and bounds, we foresee IT to be the single most important aspect of everyday life and certainly a whole range of technologies will be on stream to make our daily lives simpler and more dependent on machines, automations and computers.

What does being a part of the 2009 Computerworld Honors Program mean to you?

This Program aims at identifying and recognising the accomplishments of individuals, organisations and institutions which are using the IT Revolution for achieving global best practices and initiatives that are setting high standards in the world. It would be a great honour for us, as this will recognise our social commitment in bringing out the use of Information Technology to bring about automation into one of the oldest and largest organisations in the world. CRIS aims at infusing the use of Information Technology and domain expertise for helping Railways to use IT as an enabler.

CITY OF OTTAWA, OC TRANPO

Ontario, Canada

SmartBus*How do you think Information Technology will be different in 2020?*

In 2010, Information Technology will have moved from being a service provider and support organization to being an integrated business enabler that delivers innovation and value to its clients so they can focus on their core business functions

What does being a part of the 2009 Computerworld Honors Program mean to you?

The 2009 Computerworld Honors Program provides recognition of the hard work and dedication of the many people within the organization who worked together to provide this innovative solution. SmartBus has had a positive impact in so many areas, both inside and outside the organization. Being nominated for this award helps highlight what can be achieved with the right combination of people and technology and showcases the broader benefits which are possible in the community.

ITT CORPORATION

Herndon, VA, United States

ADS-B Program**NORTH CAROLINA DEPARTMENT OF TRANSPORTATION**

Raleigh, NC, United States

Wearable Inspection Grading Information Network System WIGINS*How do you think Information Technology will be different in 2020?*

As a developer, you have to look forward to the future with anticipation. Perceived improvements in hardware and development systems and an increasingly computer literate workforce are all things I look forward to in 2020. However, as a project implementer there are concerns that as our technology improves and size of hardware decreases, there will be less product availability for niche markets where decreased hardware size is a negative thing. For these markets, it will be more difficult to find off-the shelf hardware that will perform to modern standards. This will necessitate those markets to develop custom hardware that is costly to produce. This will increase the cost of implementation versus the initial perceived cost reduction due to cheaper hardware.

What does being a part of the 2009 Computerworld Honors Program mean to you?

While ultimately acceptance and appreciation by your client and users is the best validation for our project, it is also an honor to be recognized by our peers in the industry. It is rewarding to know that our project, while created to ultimately ensure the safety of those traveling the roads in North Carolina, has ramifications beyond the initial scope. Being a part of the 2009 Computerworld Honors program allows us to document our achievement and hopefully provide a foundation for the future of technology.

REGIONAL TRANSPORTATION DISTRICT

Denver, CO, United States

Simple and Thin*How do you think Information Technology will be different in 2020?*

Faster and low power chips sets, 100% virtual desktops and laptops, 95% virtual servers.

What does being a part of the 2009 Computerworld Honors Program mean to you?

I agreed to submit this because I feel strongly about improving the end users' experience, simplifying workload for already overburdened IT staff and being environmentally conscious with action. My hope is to provide a real world example of using this technology and get the word out that it is here and now. As Gartner would say, it is on the Slope of Enlightenment and certainly not on the Trough of Disillusion.

TRANSPORTATION

SABRE HOLDINGS

Southlake, TX, United States

Traveler Security and Data Suite (TSDS), and SabreSonic Business Intelligence*How do you think Information Technology will be different in 2020?*

By 2020, IT could finally live up to its name of managing information with technology and reach the promise of Enterprise Information Integration (EII). With the maturity of Service Oriented Architecture (SOA), message oriented systems, and web services, users of IT should see a great expansion of information-supported applications. Integrating business intelligence capabilities into transaction-oriented applications should finally enable better informed, data supported, real-time decision making. One major component of these information integrated applications will be the implementation of the data management principles in behind-the-scenes data profiling, data cleansing, and data integration processes that support data mining, model building, and event detection processes. The continued advances in search technologies will enable the improvement of the data integration methods used in data warehousing and business intelligence systems. Technologies like cloud computing and software-as-a-service (SaaS - in particular BI-as-a-service) should let companies focus more on the intelligent use of data rather than on the technologies required to build the infrastructures required to maintain and integrate the expanding quantities of data generated by IT enabled enterprises. The prevalence and improved quality of robust open source tools will allow enterprises to focus on more broadly deploying IT solutions rather than on restraining and controlling licensing costs. Continued improvements in human interfaces should expand the use of IT by providing extended access via wireless, mobile, and embedded computing devices. These new interfaces, high-speed communications, and powerful back-end processing data infrastructures may finally provide information at our fingertips to allow businesses to develop products and services that let us lead informed, interconnected lives.

What does being a part of the 2009 Computerworld Honors Program mean to you?

We are honored to be part of the 2009 Computerworld Honors Program, and to be recognized alongside programs that are shaping the future of business through innovation in technology. We are proud of what we've achieved for our company, and most importantly our customers, and are happy to have that recognized by such a prestigious program.

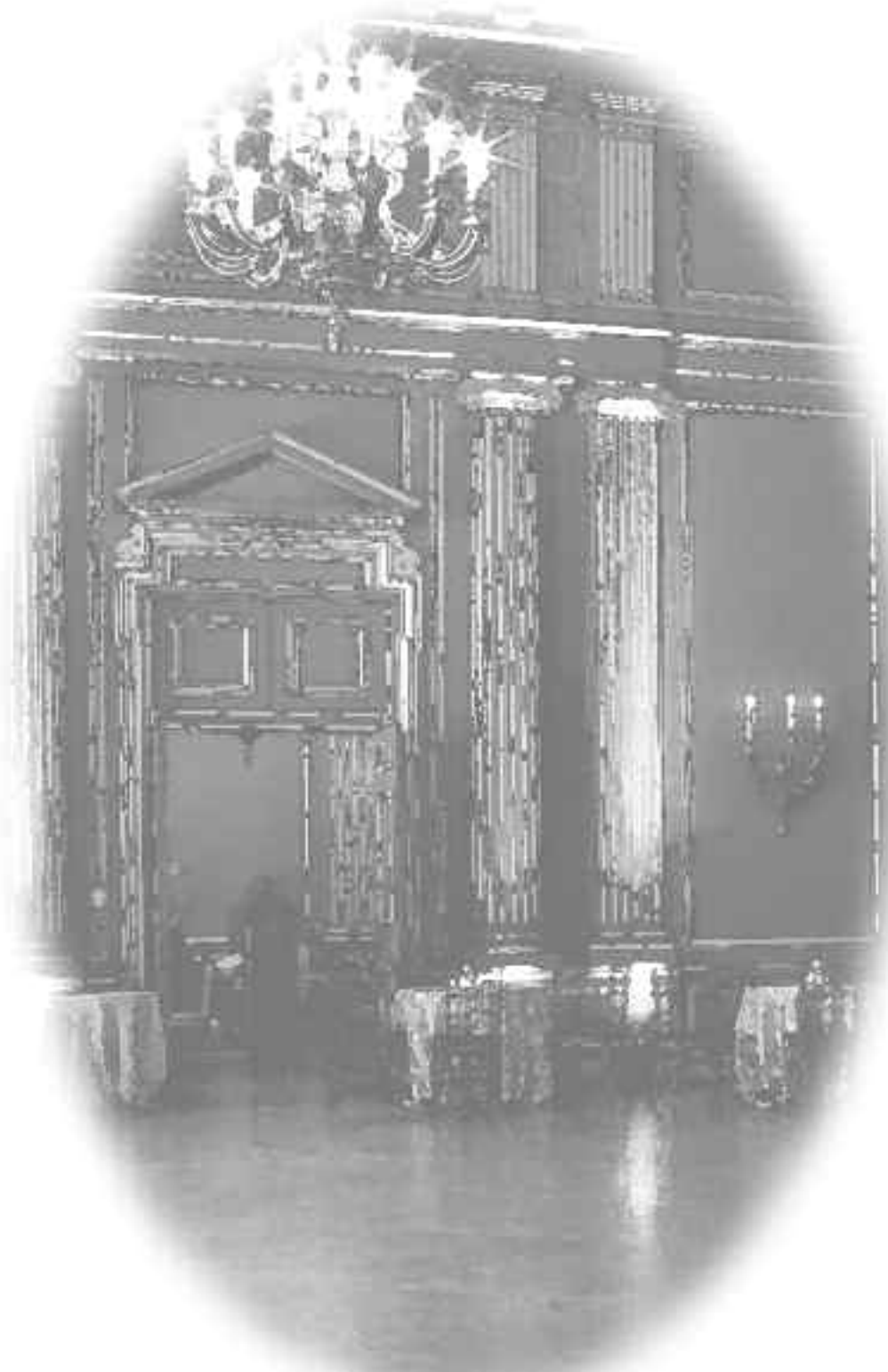
UNITED STATES TRANSPORTATION COMMAND, DISTRIBUTION SYSTEMS PROGRAM MANAGEMENT OFFICE

Scott AFB, IL, United States

TRANSCOM Regulating And Command Control Evacuation System TRAC2ES

THE COMPUTERWORLD
HONORS PROGRAM
2009

THE PROGRAM ARCHIVES



THE GLOBAL ARCHIVES AND ACADEMIC COUNCIL

Well before the turn of the 21st Century, it had become abundantly clear that the information technology revolution was truly global in scope and scale and that its history belonged to all the nations of the world. Simultaneously, individuals and organizations in search of inspiration and answers to increasingly complex questions were turning to those faced with similar issues around the world.

In the year 2000, the Computerworld Honors Program, in consultation with its Chairmen's Committee and Laureates, its friends and advisors from academia and the IT industry, and with invaluable assistance from friends in the diplomatic corps, began to disseminate its annual collection of primary source materials to national archives, state and university libraries, research institutions and similar repositories around the world.

To date, over 350 institutions are actively engaged in the preservation, protection and dissemination of these materials and have been designated Members of the Computerworld Honors Program Global Archives and Academic Council:

ARGENTINA

- Turbo Linux
- Universidad Torcuato Di Tella

AUSTRALIA

- Australian Information Industry Association
- Australian Trade Commission
- Commonwealth Science and Industry Research Organisation
- Mr. Eliza Business School
- National Library of Australia
- National Museum of Australia, Research Library
- Queensland Institute of Technology
- The University of New South Wales

AUSTRIA

- Vienna University
- Vienna University of Technology

BELGIUM

- University of Ghent
- University of Ghent, Dept. of Telecommunications & Information Processing

BRAZIL

- Agencia Cidadão
- Biblioteca da Universidade de Brasilia
- Biblioteca da Universidade de Rio de Janeiro
- Biblioteca Nacional Centro
- Camara Americana de Comercio-Amcham
- Fundacao de Amparo a Pesquisa no Estado de Sao Paulo
- Fundacao Getulio Vargas
- General Electric do Brasil Ltda.
- Instituto Brasileiro de Geografia e Estatistica
- Instituto de Pesquisa Economica Aplicada
- Instituto de Pesquisas Eldorado
- Instituto para Educacao em Medicina e Saude
- Ministerio da Ciencia e Tecnologia
- Universidade de Sao Paulo
- Universidade Estadual de Campinas-Pro-reitoria de Extensao e Assuntos Comunitarios

BULGARIA

- American University in Bulgaria
- City University Programs

CANADA

- HEC
- International Development Research Centre
- McGill University, Schulich Library of Science and Engineering
- Memorial University of Newfoundland
- Royal Ontario Museum
- University of Manitoba
- University of Toronto
- University of Waterloo
- Wilfrid Laurier University

CHINA

- Institute of Science and Technology Information of China
- Tsinghua University
- Chinese Academy of Sciences

COLOMBIA

- Colombian Institute for the Development of Science & Technology
- National University of Colombia at Medellin

CZECH REPUBLIC

- Academy of Science of the Czech Republic
- Charles University

DENMARK

- Aarhus School of Business
- Danmarks Tekniske Universitet
- Handelshojskolen i Kobenhavn
- Technical University of Denmark

ECUADOR

- Banco Central del Ecuador

EGYPT

- American University in Cairo
- Alexandria University

FINLAND

- Helsinki University of Technology
- Helsinki University of Technology, Library of Computer Science and Engineering
- Lappeenranta University of Technology

FRANCE

- Conservatoire National des Arts et Metiers
- La Cité des Sciences et de l'Industrie
- National Institute for Research in Computer Science and Control

GERMANY

- Deutsches Museum, Bonn
- Frankfurt Museum of Applied Arts
- Fraunhofer Society
- German Museum of Technology
- Heinz Nixdorf Museum
- University of Paderborn

HONDURAS

- Consejo Hondureno de Ciencias y Tecnologia
- Universidad de San Pedro Sula

HONG KONG

- The University of Hong Kong

INDIA

- Cognizant Corporate Library
- Indian Institute of Management, Ahmedabad
- Indian Institute of Management, Bangalore
- Indian Institute of Management, Lucknow
- Indian Institute of Technology (IIT), Delhi
- Indian Institute of Technology, Bombay
- Institute for Development and Research in Banking Technology
- Jadavpur University
- University of Madras

INDONESIA

- Bandung Institute of Technology
- University of Indonesia

IRELAND

- Dublin City University
- Dublin Institute of Technology
- National University of Ireland, Galway
- Trinity College Dublin

ISRAEL

- Neiman Library of Exact Sciences and Engineering, Tel Aviv University
- University of Haifa
- Israel Institute of Technology

ITALY

- Centro Cefriel
- Free University of Bozen - Bolzano

JAPAN

- University of Hyogo
- University of Tokyo

KENYA

- Kenyatta University
- Strathmore University
- University of Nairobi

KUWAIT

- Kuwait University

MALAYSIA

- Universiti Teknologi MARA
- University of Malaya Library

MEXICO

- Universidad Anahuac
- Universidad de Guadalajara
- Universidad Nacional Autonoma de Mexico

NETHERLANDS

- Ministry of Economic Affairs
- Ministry of Education, Culture & Science
- National Research Institute for Mathematics & Computer Science
- Techniek Museum
- University of Amsterdam Computer Museum

NIGERIA

- University of Benin
- University of Ibadan
- University of Lagos

NORWAY

- Norwegian University of Technology and Science
- Universitete I Oslo
- University of Bergen

PERU

- Consejo Nacional de Ciencia y Tecnologia

PHILIPPINES

- University of the Philippines Diliman
- University of the Philippines Manila

POLAND

- Lublin University of Technology
- Warsaw University

PORTUGAL

- Instituto Superior Tecnico
- University of Oporto

QATAR

- Qatar University

RUSSIA

- European University at St. Petersburg
- Lomonosov, Moscow State University
- St. Petersburg State Technical University

SCOTLAND

- Edinburgh University Library
- Queen Margaret University College
- UHI Millennium Institute
- University of Glasgow
- IUPUI University Library's Special Collections and Archives
- Johns Hopkins University
- Kansas State University
- Kentucky Department for Libraries and Archives
- Kentucky State University
- LeHigh University
- Library of Congress
- Louisiana State University
- Marshall University
- Massachusetts Institute of Technology
- Michigan State University
- Middlebury College
- Minnesota State University
- Mississippi Library Commission
- Mississippi State University
- Missouri State Library
- Montana State Library
- Montana State University
- Montana Tech Library
- Museum of Science and Industry, Chicago
- Museum of Science, Boston
- National Museum of American History
- National Museum of Natural History
- Nebraska Library Commission
- Nevada State Library & Archives
- New Hampshire State Library
- New Jersey Institute of Technology
- New Mexico Highlands University
- New Mexico State Library
- New Mexico State University
- New York Hall of Science
- New York Institute of Technology
- New York Public Library
- New York University, Elmer Holmes Bobst Library
- North Carolina Board of Science and Technology
- North Carolina Museum of History
- North Dakota State Library
- North Dakota State University
- Northern Michigan University
- Northwest Missouri State
- Ohio State University
- Oklahoma State University
- Oregon Institute of Technology
- Oregon State Library
- Oregon State University
- Penn State University Library
- Pepperdine University
- Plymouth State University
- Princeton University Library
- Public Education Network
- Purdue University
- Rand Corporation
- Rhode Island State Archives
- Rice University
- Robert Wood Johnson Foundation
- Rutgers University
- Sacred Heart University
- San Bernardino County Museum
- San Francisco Museum of Modern Art
- Smithsonian Institute National Museum of American History
- Smithsonian Institution National Air and Space Museum
- South Carolina Department of Archives and History
- South Dakota State University
- St. Mary's Episcopal School, Memphis
- Stanford University
- Stanford University
- State Library of Iowa
- State Library of Michigan
- State Library of Ohio
- State of Florida Library
- State University of New York
- Tennessee State Library and Archives
- Tennessee Tech University
- The Tech Museum of Innovation
- Thomas Jefferson Foundation, Jefferson Library
- United States Naval Academy
- University of Alabama
- University of Alaska Anchorage

SINGAPORE

- Singapore Polytechnic University

SOUTH AFRICA

- Castle of Good Hope
- Rhodes University
- University of Cape Town
- Xavier University

SPAIN

- Consejo Superior de Investigaciones Cientificas
- Instituto de Automatica Industrial
- Universidad Politecnica de Madrid

SWEDEN

- Royal Institute of Technology

SWITZERLAND

- Ecole Polytechnique Fédérale de Lausanne
- ICARE Research Institute in Computing and Telematics

TAIWAN

- Industrial Technology Research Institution
- National Taiwan University of Science and Technology

THAILAND

- King Mongkut's University Technology Thonburi

TURKEY

- Middle East Technical University

UNITED ARAB EMIRATES

- United Arab Emirates University
- United Arab Emirates University

UNITED KINGDOM

- British Museum
- Imperial College of Science, Technology and Medicine
- Lennoxvale
- Museum of Science and Industry
- Museum of the History of Science
- Science Museum
- The British Library
- The Royal Society
- University College London
- University of Cambridge, Whipple Collection
- University of Oxford, Bodleian Library
- University of Sussex
- Warwick University

UNITED STATES

- Alabama Department of Archives and History
- Alabama Public Library Service
- Arizona State University
- Arkansas State Library
- Auburn University
- Baker University
- Boise State University
- Bowdoin College Library
- Brookings Institution Library
- Brown University, John D. Rockefeller Library
- Bryant University
- California Institute of Technology
- Carnegie Museum
- Carnegie-Mellon University
- Case Western Reserve University
- Colorado State Library
- Computer History Museum, California
- Connecticut State Library
- Coronado Public Library
- Dakota State University
- Dana College
- Dartmouth College
- Delaware Public Archives
- Delaware State University
- DePauw University
- Duke University
- Eastman School of Music
- Emory University
- Florida State University
- Georgia Institute of Technology
- Georgia Public Library Service
- Harvard University
- Harvard University, Technology and Entrepreneurship Center
- Hawaii Pacific University
- Healthcare Advisory Board Company
- Howard University
- Idaho State University
- Indiana Historical Society
- Inter American Development Bank
- Internet Public Library
- Iowa State University
- IUPUI University Library's Special Collections and Archives
- Johns Hopkins University
- Kansas State University
- Kentucky Department for Libraries and Archives
- Kentucky State University
- LeHigh University
- Library of Congress
- Louisiana State University
- Marshall University
- Massachusetts Institute of Technology
- Michigan State University
- Middlebury College
- Minnesota State University
- Mississippi Library Commission
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- Missouri State Library
- Montana State Library
- Montana State University
- Montana Tech Library
- Museum of Science and Industry, Chicago
- Museum of Science, Boston
- National Museum of American History
- National Museum of Natural History
- Nebraska Library Commission
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- New Hampshire State Library
- New Jersey Institute of Technology
- New Mexico Highlands University
- New Mexico State Library
- New Mexico State University
- New York Hall of Science
- New York Institute of Technology
- New York Public Library
- New York University, Elmer Holmes Bobst Library
- North Carolina Board of Science and Technology
- North Carolina Museum of History
- North Dakota State Library
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- Oklahoma State University
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- Oregon State University
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- Pepperdine University
- Plymouth State University
- Princeton University Library
- Public Education Network
- Purdue University
- Rand Corporation
- Rhode Island State Archives
- Rice University
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- Rutgers University
- Sacred Heart University
- San Bernardino County Museum
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- Smithsonian Institute National Museum of American History
- Smithsonian Institution National Air and Space Museum
- South Carolina Department of Archives and History
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- University of Alabama
- University of Alaska Anchorage
- University of Alaska Fairbanks
- University of Alaska Southeast
- University of Arizona
- University of Arkansas at Little Rock
- University of Arkansas Libraries
- University of California
- University of California at Berkeley
- University of California at Los Angeles
- University of Charleston
- University of Cincinnati
- University of Colorado
- University of Connecticut
- University of Dayton
- University of Florida
- University of Georgia
- University of Hawaii, Manoa
- University of Houston, College of Technology
- University of Idaho
- University of Illinois Library
- University of Iowa
- University of Kansas
- University of Kentucky
- University of Louisiana at Monroe, Sandel Library
- University of Louisville
- University of Massachusetts
- University of Michigan
- University of Michigan Library
- University of Michigan, Center for Information Technology
- University of Minnesota
- University of Mississippi
- University of Missouri
- University of Montana
- University of Nebraska
- University of Nebraska, Omaha
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- University of New England
- University of New Hampshire
- University of New Mexico
- University of North Carolina
- University of North Carolina, Kenan-Flagler Business School
- University of North Dakota, Chester Fritz Library
- University of Northern Iowa
- University of Oregon
- University of Pittsburgh
- University of Rhode Island
- University of San Diego
- University of South Carolina
- University of South Dakota
- University of Southern Mississippi
- University of Tennessee
- University of the Ozarks
- University of Tulsa
- University of Utah
- University of Vermont
- University of Virginia
- University of Washington
- University of Wisconsin
- University of Wisconsin-Madison
- University of Wyoming
- USC
- Utah State Library
- Vermont State Library
- Virginia Tech University
- Wake Forest University, Z. Smith Reynolds Library
- Washington State Library
- Washington State University
- Washington University
- Wayne State University
- Wesleyan University
- West Virginia Archives and History
- West Virginia University
- Western Carolina University
- Wheaton College
- Wisconsin State Historical Society
- Wyoming State Library
- Yale University

VENEZUELA

- Biblioteca Marcel Roche
- United Nations Education, Scientific and Cultural Organization
- Universidad Simon Bolivar

ZIMBABWE

- University of Zimbabwe

THE OFFICIAL ARCHIVES ONLINE

The Computerworld Honors Program's official Archives Online harnesses the power of the Internet to provide global access to the primary source materials submitted by Computerworld Honors Program Laureates. This ever-growing global collection comprises an extraordinary selection of interpretive resources. In addition to sound recordings, still photography, interviews, oral histories and video biographies, the archive now includes literally thousands of case studies of outstanding applications of information technology. Nominated over more than a decade by the Program's Chairmen's Committee, these works are submitted for inclusion in the permanent research collections of a select group of the world's leading academic and research institutions.

www.cwhonors.org



THE ORAL HISTORY ARCHIVE

The Chairmen's Committee and Sponsors of the Computerworld Honors Program have made possible the creation of oral histories and video biographies of some of the most outstanding leaders of the information technology revolution. These interviews are designed to capture for posterity some of the personal and professional stories of these individuals, their goals, ideals, mentors, sources of inspiration and thoughts on the future of technology. Transcripts and, in many cases, highlights of the original audio or videorecordings of these interviews, are rapidly becoming available through the resources of the Smithsonian's National Museum of American History and The Computerworld Honors Program's Official Archives Online.

Marc Andreessen, Founder and Vice President, Netscape Communications Corporation

Robert Ballard, Founding Chairman of the JASON Project

Edward Barnholt, Chairman, President and CEO, Agilent Technologies

Craig Barrett, Chief Executive Officer, Intel

Bill Bass, Senior Vice President, E-commerce & International, Lands' End

Andreas Bechtolshiem, Vice President Giga Byte Switching, Cisco Systems

Gordon Bell, Chief Scientist, Stardent Computer

Tim Berners-Lee, Inventor of the World Wide Web

Steve Case, CEO, America Online

Vinton Cerf, Senior Vice President, Internet Architecture & Technology, WorldCom

John Chambers, Chairman & CEO, Cisco Systems

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Irwin Jacobs, Chairman, Qualcomm

THE PROGRAM ARCHIVES

THE ORAL HISTORY ARCHIVE

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Ken Olsen, Founder & President, Digital Equipment
Corporation

Ann Vesperman Olson, Vice President Customer
Service, Lands' End

Paul Otellini, President & Chief Operating Officer, Intel

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Seymour Papert, LEGO Professor of Learning
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Charles Peskin, Professor, New York University's
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Hasso Plattner, Co-Founder, SAP AG

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Don Stredney, Co-Founder, McDonald & Stredney

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Red Hat

Ralph Szygenda, Group Vice President & Chief
Information Officer, General Motors

Joseph Tucci, President & Chief Executive Officer, EMC

Hal Uplinger, Producer of Live Aid concert

J. Craig Venter, President & Chairman,
The Center for the Advancement of Genomics

John White, Head of Manufacturing, RBS Americas,
The Royal Bank of Scotland

Richard Williams, Vice President & Group CIO,
AstraZeneca

THE COMPUTERWORLD
HONORS PROGRAM
2009

ACKNOWLEDGEMENTS



ACKNOWLEDGEMENTS

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The Computerworld Honors Program proudly thanks the Program's Chairmen's Committee for 2009.

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Accenture, William D. Green
ADTRAN, Thomas R. Stanton
Agilent, William P. Sullivan
Alcatel-Lucent, Ben Verwaayen
AT&T, Randall L. Stephenson
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Avaya, Kevin Kennedy
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BMC, Robert E. Beauchamp
Booz Allen Hamilton, Ralph W. Shrader
Borland, Erik Prusch
Broadcom, Scott A. McGregor
Brocade, Michael Klayko
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Capgemini, Paul Hermelin
CDW, John A. Edwardson
Cincom, Thomas M. Nies
Cisco, John Chambers
Cognizant, Francisco D'Souza
Dell, Michael Dell
Deloitte, Barry Salzberg
Eclipsys, R. Andrew Eckert
EDS, Joe Eazor
EMC, Joseph Tucci
Epicor Software, L. George Klaus
Extreme Networks, Mark Canepa
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Fujitsu, Michiyoshi Mazuka
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IBM, Sam Palmisano
iGate, Phaneesh Murthy
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