GOVERNMENT TECHNOLOGY

VOL23 ISSUE3 SOLUTIONS FOR STATE AND LOCAL GOVERNMENT IN THE INFORMATION AGE MARCH 2010

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DOERS, DREAMERS & DRIVERS

DIGITAL COMMUNITIES

inside: quarterly report

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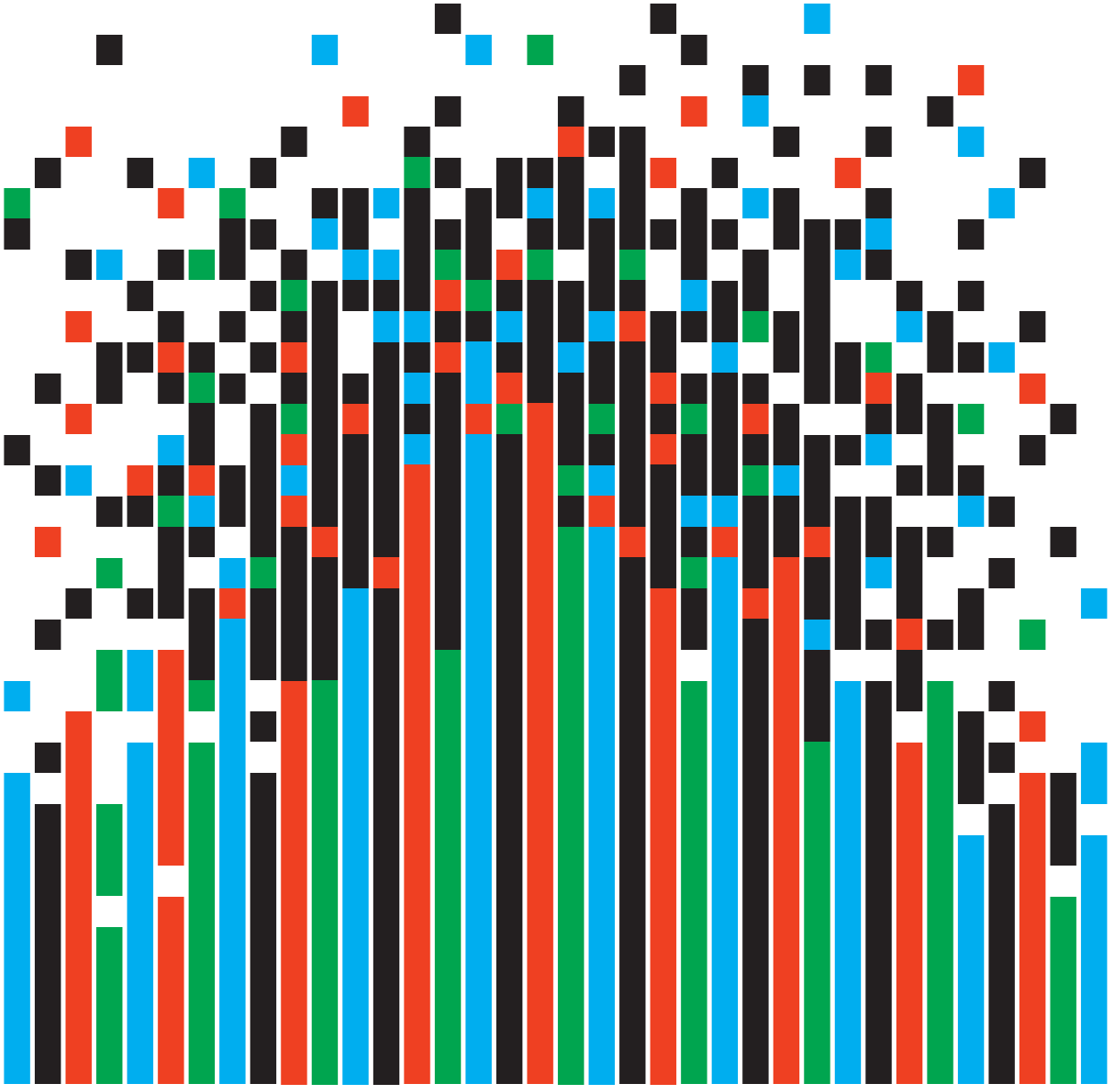

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Chris Vein
CIO, CITY AND COUNTY OF SAN FRANCISCO

PHOTO BY RICHARD MORGENSTEIN

The inside pages of this publication are printed on 80 percent de-inked recycled fiber.

Government Technology (ISSN# 1043-9668) is published monthly by *Government Technology*, 100 Blue Ravine Road, Folsom, CA 95630. Periodicals Postage Paid at Folsom, Calif., and additional offices. POSTMASTER: Send address changes to: *Government Technology*, 100 Blue Ravine Road, Folsom, CA 95630. SUBSCRIPTIONS: Subscription inquiries should be directed to Government Technology, Attn: Circulation Director. 100 Blue Ravine Road, Folsom, CA 95630, 916/932-1300. Canada Post Publication Agreement #41578525, undeliverables 27496 Bath Road, Mississauga, Ontario L4T 1L2 or e-mail subscriptions@erepublic.com.

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BY STEVE TOWNS, EDITOR

Spotlighting Government Innovators

Eight years ago when we launched our first "Doers, Dreamers and Drivers" issue, we wondered how long we could keep the annual feature going. Our original idea was simple: We would cast a spotlight on 25 individuals who set the standard for using technology to make government work better. Back then, we questioned whether we could find enough innovators to assemble a new list year after year — especially given the tight budgets, institutional inertia and other roadblocks to change in the public sector.

Now that concern seems ridiculous. We've honored more than 200 people since March 2002. And the hardest part is paring each annual list down to just 25. That alone is a testament to the dedication and creativity of the IT professionals, public leaders, agency managers and private-sector experts who find ways to advance the use of technology in government, even with the deck seemingly stacked against them.

Our 2010 list includes an eclectic and, we believe, inspiring group of men and women.

They lead some of the nation's most innovative IT projects. Los Angeles CTO Randi Levin faced down a wave of controversy to lead implementation of what may be the nation's largest cloud-based e-mail deployment in government. CTO David Fletcher was the driving force behind Utah's award-winning Web site redesign. And New York City Deputy Mayor Linda Gibbs, along with her CIO Kamal Bherwani, is using technology to overhaul health and human services programs in the nation's largest metropolis.

Members of this year's Top 25 also are social media pioneers like Steve Ressler, a federal government worker in his 20s who started a social network site for government employees in his spare time that now boasts 25,000 members. And they're tech-savvy elected officials like Colorado Gov. Bill Ritter and Massachusetts Gov. Deval Patrick, who understand that executive leadership is crucial to technological undertakings.

Most importantly, they were all willing to challenge convention by using information technology in innovative ways that strengthen their organizations and improve the lives of citizens. I invite you to turn to page 14 to meet our 2010 Doers, Dreamers and Drivers. GT

RAISE YOUR VOICE: Your opinions matter to us. Send comments about this issue to the editors at editorial@govtech.com. Please list your telephone number for confirmation. Publication is solely at the discretion of the editors. *Government Technology* reserves the right to edit submissions for length.

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Subscription Information: Requests for subscriptions may be directed to Circulation Director by phone or fax to the numbers below. You can also subscribe online at www.govtech.com.

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govtech.com/extra

Updates from *Government Technology's* daily online news service.

A Federal Match.com?

In January, the National Telecommunications and Information Administration and the Rural Utilities Service — the two agencies in charge of managing broadband stimulus funds, launched **match.broadbandusa.gov**. The Web site's aim is to bring together companies, nonprofits, state and local governments, and "expert" individuals who are interested in teaming up to apply for stimulus money.
www.govtech.com/match

The Pentagon's Defense Advanced Research Projects Agency (DARPA) is requesting proposals for "innovative new ideas to encourage students to major in CS-STEM [computer science, science, technology, engineering and mathematics] and pursue careers as engineers and scientists." The agency aims to combat a marked decline in the number of students taking math, science and engineering courses.
www.govtech.com/darpa

Top-Tweeted Stories

Twitter and Government Transparency
WWW.GOVTECH.COM/TWITTER — 70 tweets

Cloud Computing: Four Questions to Ask Your Vendor
WWW.GOVTECH.COM/CLOUD — 42 tweets

Contest Opens to Award Travel Expenses for City Employees to Attend CityCamp
WWW.GOVTECH.COM/CITYCAMP — 26 tweets

$182 MILLION
The amount spent so far of the **$7.2 billion** set aside for broadband stimulus.
www.govtech.com/match

Web Comment of the Month

"The government is trying to provide strong future infrastructure. Those opposing the necessary higher speeds are reiterating past arguments. What [will] happen to candle-making jobs if we use light bulbs? Why pave the streets — dirt roads work. Is stifling creativity, creating barriers for businesses, removing opportunities for better medical care and limiting educational opportunities in the best interest of the U.S.? We need higher speeds, those you can get with fiber optics."

Anonymous on Jan. 11, 2010, in response to our story on whether the federal broadband standard is too slow.

www.govtech.com/wcom

Broadband Slowdown

The average broadband speed in the U.S. declined by 2.4 percent in the third quarter of 2009 compared to the same quarter in 2008, according to a report released by content delivery network Akamai. In its *State of the Internet* report, the company said the U.S. ranks 18th in the world with an average broadband speed of 3.9 Mbps.
www.govtech.com/slowdown

Less than **10%** of new computer science undergraduates are **women**.
www.govtech.com/darpa

Hot List

Here are the 10 most popular stories from Jan. 8, 2009 to Feb. 7, 2009.

1. **How to Make Municipal Wi-Fi Work**
After years of trial and much error with citywide broadband plans, municipal governments find ways to deliver Internet access to the public.
www.govtech.com/736963

2. **New Broadband Stimulus Requirements Include Urban Cities**
New eligibility requirements enable urban cities to compete by not mandating 'unserved' or 'underserved' coverage status.
www.govtech.com/gt/articles/738252

3. **Is the Federal Government's Defined Speed for Broadband Too Slow?**
Advocates of higher minimum broadband speeds say the National Broadband Plan may not be fast enough for citizens.
www.govtech.com/736478

4. **U.S. Ranked 18th in World for Average Broadband Speed**
Report identifies fastest broadband speeds and most unique IP address for 201 countries worldwide.
www.govtech.com/738833

5. **Does Your City Need a Web 2.0 Makeover?** In 2011, five U.S. cities will get the chance to receive a customized Web 2.0 solution to improve transparency and efficiency.
www.govtech.com/739813

6. **Site Reveals Salaries of New York State Employees**
Conservative think tank launches Web site with comprehensive state financial data.
www.govtech.com/383701

7. **Enterprise Architecture Demystified**
What is enterprise architecture and who is it intended to benefit?
www.govtech.com/418008

8. **Cloud Computing: Four Questions to Ask Your Vendor** Data location, access and security are crucial to cloud computing contracts.
www.govtech.com/738245

9. **Houston's My City Consolidates GIS Data From City Agencies**
Enterprise GIS makes more accurate maps available to citizens and city departments.
www.govtech.com/736224

10. **Consolidating E-Mail Statewide**
The New York State Office for Technology has 18 months to migrate nearly 100,000 additional users to the e-mail solution currently managed by the state CIO's office.
www.govtech.com/743398

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FAMILY ALBUM

If the "before" image looks dated, that's because it is. It shows Robart I — one of the first behavior-based autonomous robots — created in 1980 by a joint Army-Navy program. The larger image shows a 1992 laboratory prototype for the third-generation Robart. Both are part of the Army-Navy Mobile Detection Assessment and Response System, intended to detect intruders and potentially hazardous conditions at military installations. Robart I was controlled by a Synertek SYM-1 computer running at 1 MHz with 4 KB of on-board RAM. The robot featured an optical and ultrasonic sensor, an infrared proximity sensor, and could detect vibration, heat and gases. Several functional field models have been developed from the latest Robart III platform.

PHOTO COURTESY OF THE U.S. NAVY

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CHAD VANDER VEEN | ASSOCIATE EDITOR

WATCH VIDEO of the interview with Linda McCulloch at www.govtech.com/lindamcculloch

Linda McCulloch

Montana Secretary of State

PHOTO COURTESY OF MONTANA SECRETARY OF STATE OFFICE

In 2008, **LINDA McCULLOCH** became the first woman elected secretary of state in Montana. McCulloch ran on a platform of increasing voter participation and partnering with state businesses to help them grow. Prior to taking office, she served eight years as the state superintendent of public instruction and in the Montana House of Representatives. She is overseeing a bar-coding project for the 40,000 boxes of documentation the state stores.

1 What are your policies for records management in Montana?

Records management is one of those things most people don't think of very often and don't think is very exciting. But I'm also a school librarian, and librarians were the first records managers. We use the national standard, which always surprises folks because people think it must be flash drives, discs or something digital — when in fact, it's microfiche. We need to keep them on a medium that will be workable 100 years from now, and that's microfiche.

2 How do you respond to e-discovery requests using microfiche?

Although we have all these records on microfiche, we keep the storage information digitally so we can find those things in a huge warehouse. It's kind of like going to the public library: To find books, you can use the Dewey Decimal System, but we also have digital numbers attached. E-discovery tells us where to find those records.

3 What is the Secretary of State Information Management System (SIMS)?

One of our tasks in the secretary of state's office is to license all businesses in Montana. Those records are kept on a 1978 mainframe. We worked with the governor and the Legislature to capture enough state money to start converting that data into something that's in the 21st century.

We have 23 software programs, and they're not Web-based so they don't talk to each other. It would be so much better for Montana businesses to do business with us on a Web-based system. So we're very excited about SIMS, and we're working with a company that created a similar system in New Hampshire.

4 What's your position on online voter registration and e-voting?

We're very excited about online voter registration. One barrier, more than anything, is it costs money to implement this system. We're working on this and hope to be able to present some ideas to the next Legislature, if not a full bill. We're also looking at the possibility of piloting it. GT

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THE TOP TWENTY-FIVE

DOERS, DREAMERS & DRIVERS

Since 2002, we've dedicated the March issue of *Government Technology* to 25 people who cut through the public sector's infamous barriers to innovation — tight budgets, organizational inertia, politics as usual, etc. — to reshape government operations for the better. This year, we honor an eclectic group of individuals from government, academia and the private sector who share a willingness to challenge convention and find new answers to long-standing issues. Congratulations to our 2010 Doers, Dreamers and Drivers.

Kamal Bherwani
CIO of Human Services, New York City

Peter Corbett
CEO, iStrategyLabs

Toni Cramer
CIO, Bellevue, Wash.

David Fletcher
CTO, Utah

Linda Gibbs
deputy mayor, Health and Human Services, New York City

Wanda Gibson
CTO, Fairfax County, Va.

Bill Greeves
communications and IT director, Roanoke County, Va.

Gov. Dave Heineman
Nebraska

Bill Hobgood
project manager, Richmond (Va.) IT Department

Michele Hovet
IT director, Arvada, Colo.

Karen Jackson
deputy secretary of technology, Virginia

Randi Levin
CTO, Los Angeles

Mike Locatis
CIO, Colorado

Anne Margulies
CIO, Massachusetts

Harlin McEwen
chairman, Public Safety Spectrum Trust Corp.

Beth Noveck
deputy CTO for open government, U.S. government

Gov. Deval Patrick
Massachusetts

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founder and president, GovLoop

Gov. Bill Ritter
Colorado

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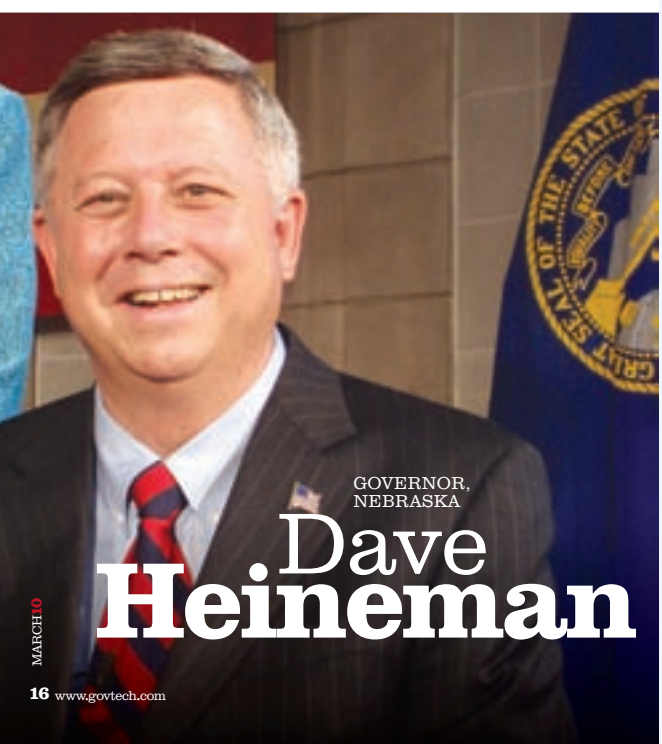


GOVERNOR, NEBRASKA

Dave Heineman

Executive support is often cited as the cornerstone of any successful IT venture. At the state level, getting the governor on board can make or break a project. In Nebraska, Gov. Dave Heineman has proven that he understands IT's importance by taking the lead on groundbreaking technology endeavors like statewide electronic health records, interoperable public safety communications and e-mail consolidation.

Heineman, elected in 2005, helped guide a series of ambitious objectives that aim to unify IT in the state. The Nebraska Health Information Initiative, for instance, is a Web-based application that allows patient information to be shared by any medical facility in Nebraska. Heineman also is driving efforts to unify communications technology for all the state's public safety and emergency response organizations.

It's all part of the governor's push to prepare Nebraska for the next generation of residents, businesses and employees.

"Look at where customers are headed — I say this all the time. Our kids — my son — is never going to City Hall, or to the county courthouse or a state office building. They want to do it using technology. So we have to get in the 21st century. We'll have a more efficient, more cost-effective government," Heineman said in an interview with *Government Technology* last year. "I think if you're involved in technology in our state, you know the state is trying to take a quantum leap forward. We want to be prepared for the next generation of consumers who are going to use technology at all hours of the day."

CHAD VANDER VEEN, ASSOCIATE EDITOR

CEO, iSTRATEGYLABS

Peter Corbett

If you ask Peter Corbett, CEO of iStrategy Labs, to pitch you some of his marketing ideas, he will reject you.

"I'm not going to walk in and present ideas," he said. "What I will do is sit in a room and we're going to talk about ideas until we find one that's so exciting that you can't wait to bring it to life with us."

Such collaboration has been standard operating procedure for Corbett since he launched his "digital-word-of-mouth" agency two years ago. Based in Washington, D.C., iStrategy Labs seeks to bridge the digital and physical worlds, using social media and technology to produce content and connect citizens.

With an extensive multimedia background, Corbett is the force behind numerous creative, interactive marketing campaigns, like Geico's fake dating site, iheartcavemen.com.

But the company is best known for creating Apps for Democracy, an innovation contest with cash prizes, where D.C. residents created new applications using public-sector data. The 30-day contest cost the district $50,000, and produced 47 Web, iPhone and Facebook apps worth $2.3 million.

"This contest set a model for how governments can engage citizens to develop innovative technology solutions," Corbett said.

Apps for Democracy's success led to copycat programs globally.

"If state and local governments realize that the most valuable assets they have are citizens, they are going to solve their problems so much faster," he said. "Using digital media to understand how to reach and harness the power of citizens is the promise of government 2.0 and revitalized American democracy."

RUSSELL NICHOLS, STAFF WRITER

CTO, UTAH

David Fletcher

Utah made a splash in 2009 with its e-government-focused portal overhaul, an effort spearheaded by state CTO David Fletcher. The innovative redesign earned Utah.gov the top ranking among state portals in the Center for Digital Government's Best of the Web awards last year.

The timing of Utah.gov's update couldn't have been better. Much of the state's work force transitioned to a four-day workweek in 2008, with many state office buildings closing on Fridays. The portal redesign aimed to make that situation more livable by offering citizens more Web-based services. One of the site's new features that piqued interest in the government IT community was geo-IP technology, which lets the portal read a user's IP address and uses GIS to match it with links relevant to the user's physical surroundings.

"We wanted to localize the services and information so they would mean more to the citizens," said Fletcher. "The geo-IP enabled us to determine what public meetings and services would apply to citizens using the site."

Those customized links also include data for local parks, libraries and schools.

Fletcher — a prolific tweeter who maintains seven Twitter accounts, each on different topics — has been a driving force behind Utah government's use of social media. Engaging social networks was a top priority for Fletcher's portal revision. Utah.gov assembles links to all social network activity by state agencies. And late last year, Utah became one of the first states to release guidelines for appropriate use of social media tools by state employees.

As government social media use builds momentum, Fletcher is helping to pioneer effective use of these tools in the public sector.

ANDY OPSAHL, FEATURES EDITOR

Toni Cramer

CIO, BELLEVUE, WASH.

Cloud computing drew a lot of interest among state and local IT officials last year. Not everyone is on board with the approach yet, but they can't seem to stop asking questions about it.

One CIO deserving more attention as a leader in this area is Toni Cramer of Bellevue, Wash. The IT infrastructure she manages in Bellevue hosts software shared by 39 other organizations: 34 cities, one county, a fire district, two economic development councils and an airport. All of these users were brought into Cramer's data center by eCityGov.net, an alliance formed in 2001 by nine Puget Sound-area cities to provide shared, Web-based services. Cramer co-chairs the organization's board of directors.

Among the services hosted by eCityGov.net: online building permits, parks and recreation information, maps, commercial property listings, procurement bid submissions, job listings and human services functions.

Participating governments share the costs of running the applications, based on their population. Only partner members, who pay an extra fee, get the right to vote on new services, which are available through eCityGov.net and developed with the help of survey research of citizen preferences. Before each new application goes live, individuals representing the application's target market test beta versions of the software.

Microsoft, based in nearby Redmond, Wash., donated consulting services to eCityGov.net's founding cities when they created the innovative arrangement nine years ago. Today the organization's hosted, shared services model looks even more attractive as local governments struggle to deliver services on recession-battered budgets.

Cramer may not be the most high-profile CIO in government, but she was running a government-to-government cloud long before it was trendy.

ANDY OPSAHL, FEATURES EDITOR

Randi Levin

CTO, LOS ANGELES

No public-sector CIO has endured turmoil and relished triumph quite like Randi Levin, who last summer was amid a politically charged debate about Los Angeles' enterprisewide adoption of Google's Gmail e-mail service.

The five-year agreement, approved by the Los Angeles City Council in October 2009, sparked an intense lobbying battle between Google and its competitors that surprised staff at the city's Information Technology Agency.

"We were originally under the impression Washington, D.C., had done the whole [Gmail] migration," said Levin, who's led the agency for the past two and a half years. "I don't want to go into all the reasons why we thought that, but we certainly didn't think we were going to be the first, nor did we think it was going to be as political as it turned out to be."

The decision will migrate the e-mail of 30,000-plus city employees to Google's offsite "government cloud" that debuts this year, and will later bring Google Apps — docs, voice, chat, mobile functionality and Web site support — to city departments. The move, Levin says, will save more than $5 million in hard costs and $20 million more through increased productivity.

"… people are realizing that running infrastructure, particularly, is becoming much more of a commodity …"

But it took some time to win support. Some council members and public safety officials initially opposed the plan because of perceived security concerns about cloud computing and protecting sensitive data. Some also were nervous that L.A. would be the first large government to adopt Google across the enterprise, however, Levin said those concerns have since been addressed and everyone is on board.

Levin and her IT managers believed from the start that L.A. was making the right decision by choosing Gmail. "In all, everyone's trying to figure out that age-old question of doing more with less, and people are realizing that running infrastructure, particularly, is becoming much more of a commodity — and there are others who can do it better, faster and cheaper."

MATT WILLIAMS, ASSOCIATE EDITOR

Anne Margulies & Deval Patrick

CIO, MASSACHUSETTS

GOVERNOR, MASSACHUSETTS

It seems like every other government department has either played the IT consolidation game or is racing toward the finish line. But if any of them want to see how to play to win, they should look at Massachusetts. The state is consolidating services and infrastructure, including 183 data centers, 100 phone systems, 24 e-mail systems and 15 major data networks.

Under the leadership of Gov. Deval Patrick and CIO Anne Margulies, the state's streamlining appears to be going so smoothly that it has surprised even Margulies.

"I know it is a very large-scale complex change, and people just don't like change," she said. "It's gone better than I thought it would because people have been extraordinarily collaborative in ways that I think they haven't had to in the past."

Patrick's early decisions set the groundwork for the transition. In February 2009, he issued Executive Order 510 to consolidate the state's technical resources and create eight new secretariat CIOs, in addition to the existing state CIO. The overall goal was to build an IT environment that's more secure and efficient than the old systems. Massachusetts is currently in Phase 3 of the four-phase effort that's expected to be completed in December 2010.

"I think that by putting all of our material out there openly and getting as many people engaged in a meaningful way, it will help us accomplish a huge amount in a short period of time." ANNE MARGULIES, CIO, MASSACHUSETTS

Patrick took office in January 2007, and soon after that he filed a $1.47 billion bond bill to finance technology projects as capital investments, similar to transportation, public safety and environmental initiatives.

"This governor recognized the importance in making important long-term investments in technology," said Margulies.

Patrick also recognizes the power of social media to reach constituents. He's on Flickr, YouTube, Twitter and has a blog. He's an advocate of open communication in other areas, exemplified by the Open Data Initiative his administration launched to make public information available to citizens via an online data catalog from various departments.

That spirit of open communication has already shown itself in the consolidation efforts. To keep state employees and other stakeholders informed, Margulies and her staff created a detailed interactive wiki and video, which can be accessed from the Information Technology Division (ITD) Web site. Margulies also narrates a YouTube video that explains the project's concept, development and expected completion date, in addition to the ITD's weekly news blast and quarterly newsletter.

"I think that by putting all of our material out there openly and getting as many people engaged in a meaningful way, it will help us accomplish a huge amount in a short period of time," Margulies said.

HILTON COLLINS, STAFF WRITER

Welcome Relief

Social service organizations face significant challenges in today's economy, but have a powerful technology ally.

Government organizations are experiencing unprecedented demand for social services. The current economy continues to put immense stress on social service organizations. Increased need for food assistance, employment security, housing aid and other critical services is keeping agencies busier than ever.

The difficulties in meeting today's demands are compounded by reduced staff due to budget cuts and legacy IT systems that don't adapt to changing social service needs. Thus, social service agencies must work more efficiently and effectively for better outcomes, as they help constituents with health, safety and self-sufficiency.

A unique new social services solution from Oracle may be the answer for many organizations. Oracle now provides a complete solution that gives caseworkers a comprehensive view of clients across programs. Using Oracle's social services solution, organizations can streamline the entire social services lifecycle, including 1) application, initiation and screening, 2) determination and investigation, 3) delivery of benefits and services and 4) measurement, analysis and optimization of programs (see diagram on following pages).

Oracle is expanding its presence in social services after seeing a need in the marketplace for a complete and flexible approach. This commercial off-the-shelf (COTS) offering can assist agencies in meeting social service needs in today's challenging environment for three key reasons: It's client-centric, modular, and helps organizations respond quickly to changing policies and processes.

The Oracle social services solution leverages Oracle's Siebel Public Sector 8.2, an industry-leading case management system, and Oracle Policy Automation, which makes policy management easier and more efficient.

Client-Centric Approach

The solution starts with the client, allowing organizations to assess the client's situation across all services and programs. Unlike other solutions that are built only for specific programs, the Oracle solution eliminates information silos and creates a more automated, collaborative environment, so caseworkers have an integrated understanding of clients and can make better decisions.

The solution also enables organizations to collect data from social service providers, via an easy-to-use, Web-based interface. By including the various providers in this manner, Oracle's social services solution broadens the integrated service-delivery environment, enabling organizations and the providers they work with to collaborate more closely in achieving positive outcomes for clients.

For example, when clients are referred to a group home or homeless shelter, are resources available there to help them? Are clients getting the attention they need? Are the proper outcomes realized? Oracle's solution lets organizations work with providers more effectively to coordinate and expand service delivery. And it's all done with roles-based security, helping organizations protect client data.

Structured for Success

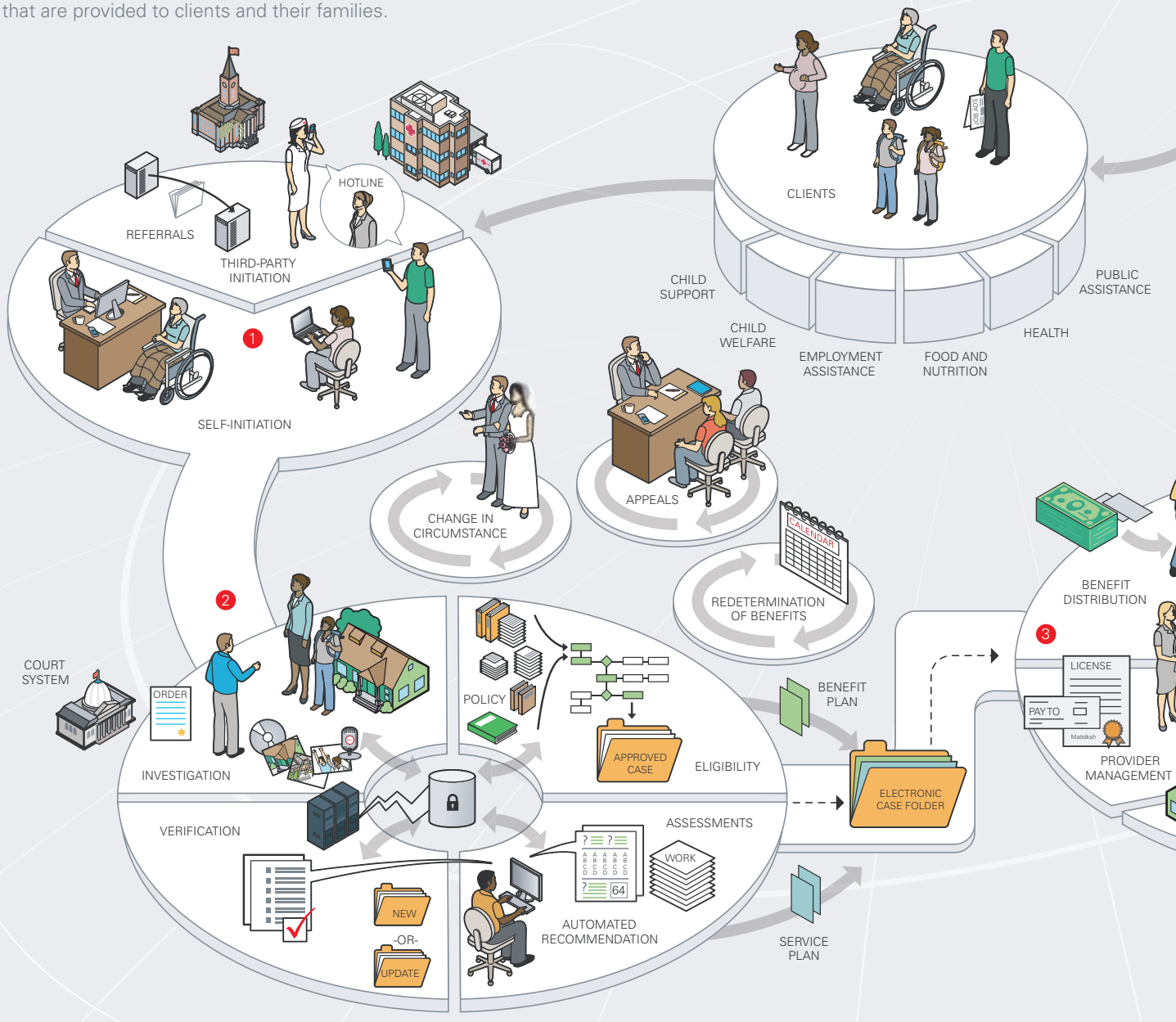
Oracle's social services solution uses service-oriented architecture (SOA), which means interconnected components, such as case management systems and financial systems that deal with benefit payments, can be deployed separately, or in stages, rather than needing a "big bang" implementation. Front-end processes can be improved quickly, and back-end systems can be transformed individually and affordably.

Once new components are in place, they can be upgraded individually as needs arise. Changes can be made to the labor eligibility policies, for example, without affecting other program rules, financials or case management. This modular approach enables organizations to constantly modernize caseworker capabilities and improve services to constituents.

The solution's SOA approach and standards-based technology give organizations greater adaptability to change. SOA lets any given part of the system "talk to" any other part, providing a lot

How Oracle Solutions Help Manage the Social Services Lifecycle

Oracle provides a complete platform for integrated program delivery. With Oracle solutions, organizations can transform their legacy IT systems into enterprisewide platforms that can support one or more programs and provide a comprehensive view of the services and benefits that are provided to clients and their families.



1

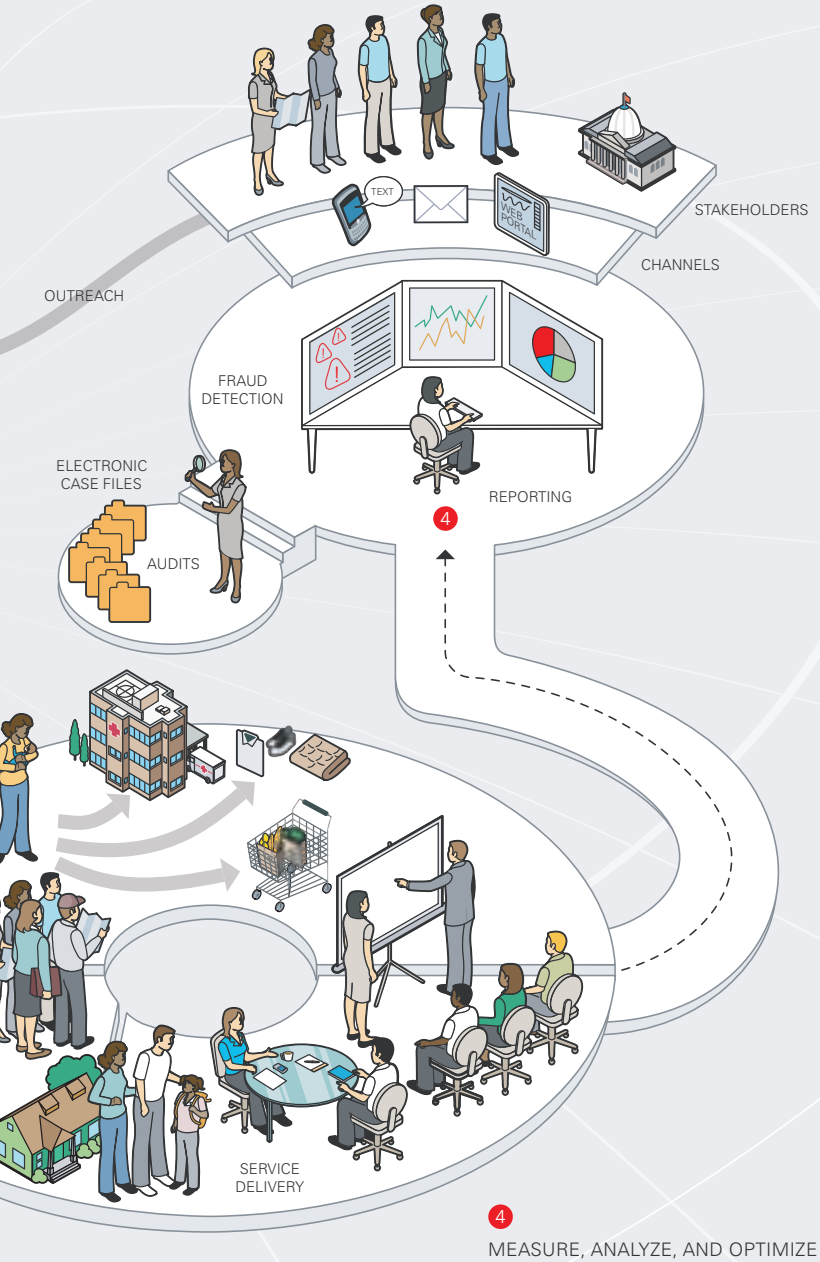
APPLY, INITIATE, AND SCREEN

Simplify new or additional service requests from citizens and third parties. Support multiple channels, including phone, internet, automated referrals, mail, and in-person requests. Expand access to citizens by providing self-screening capabilities, including the ability to document the complex relationships between family members and other stakeholders, as well as ways to determine potential eligibility, complete an application, and submit the application electronically.

2

DETERMINATION AND INVESTIGATION

Reduce data entry by building an electronic case folder of all documents and content related to an investigation, an assessment, or an eligibility determination. Ensure consistent rules are applied to each applicant in compliance with program policies and procedures, and provide a complete audit trail with an automated rules engine and workflow. Automatically reflect changes in client circumstance, redeterminations, and other life events.



4

MEASURE, ANALYZE, AND OPTIMIZE

Evaluate overall program performance, monitor for exception situations, and detect potentially fraudulent situations. Automate internal and external reporting to stakeholders. Analyze and escalate key performance indicators through multiple delivery channels.

3

DELIVERY OF BENEFITS AND SERVICES

Provide the ability to create a service plan that contains measurable goals and activities, allowing caseworkers to monitor a client's progress toward key milestones and goals. Create a plan detailing the benefits that a client is eligible to receive, integrated with the financial system that generates those benefits. Provide the ability to collaborate with internal and contracted service-delivery providers, and include program-specific capabilities to access, update, and record case activities, subject to user access and security controls.

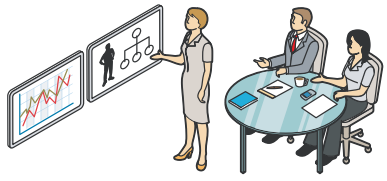
BUSINESS PROCESSES

CASE MANAGEMENT

Provide caseworkers with a single view of a client across programs and organizations, facilitating agency collaboration and helping to provide holistic services across multiple agencies. Maintain a complete, electronic case file, including information about all parties associated with a case; eligibility determinations, assessments, and investigation results; supporting documentation; correspondence and contacts; visits; and benefits and service plans. Monitor case information and alert caseworkers of key milestones, events, and triggers.

HUMAN RESOURCES

Manage the entire workforce and employee lifecycle, including recruiting, certifications and training, and performance management. Manage benefits, time and attendance, and payroll, and enable employee self-service capabilities.

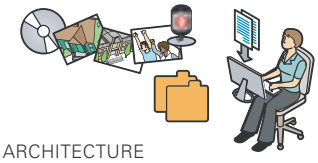


FINANCIAL MANAGEMENT

Analyze program costs related to case activities. Improve financial management and performance, including planning and budgeting, revenue collection, cash management, grants management, procurement, disbursement, and financial reporting. Create what-if analyses to determine the impact of future policy-change scenarios. Evaluate and understand the cost of providing services to maximize reimbursement opportunities. Ensure the integrity of operations by enabling and documenting internal controls.

CONTENT AND DOCUMENT MANAGEMENT

Increase productivity and maintain accurate, timely information across the organization. Capture, record, and index incoming and outgoing program documents, correspondence, and media associated with relevant cases. Maintain and publish policies and procedures for program administration. Manage the process for publishing Web content and maintaining version control.



ENTERPRISE ARCHITECTURE

Reduce administrative costs and increase responsiveness to program changes by creating a secure enterprise architecture that can be implemented over time. Integrate and automate business processes across programs with a service-oriented architecture and standards-based technology. Reduce risk and time to implement with a modern enterprise architecture that leverages third-party and legacy solutions.

ORACLE®

of flexibility in operations. That's crucial in social services, where changes to legislation, policies, business processes, regulations and reimbursement rates constantly occur.

A Strong Foundation

The Kansas Department of Labor (KDOL) uses Oracle's social services solution in its employment security program. KDOL has used Siebel Customer Relationship Management (CRM) for nearly a decade, and recently purchased Oracle Policy Automation to improve its services even further. KDOL implemented Siebel CRM in 2002, and has expanded its use of it over the years. The agency started with Siebel CRM in the call center and later moved it into case management.

Siebel CRM has been a strong foundation for KDOL in the face of rising demand for unemployment benefits, numerous labor-related law changes, and an evolving IT environment.

"We've experienced a lot of growth in the last year, with unemployment going up the way it has," said KDOL CIO George Hubka. "The Siebel product has had no problem keeping up. It's been a very smooth process, all these upgrades we've done over the years. It's surpassed our expectations."

The result has been better service for constituents. "It's really enabled our staff to be more effective in serving clients," said Hubka. That's a trend the department plans to continue. "We're 100 percent down the path of Siebel, in terms of what we're doing in the future," Hubka added. "Their vision is very much in line with what we're planning on doing ourselves."

Unique Tool

KDOL wants technology that brings improved efficiency in serving its clients. That's why it has significant modernization projects under way. "Siebel is actually central right now to our modernization efforts," Hubka said. Oracle Policy Automation will play a large role also. Oracle Policy Automation enables organizations to easily adapt to alterations in policies regarding such things as eligibility determination and changes in client circumstance.

With Oracle Policy Automation, policy experts can make changes themselves in Word or Excel, using natural language, without requiring IT staff to alter programming code. Thus, policy and rate changes can be made in minutes, rather than days or weeks. Oracle Policy Automation can also run "what-if" analyses, so agencies can visualize the impact of proposed legislation or potential policy changes.

Oracle Policy Automation is a unique tool that sets Oracle's solution apart from others. Hubka said it will bring more flexibility and faster service for KDOL. "In the economic environment that we've had, many law changes have been thrown at us just in the last year," he said. "Being able to move to a platform that is more natural-language-based will allow us to modernize how the rules are applied and how calculations are done. It will enable us to make changes quicker and get payments out faster."

With KDOL's modernization and the Oracle social services solution, Hubka expects staffers will know their constituents better and have the ability to give clients more information on how their cases are progressing. "We'll be able to provide better feedback as to why a particular decision was rendered the way it was," said Hubka. "Being able to share that information with the client and claimants will enable us to communicate better and provide the feedback to help fix the issues that may arise with a particular claim."

Improving Policy Management

Community Services is the leading agency responsible for the safety and well-being of children and young people within Australia's New South Wales (NSW) Government. Already a longtime Oracle Case Management user, Community Services recently implemented Oracle Policy Automation to ensure accurate, consistent decisions in the management of child safety.

"Oracle Policy Automation has helped to provide a vehicle for the consistent application of the Government's 'Keep Them Safe' child protection action plan," said Kerry Holling, CIO for Community Services. "We believe this approach is a world-first in the structured decision-making space for child protection and we believe our department is setting an example that other child protection agencies will replicate."

In conjunction with Oracle's Case Management solution, Oracle Policy Automation is deployed as an online mandatory reporter guide to allow those who have a legal obligation to report children at risk to do so efficiently — in a manner that facilitates the most effective response possible from Community Services. Approximately 250,000 professionals in NSW Departments of Health, Education, Police, Housing, Ageing & Disabilities and Juvenile Justice can use the system, as can any member of the public who works with children and needs to make an assessment.

Oracle Policy Automation also condenses around 100 pages of policy into a dynamic online questionnaire that requires no prior training for the user.

Community Services chose the solution because it's simple, could be implemented quickly and enables easy changes as policies evolve. It will also provide accurate, consistent reporting. The solution had been proven in other NSW and federal jurisdictions, and it integrates well with the broader Oracle social services solution being used in Community Services.

The solution provided out-of-the-box tools for designing, testing and deploying policies — allowing Community Services to implement it quickly. "When the issue at hand is the safety of youth, there is a need to be quick and nimble," said Holling.

Simplicity for the Client's Sake

Providing social services is a complex undertaking. Policies, rules, business processes, legislation and numerous other factors are constantly changing. While organizations grapple with this ever-evolving social service landscape, their clients still need help.

By focusing on the client first, and by using a modular approach to technology, Oracle's social services solution enables organizations to adapt to change — while also providing the best possible outcomes for their clients.

Local public safety officials are rethinking how 911 call centers should receive alerts from alarm companies, due in part to the efforts of Bill Hobgood, public safety team project manager for Richmond, Va.

In 2009, Hobgood helped secure an endorsement from the Association of Public-Safety Communications Officials (APCO) for a new standard that's designed to shave two to three minutes off the time it takes police to respond when an alarm is activated.

When an alarm company receives an alert notification, an employee usually places a call to the appropriate 911 center, which in turn contacts the police dispatcher. By using the APCO-endorsed standard, the call from the alarm company is automated, allowing the 911 center to receive it two to three times faster.

Hobgood led pilot testing of the standard in Richmond, which eliminated 5,000 manual

Bill Hobgood

PROJECT MANAGER,
RICHMOND (VA.) IT DEPARTMENT

calls from security companies to 911 centers during a two-year span.

"When you take away those two to three minutes, you get police officers responding to an incident that much quicker. The probability of catching the suspect goes up tremendously," said Capt. William Smith of the Richmond Police Department. "It doesn't sound like that much time, but if you're in a fight, it's the difference between visiting the hospital and not."

Hobgood wasted little time drumming up support for the new approach. In January 2009, he started with 12 local agencies interested in deploying the standard. By the end of the year, that number increased to 70.

ANDY OPSAHL, FEATURES EDITOR

As Karen Jackson, Virginia's deputy secretary of technology, tells it, her public-sector IT career took root largely because of serendipity. But it didn't happen entirely by accident. Jackson's understanding of both technology and business give her an advantage and a unique perspective.

Jackson's business background paved the way for her career in IT since the mid-'90s, when she was employed by the Virginia Center for Innovative Technology, a quasi-state agency that provides business consulting to entrepreneurs. During this time, the Internet and e-commerce were in their infancy, but as they took off, so did Jackson's career. Today she's tackling the Internet's newest challenges: how to best use and monitor Web 2.0 technologies, defining a minimum national broadband speed, and creating policies and standards for telework — in addition to working under shoestring budgets.

Jackson gained real-world experience with these issues as director of the Virginia Office of Telework Promotion and Broadband Assistance and as former vice president for broadband programs at the Center for Innovative Technology.

She has worked tirelessly on legislation that promotes broadband connectivity statewide, especially in rural areas. Virginia, a leader in broadband development, recently created a comprehensive broadband coverage map — a feat accomplished at no cost to taxpayers, Jackson proudly noted.

"Right now, we're estimating based on the first map that we did, we have about 25 percent of the population left to go," she said.

Although Virginia is close to providing statewide broadband connectivity, Jackson acknowledges that there are topographical and other challenges. But she's persistent. "If I can leave my career thinking that the people who need and want connectivity can get it affordably and reliably, then I would be happy," she said. "My legacy will be that I just didn't give up."

KAREN STEWARTSON, MANAGING EDITOR

DEPUTY SECRETARY OF
TECHNOLOGY, VIRGINIA

Karen Jackson

THE TOP
TWENTY-FIVE

Bill Greeves

COMMUNICATIONS AND IT DIRECTOR, ROANOKE COUNTY, VA.

For years, researchers have wondered if social media — Web-based technology designed to connect people — actually contributes to isolation and loneliness.

Bill Greeves wouldn't be a good test case for this theory. In 2008, he founded MuniGov 2.0 — a group comprising 800 public-sector IT employees who discuss how Web 2.0 can improve government.

MuniGov meets twice a month in Second Life or in person. In April 2009, the group hosted what was believed to be the first virtual conference for government, and members also are collaborating on an e-book about the value of Web 2.0 and social media to specific government functions. All different levels of government are involved, which helps MuniGov get a better perspective on where resources should be focused, he said.

In addition to being Roanoke County, Va.'s IT director, Greeves is overseeing a consolidated department that manages the county's 911 call center. His staff recently completed a feasibility study to merge Roanoke's dispatch services with the town of Vinton, and outsourced the county's payroll system and customer relationship management to become leaner and more cost-effective.

Greeves sees Web 2.0 as another efficiency tool. So the county formed a cross-agency working group to write a social media policy. "When I first started doing this, everybody wanted to know, 'What is Web 2.0 and how are governments using it? Give me examples,'" he said. "Now the tide is changing to, 'How do I control and manage it?' They want to know more about developing policy … which shows Web 2.0 isn't just a flash in the pan."

MATT WILLIAMS, ASSOCIATE EDITOR

Michele Hovet

IT DIRECTOR, ARVADA, COLO.

Arvada, Colo., IT Director Michele Hovet is a rising star in local government IT, thanks to her knack for promoting communication among local IT leaders and deploying leading-edge technology in small cities.

The accolades from her work say it all: The Denver suburb of Arvada has a long history of technology achievements, having been a top-10 finisher in the Center for Digital Government's Digital Cities Survey the past five years, including a second-place ranking in 2009.

Hovet is vice chair of the Government Shared Services Council, a subcommittee of the Colorado Government Association of Information Technology. In this capacity, she has aggressively advocated for a local government cloud through which Colorado cities and counties could share services. Hovet and her fellow council members envision an arrangement in which one city or county hosts e-mail services for others, while another hosts financial services, and so on.

"I don't think the economy is going to allow us to sustain the single IT model that we've seen in local government," she said.

Hovet's also putting Arvada on equal footing with bigger cities like San Francisco and New York City that are embracing the "open data" trend. Arvada might emulate Washington, D.C.'s Apps for Democracy contest, where residents earn prizes for creating innovative applications using city data.

"I envision publishing that data and hopefully coming up with a way to use the data in a way we wouldn't have thought of," she said.

ANDY OPSAHL, FEATURES EDITOR

Shannon Tufts

DIRECTOR, CENTER FOR PUBLIC TECHNOLOGY, UNIVERSITY OF NORTH CAROLINA

"I can't imagine not doing this," said Shannon Tufts, about her career as a public servant. Tufts, director of the Center for Public Technology at the University of North Carolina, has a passion for public service and education — one reason government officials asked Tufts to spearhead an innovative training program for public-sector IT leaders.

In 2004, Tufts founded the nation's first government CIO certification program, designed to elevate the strategic value of state and local government IT professionals.

The center offers a 10-month Certified Government CIO (CGCIO) program that educates public CIOs and IT directors in their evolving roles as leaders. The course has trained more than 300 IT professionals from all government levels nationwide. Because of the CGCIO's success, the center launched the Certified Educational Chief Technology Officer program to change how school technology directors and their superintendents think about IT investments. Both programs aim to give IT professionals the leadership and communication skills they need to make strategic IT business decisions, not to teach them technology tools.

Tufts, who also has authored various publications on e-government and IT, said she's proud that her programs are making an impact on the lives of public CIOs.

"I'm glad to see that the knowledge we have tried to share throughout the yearlong course is applied, is practical and makes a difference in the lives of the people who I most ultimately respect, which are the IT professionals who work in the public sector," she said.

KAREN STEWARTSON, MANAGING EDITOR

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Beth Noveck

DEPUTY CTO FOR OPEN GOVERNMENT, U.S. GOVERNMENT

Beth Noveck, leader of President Barack Obama's government transparency initiative, had a busy first year on the job.

The February 2009 launch of Recovery.gov lets citizens track spending of American Recovery and Reinvestment Act money. In March, Obama held an electronic town-hall meeting where he answered questions submitted and ranked in importance by the public. In July, the White House began posting staff salaries in a searchable online database, and over the summer it used a Web-based wiki to let citizens help craft the president's open government policy. In August, federal agencies like the Office of Science and Technology Policy started using blogs to seek public comment on policy decisions. And that's just a partial list.

Noveck, a professor at New York Law School, came to her administration post with strong credentials. In 2007, she helped the U.S. Patent Office launch its Peer-to-Patent program, which uses the Web to engage citizen-experts to help review patent applications. Her experience with that effort led Noveck to write the 2009 release *Wiki Government*, an influential book on democracy in the digital age.

As Web-based comment and feedback functions proliferate, what sets Noveck apart is a keen focus on results. "It's one thing to build a Web site that gives people a place to submit a suggestion and another thing to create a policy to route the information to the right place, to ensure that there is someone at the other end to receive it," Noveck said last year. "It's not transparency for its own sake ... but toward the end of making better decisions, creating greater accountability and driving better performance."

Noveck spent 2009 putting those ideas into action. Americans can now collaborate and interact with the policy-making machinery of government like never before.

STEVE TOWNS, EDITOR

As the social networking juggernaut gained strength in 2008, one population segment had been largely ignored — government employees. That's where Steve Ressler came in. With a full-time federal job, Ressler spent his spare time building GovLoop, a social network for civil servants.

"I created a professional group called Young Government Leaders," Ressler recalled. "I wanted to talk to people of all ages — not just federal, but also state and local. I was seeing all these technologies, from Friendster and Facebook to LinkedIn, and I thought it would be cool to do that online for government."

FOUNDER AND PRESIDENT, GOVLOOP

Steve Ressler

GovLoop bears all the hallmarks of a modern social networking site, with member profiles, discussion groups, forums and blog posts. But GovLoop, Ressler said, is unique in that it's a platform for public-sector employees to share government-specific experiences.

"It's something needed in government because everyone works in their silos, whether by agency or federal, state or local level, but we're all dealing with the same issues," Ressler said. "I think that's why [GovLoop] took off."

The site has 25,000 members and has grown so much that it was acquired by government-citizen communications software vendor GovDelivery in September 2009. The growth led Ressler to leave his federal job to work on GovLoop full time. So what does the future hold for Ressler's growing government-focused Web community?

"I created this site [as] a way to connect people, and share ideas and best practices. I see the possibility to do that at a greater scale."

CHAD VANDER VEEN, ASSOCIATE EDITOR

SECRETARY, DEPARTMENT OF INFORMATION TECHNOLOGY, MARYLAND

Elliot Schlanger

Elliot Schlanger has a long history of being an IT achiever. As CIO of Baltimore for then-Mayor Martin O'Malley, Schlanger won acclaim for developing the technology behind the renowned CitiStat program. As IT secretary for Maryland, under now-governor O'Malley, Schlanger has been instrumental in helping to position Maryland as one of the nation's most technologically sophisticated states.

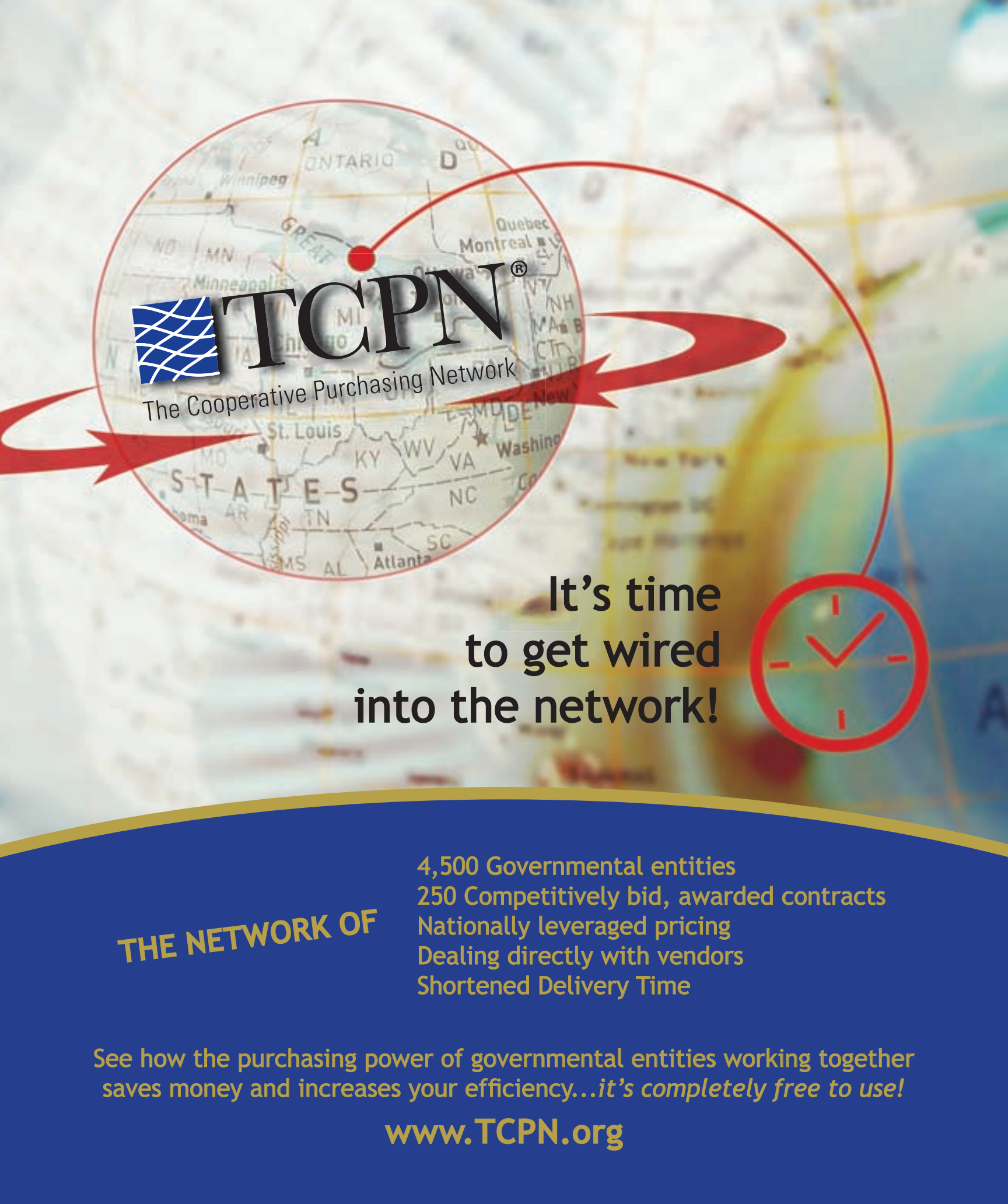
Schlanger helped O'Malley bring CitiStat to the state level with StateStat, an application that gives all Maryland officials and residents unprecedented access to performance-measurement and management data, in many cases by mapping data sets.

"As secretary of the Department of Information Technology, Elliot is a staple participant in the StateStat process," said StateStat Director Beth Blauer. "He is always on hand to lend his innovation, technical expertise and critical ear to issues that face the state on many different levels. Maryland remains on the cutting edge in many areas as a result of his support, skills and focus."

Maryland has received extensive recognition for StateStat as well as its Funding Accountability Web site. These tools make Maryland one of the most transparent state governments today, an achievement Schlanger is largely responsible for.

"We're proud to have Elliot on our team, as we continue to find ways to improve government efficiency, fuel innovation, and provide new levels of accountability and transparency for the people of Maryland," O'Malley said. "Elliot brings to the team a wealth of knowledge, talents and skills necessary to carry our mission across all levels of Maryland's state government — applying the practical application of human effort to solve human problems."

CHAD VANDER VEEN, ASSOCIATE EDITOR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Selvi Stanislaus

EXECUTIVE OFFICER, CALIFORNIA FRANCHISE TAX BOARD

The tax department usually isn't a favorite with citizens, but Selvi Stanislaus, executive officer of California's Franchise Tax Board (FTB), has been reshaping her agency and working to increase public trust in government. Under Stanislaus, the FTB is a consistent technological innovator, launching ReadyReturn, a popular electronic tax filing initiative, and employing Web 2.0 tools to boost transparency.

"Whatever the cost of putting a thing right, it can never be more than the cost of leaving it wrong," Stanislaus said.

ReadyReturn has become a huge success since its debut in the 2007 tax year. The number of taxpayers using the service grows every year. The program grew from almost 11,000 users in 2008 to more than 61,000 users in 2009. Stanislaus sees e-filing as a win-win: Electronic returns are cheaper to process than paper, and taxpayers get their refunds faster. The FTB promoted ReadyReturn via YouTube, she said.

"We don't have an advertising budget, so we needed a creative way of getting the information out there. The videos got so many hits and we saw so many returns coming in; the impact was huge," she said.

A proponent of Web 2.0, Stanislaus helped the FTB get on Facebook. She also has five employees who regularly tweet and blog for the agency.

In keeping with her theme of transparency, Stanislaus said the blog will help open communication lines between the FTB and taxpayers. She says hearing the negative and positive can help the FTB improve its service to taxpayers.

CASEY MAYVILLE, STAFF WRITER

PHOTO BY CADE MARTIN

Wanda Gibson

CTO, FAIRFAX COUNTY, VA.

Wanda Gibson says she was a shy child growing up. That might be hard to believe considering her current role as the CTO and director of the Department of Information Technology (DIT) in Fairfax County, Va.

Gibson leads more than 450 employees and contract staff in the DIT and other agencies, advises executive management on IT matters and supervises developing an enterprise technology environment to serve county's population of more than 1 million residents.

Fortunately for Gibson, a modeling stint, a gas station gig and a retail job for a boutique — which helped pay for school at Howard University — forced her out of that introverted shell long ago.

"I'm a people person now. I'm very involved," she said. "To be successful, you have to be able to deal with a lot of different opinions and be conscious of what businesses you're serving."

Fairfax County experienced much success in the past decade, winning a slew of state and national awards for its innovative IT and e-government programs. The county was named one of the Best IT Places to Work in 2006, and consistently ranks high in the Center for Digital Government's Digital Counties Survey.

"To be successful, you have to be able to deal with a lot of different opinions and be conscious of what businesses you're serving."

Since joining the county in 1999, Gibson has brought an undeniable dedication to government IT. Bolstered by a 25-year career as a technology executive, her job description illustrates a range of responsibilities: managing comprehensive technology architecture in all government business arenas; centralizing and automating the IT department; leading the e-government program; and organizing the county's IT investment portfolio.

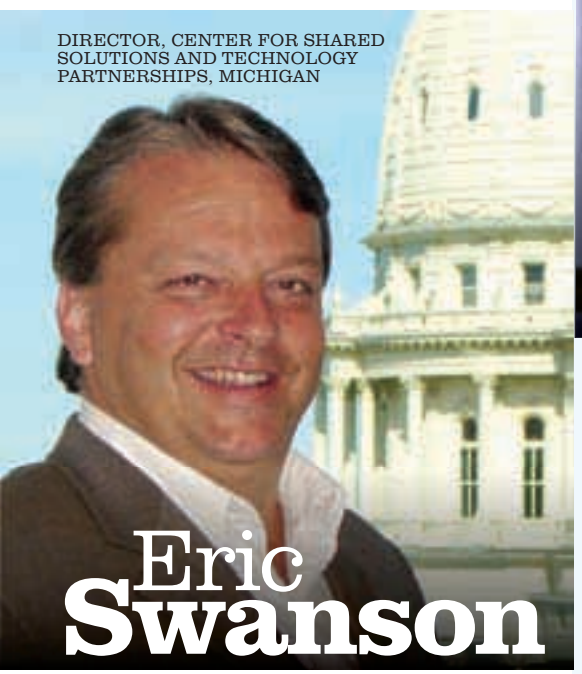
Along with a devoted staff, Gibson said, success comes from her ability to be a hands-on manager who can find the tools needed to transform infrastructure.

"We have probably 700 or more unique applications spread throughout 55 county agencies and divisions," she said. "It's county government without doors, walls or clocks."

RUSSELL NICHOLS, STAFF WRITER

Michigan's Center for Shared Solutions and Technology Partnerships is a hub for data and resource collaboration among government entities throughout the state. The success of this unique agency is due largely to the leadership of its director, Eric Swanson.

"It's very rare, I think, to be afforded the opportunity to operate as an entrepreneur within a government setting, and that's been extremely successful," said Swanson, who joined the center in 1989 as a student intern from Michigan State University.



DIRECTOR, CENTER FOR SHARED SOLUTIONS AND TECHNOLOGY PARTNERSHIPS, MICHIGAN

Eric Swanson

The center's mission is "to transform government with IT being the catalyst, fostering collaboration across government lines," and Swanson and his team have worked hard to make that possible over the years.

For instance, the center offers more than 60 statewide data sets for various types of mapping; business intelligence data, like information the Department of Management and Budget uses to analyze Medicaid use trends; address and census data; and multiple data profile and analysis tools.

The list of available resources continues to grow.

"We've just signed an agreement with Microsoft for an enterprise Bing Maps license," Swanson said. The deal was finalized in September 2009 and multiple jurisdictions are already putting the application to work. "It includes an unlimited-use license through our enterprise license agreement for every government entity in Michigan."

HILTON COLLINS, STAFF WRITER

DEPUTY MAYOR, HEALTH AND HUMAN SERVICES, NEW YORK CITY

CIO, HUMAN SERVICES, NEW YORK CITY

Linda Gibbs & Kamal Bherwani

PHOTO BY DAVID LUBARSKY

Linda Gibbs and Kamal Bherwani lead one of the most ambitious social services transformations in the nation. Through an initiative known as HHS-Connect, they're integrating information and activities across nine New York City health and human services agencies that serve millions people — many of them in crisis.

Gibbs is deputy mayor of Health and Human Services, a position created by New York City Mayor Michael Bloomberg in 2006 that gives her oversight of all city social services agencies, as well as agencies for corrections, probation and juvenile justice. The expansive post charges Gibbs — former commissioner of New York City's Department of Homeless Services — with comprehensive responsibility for helping some of the neediest and most marginalized city residents.

Bherwani is CIO of Human Services and executive director of HHS-Connect. He has more than 20 years' experience in the public and private sectors, most recently as CIO of the city's Department of Health and Mental Hygiene. His job is to give Gibbs the technology tools and information architecture she needs to deliver an effective, holistic set of services to city residents and families.

Gibbs and Bherwani make a formidable team. They've distilled input from multiple city agencies into a single vision, turned that vision into an outcome model, set goals and established metrics to measure progress. And although the entire project is spread over several years, they've already achieved some significant results that show the value of cross-departmental collaboration.

For instance, HHS-Connect worked with the city Department of Education to let New Yorkers check their eligibility for the federal school lunch program online. A Web portal called Worker Connect is beginning to give social services caseworkers access to better client information — basic demographics, a financial snapshot, employment history, and information about a client's enrollment in programs like food stamps and Medicaid.

Most important, HHS-Connect built a common client index (CCI), which is a master registry of client information across multiple benefits programs. As more data is pulled into the CCI, it will become the foundation for an enterprise case management system that gives social services caseworkers a holistic view of a person's circumstances, allowing caseworkers to deliver a set of services tailored to a client's individual needs.

As cities across the nation cope with dwindling funds and growing HHS caseloads, New York City may be creating the model for squeezing more value and better outcomes from social services programs. And Gibbs and Bherwani are at the forefront of that effort.

STEVE TOWNS, EDITOR

CHAIRMAN, PUBLIC SAFETY SPECTRUM TRUST CORP.

Harlin McEwen

Harlin McEwen is a tireless advocate for a national broadband public safety network. He also happens to be the leading authority on the subject as the elected chairman of the Public Safety Spectrum Trust Corp. — the nonprofit selected by the FCC to guide construction of such a network.

Wherever you find the nation's leaders discussing nationwide public safety wireless interoperability, you're likely to find McEwen at the forefront of those talks.

For example, McEwen recently addressed Congress (in spoken testimony and through a white paper) about what nationwide interoperable wireless communications could mean for public safety agencies. He also tackled growing misconceptions on the topic and the costs associated with building such a network.

In addition, McEwen chairs the Communications and Technology Committee for the International Association of Chiefs of Police, which is no surprise given his background in law enforcement and proclivity for technology.

McEwen began his career as a police officer in Waverly, N.Y., in 1957 and served in that capacity until 1972, when he became chief of police in Cayuga Heights, N.Y. McEwen had his hand in technology way back in 1969 when he served as coordinator of the Tompkins County, N.Y., Mobile Radio District and supervised the installation of a countywide law enforcement radio system.

He served as chief of police for Ithaca, N.Y., from 1988 to 1996, until he was sworn in as deputy assistant director of the FBI. He retired from the FBI in 2000, but continues to serve the public safety community full time.

JIM McKAY, JUSTICE AND PUBLIC SAFETY EDITOR

Mike Locatis & Bill Ritter

CIO, COLORADO

GOVERNOR, COLORADO

Colorado Gov. Bill Ritter will leave the composition of the state government's IT systems much different than they were when he was elected in 2006. Upon entering office, he was met by a dysfunctional combination of failing computer projects and a jumble of technological assets — 39 data centers, 20 phone systems and 20 e-mail systems.

Ritter realized that consolidating the state's IT functions would provide a centralized system for sound decision-making. Before starting the consolidation, Ritter hired Mike Locatis to be the state's CIO, made the CIO a Cabinet-level position and formed the Governor's Office of Information Technology (OIT).

Locatis had been the CIO of Denver, where he consolidated 20 city and county IT departments into one agency. Prior to that, he worked for Time Warner Cable, building a unified system for its acquisition of 32 cable companies.

After months of planning and research — which included Locatis and his staff interviewing more than 900 state IT professionals, departmental directors and CIOs from six states that had consolidated their IT — the Colorado Consolidation Plan took shape. The plan calls for centralized IT management, purchasing, spending and planning.

"Our consolidation of IT functions may be one of the best things we've done in bringing effectiveness to government and actually doing it with fewer people," Ritter said in 2009 during his acceptance speech for the National Association of State Chief Information Officers' State Technology Champion Award.

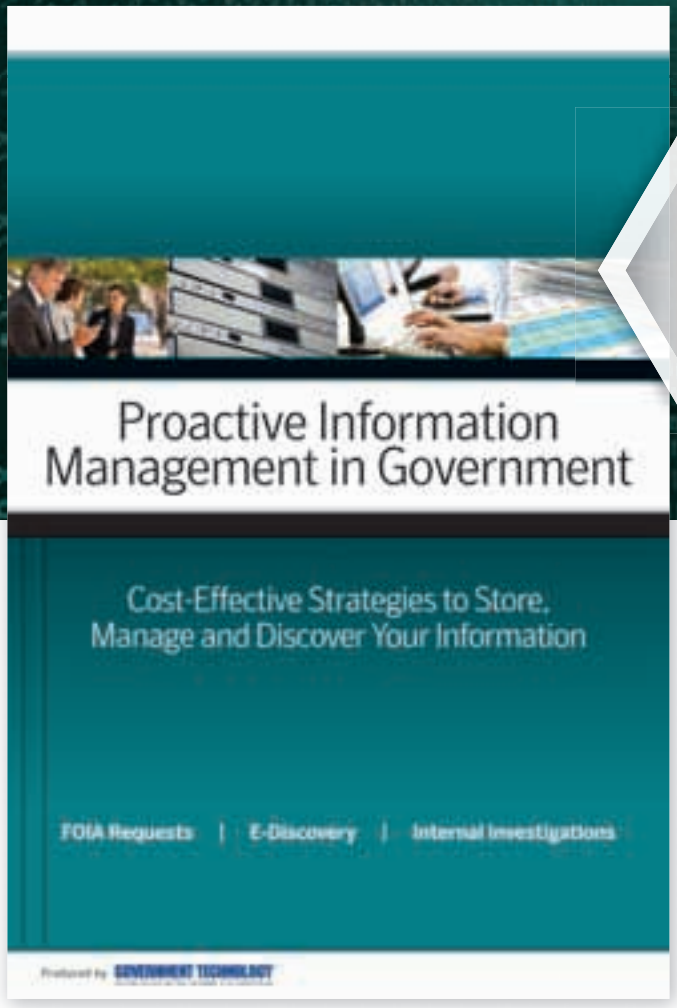
Colorado's accomplishments include:

- suspending, in July 2009, all IT hardware and software maintenance contracts until enterprise-level agreements could be established. Now purchases are done as enterprisewide price agreements through the OIT, Locatis said;
- eliminating six data centers, with plans to ultimately reduce the total number to two — one for production and one for disaster recovery; and
- creating the first state chief data officer position to architect data-sharing strategies.

Colorado also is helping others follow in the state's lead — it hosts two-day programs that provide other states with valuable information so they don't have to start from scratch. "We give them our legislation, our policies, our RFPs and procurement wins," Locatis said. "We give them a whole formula so they can really shape it for their jurisdiction."

Colorado's consolidation is on track to be completed by fiscal 2011, although Locatis said it might be finished by the end of 2010. "We're very close to being able to say that we've made Colorado 1,000 percent better in four short years. That doesn't happen very often." **ELAINE PITTMAN**, STAFF WRITER

You've Got Questions. We've Got Answers.



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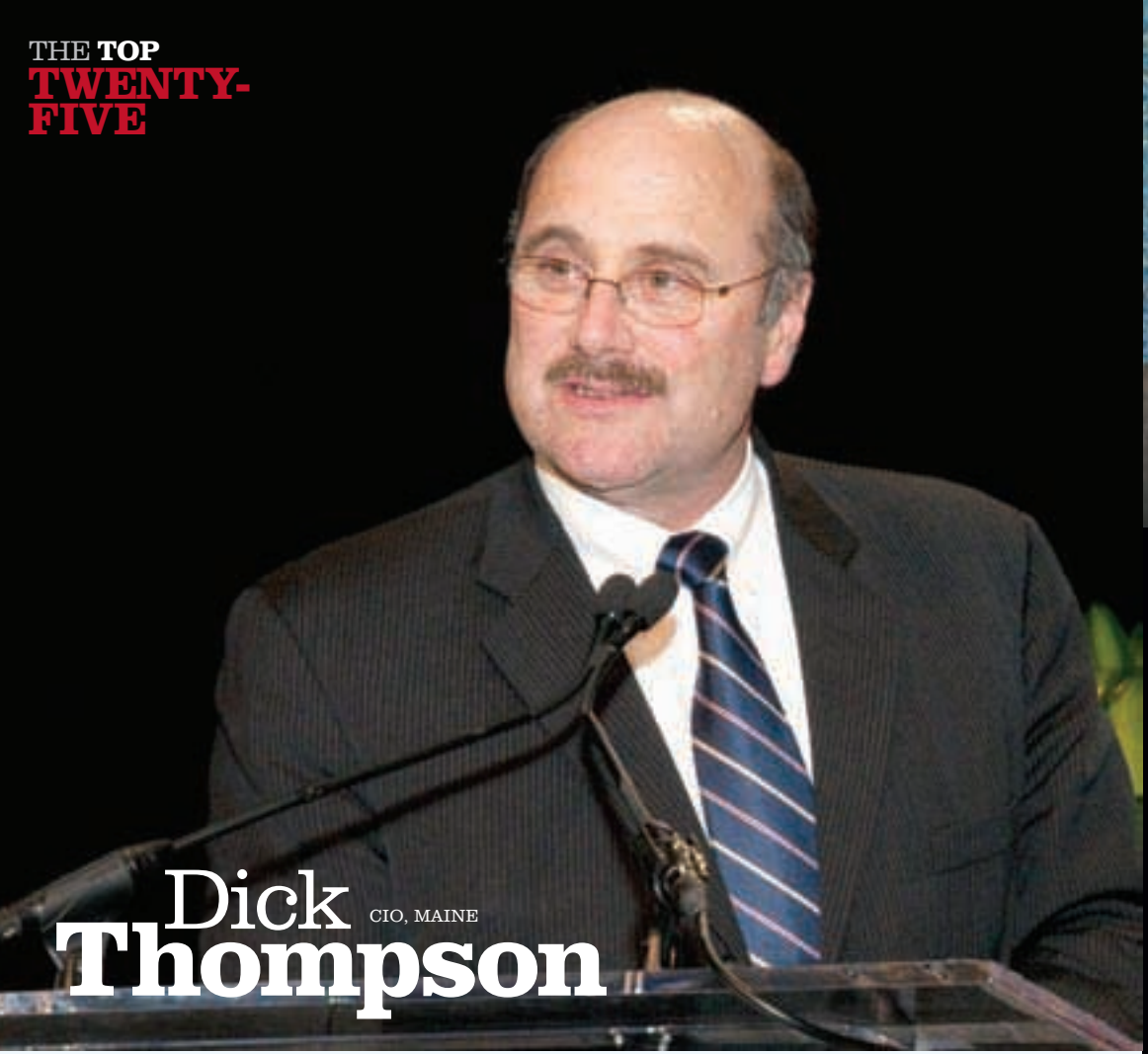

Dick Thompson

CIO, MAINE

Maine has ranked in the top five of the Center for Digital Government's Best of the Web competition since the contest began in 2001, achieving first place in 2004. It's one of Dick Thompson's many accomplishments as one of the nation's longest-serving state CIOs. Appointed state CIO in 2003, Thompson also served as director of Maine's Division of Purchases for 12 years, where he helped bring technology into the procurement office.

"We were one of the first states to use a bid-and-response system," Thompson said. "We used an ASP — application service provider — to host it on the West Coast. Everybody talks about cloud [computing now]. In the late '90s and early 2000s, we were signing up our vendors on this third-party software, issuing competitive electronic bids and issuing orders through this system paperlessly."

In all, Thompson has spent 33 years in Maine state government and said he's proudest of Gov. John Baldacci's IT consolidation initiative. "I think we've done that in an intelligent, thoughtful way, and in tough times," Thompson said.

Maine is also upgrading its public safety radio network that was built in the early 1970s. "We're well on our way to designing a system that gives us a narrowband, FCC-compliant system that is trunked, which is an efficient way for us to handle our volume with the frequencies we have and that will cover the state. That project is expected to be done before the regulatory compliance deadline." As of Jan. 1, 2011, the FCC will stop granting applications for the old 25 KHz wideband channels, and prohibit manufacturing or importing equipment that operates on 25 KHz channels.

As for Maine's future, Thompson said, the state continues to look at how technology can better deliver services to citizens. "I think the way we use our portal and tools such as social networking, we'll go through — I almost call it a rebirth — because I really believe that when we start to marry these tools in effective ways to deliver information and services, the degree of transparency, the degree of involvement of citizens in the way their government operates, will be expanded."

MIRIAM JONES, STAFF WRITER

PHOTO BY RICHARD MORGENSTEIN

Chris Vein

CIO, CITY AND COUNTY OF SAN FRANCISCO

Off the clock, you could find Chris Vein experimenting in his kitchen, a pastime that predates his role as San Francisco's first CIO in 2001. "It's the creative part of cooking that I like," Vein said. "You're not sure if it's going to work or come out right. It's all about creating something with a few resources and a little bit of risk." Vein approaches his culinary passion and technology profession the same way: He starts with a plan, gathers the right ingredients, then executes.

For the city, Vein started with a specific five-year plan. Some of his biggest projects include virtualizing servers in the city's main data center (in progress), advocating his causes at the federal level (ongoing), and extending the city's fiber network to some of the most disadvantaged citizens in the city and county (completed).

Vein works directly with the community to find creative ideas for cutting costs and providing better city services. He recently launched DataSF.org, a Web portal that publishes more than 100 public-sector data sets that residents can mash up to create shared applications. DataSF.org now has more than 20 applications. Also recently launched was a platform that provides an online collaboration opportunity for the community to crowdsource new ideas.

"We are opening up a dialog that's never been there before between the city and citizens," Vein said. "They're sharing their experience and expertise to help improve government." Such constructive criticism, he added, helps him and his dedicated team decide how and where to make changes — a method he uses after serving a meal.

"I wait until the end and I ask the guests, 'If you could tell me one thing to make better, what would you tell me?'" he said. "I'm all about feedback." GT

RUSSELL NICHOLS, STAFF WRITER

Digital Communities

is a network of public-sector leaders focused on solving challenges facing cities, counties and regions. Hosted by *Government Technology* and the Center for Digital Government, the program includes task forces on law enforcement, digital infrastructure and leadership. This is the first edition of a quarterly special report that covers issues, best practices and research resulting from these activities.

Introduction

Broadband's Economic Impact

BY BLAKE HARRIS | DIGITAL COMMUNITIES EDITOR

Despite the volumes that have been written about broadband and the changing world — including much that has been published under the banner of the *Digital Communities* program — I'm not sure the relationship between the broadband stimulus and a healthy U.S. economy is broadly understood.

How many simply viewed the $787 billion stimulus package as a stopgap measure to create immediate jobs rather than an opportunity to reform and retool the U.S. economy for a 21st-century marketplace?

According to Cisco CEO John Chambers, the country can't accomplish such reform unless it has the infrastructure to support it.

Writing on technology blog GigaOM, Chambers suggested that 100 Mbps broadband to the home — which both Japan and South Korea are already approaching — could be an essential vehicle to maintain U.S. competitiveness. This will, he added, enable new collaboration at a profound level, radically changing the very way we think.

Some efforts in the past have used real numbers and realistic projections to back up broad visions like this. According to a 2007 report from the Brookings Institution called *The Effects of Broadband Deployment on Output and Employment*: "For every one percentage point increase in broadband penetration in a state, employment is projected to increase by 0.2 to 0.3 percent per year. For the entire U.S. private nonfarm economy, this suggests an increase of about 300,000 jobs, assuming the economy is not already at 'full employment.'"

Chambers goes much further, suggesting that based on an upcoming Information Technology and Innovation Foundation study, deploying next-generation broadband to 80 percent of U.S. homes would create 2 million new jobs.

While such projections might seem optimistic, one core mission of the *Digital Communities* program is to continue to explore the evolving relationship between broadband, IT and the economic health of U.S. communities.

Triumph of the Telecoms

Telecommunications companies won the bulk of the broadband stimulus money awarded for the first funding window.

BY ANDY OPSAHL | FEATURES EDITOR

Before the federal government announced the winners of broadband stimulus awards in December 2009, conventional wisdom suggested government-run projects would capture most of the money. But when awardees were publicized, all middle-mile and last-mile grants went to small telecommunications companies. Large vendors didn't apply because they found the eligibility requirements too onerous. In all, this gave private vendors roughly a $173 million share of the money. Compare that to the $9.7 million governments got for public computing center expansions and broadband adoption programs.

Having run themselves ragged meeting a short application deadline, government CIOs suddenly found themselves deflated and doubtful about playing a strong role in the federal government's stimulus agenda, according to Alan Shark, executive director of the Public Technology Institute.

"Any idealistic hope that we may have had has been evaporated by what they funded," Shark said.

Indicators have come from the federal government that state and local agencies will have a little more influence during the second round of funding, set to be disbursed in September. In round two, the federal agencies charged with awarding broadband stimulus money promised to give higher priority to public-private partnerships in which governments gave endorsements. A more developed look at why the federal government snubbed public-sector applicants and what to expect for the next funding window could further illuminate the direction broadband stimulus is moving.

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IN OVER THEIR HEADS

The reason for the seeming shutout of government broadband stimulus applications was a lack of preparedness and expertise, according to Alex Winogradoff, research vice president with Gartner. He was among those vetting broadband stimulus applications for the National Telecommunications and Information Administration (NTIA), one of the two federal agencies tasked with disbursing $7.2 billion set aside in the American Recovery and Reinvestment Act for broadband projects.

With time and resources scarce and applications to review from nearly 2,200 entities, favoring vendors was less complicated because they wrote savvier proposals and required less follow-up, in Winogradoff's view.

"They were inundated with $28 billion worth of projects. Then they had to get 2,000 people to go through each and every one of these projects and justify and mark them off," he said. "From an administrative standpoint, that was difficult to begin with."

Winogradoff said he empathized with government applicants, given the complicated list of eligibility requirements they faced at a time when agencies were laying off staff. Vendors couldn't help but have an upper hand.

"There were so many limitations and so many problems with this, and that's why it took so long," Winogradoff said. "Most of the money was supposed to be allotted by Nov. 17, [2009] and at this time, we're almost two months later and only $182 million was let go."

He considered that amount a paltry dent in the $7.2 billion intended for distribution by the NTIA and Rural Utilities Service (RUS), the other federal agency disbursing broadband stimulus money. Originally the NTIA and RUS expected to have three funding windows, but later changed it to two. Assuming that decision goes unchanged, $4.8 billion will leave federal coffers after Sept. 11, 2010, the next funding payout. Money remaining after this round will fund a national broadband coverage map and the administration costs of distributing the money.

Winogradoff described the difficulties the NTIA and RUS created for themselves with complex application requirements for the first round of funding.

"Most of those pages talked about the process — what they had to submit, how they had to submit it, how it was going to be managed, how much weight was going to be given to what part of the submission," he said. "It was so much in there that for anybody reading the submissions that were coming into the NTIA or RUS, it would take a lot of time to go through this and to do it right."

For the second funding window, RUS simplified its rules. The first set of requirements had two funding options — grants of up to 100 percent in remote rural areas, and 50/50 loan-grant combinations in non-remote rural areas. For the second round, RUS eliminated this distinction and adopted a base 75/25 grant-loan combination for all projects. RUS says its new approach provides flexibility for seeking a waiver if additional grant resources are needed for areas that are difficult to serve.

Oakland, Calif.-based municipal broadband analyst Craig Settles, who runs broadband consulting firm successful.com, predicted applicants would find this simplification a welcome change. That's not to say RUS and the NTIA simplified their rules considerably. Analysts expected less stringent eligibility rules for the second round, and that didn't happen, in Settles' view. He expects larger telecoms to avoid the grant process, leaving the money to smaller providers. Settles thinks telecommunications companies will retain advantage during the second funding window. However, governments will likely have more influence. The NTIA announced it would give greater priority to public-private

FIELD REPORT: MIDDLE MILE

New York Project Will Create Backbone for Rural Access

A $39.7 million broadband stimulus award went to New York telecom ION HoldCo to build 10 extensions from its existing fiber backhaul in the state. The new fiber will also reach parts of Pennsylvania and Vermont. The project will help build out infrastructure from which Internet service providers can extend equipment for delivering services to more than 70 rural communities.

The funds came from the National Telecommunications and Information Administration, one of two federal agencies tasked with distributing $7.2 billion set aside in the American Recovery and Reinvestment Act for broadband projects. ION will deploy the fiber as a public-private partnership with the Development Authority of the North Country, a New York state public benefit corporation.

Extending fiber to the areas in question wouldn't have been profitable for ION without the grant money, said Joe Calzone, ION's vice president.

Although the grant went to a private company, several New York state agencies helped plan the network extension. For example, the New York Department of Correctional Services and the New York Office of Mental Health gave input that persuaded ION to route the fiber near prisons. This will let psychologists treat prisoners remotely via video.

"We'll build fiber into the 15 maximum security prisons in New York state," Calzone said.

He speculated that the high level of government input helped ION win the grant, but said it was mostly due to the federal emphasis on sustainability.

"I think they liked the fact that we had existing relationships, a plethora of customers who were already last-mile service providers," he said.

FIELD REPORT: BROADBAND ADOPTION AND PUBLIC COMPUTING

Boston Partnership Will Add Public PCs and Classes

The Boston Public Library (BPL) partnered with the Boston Housing Authority (BHA) and Boston Centers for Youth and Families (BCYF) to win $1.9 million in the first round of broadband stimulus awards in early December. The three agencies crafted their stimulus application so that they wouldn't be in competition with one another. The BPL's plan addresses both public computing and broadband adoption goals. The library will add at least 281 public terminals in its facilities and organize Internet usage classes to go with the new computers.

"I can't emphasize enough that it's more important to teach people how to use this stuff effectively, rather than just plugging the terminals in and saying, 'Good luck,'" said Tom Blake, digital projects manager for the library system.

Blake said most computer questions from patrons to librarians were about basic usage, like how to open a browser or create an e-mail attachment.

All three agencies will offer classes, but in many cases, the BHA and BCYF won't offer courses already provided by the BPL. For example, the BHA and BCYF may leave Internet research classes to the BPL because librarians are well suited for teaching research, Blake said.

Blake said the BPL kept stimulus goals modest to ensure that it didn't promise an outcome it couldn't deliver. The library's technology staff wants a year to plan the deployment and add the necessary wiring infrastructure. Blake expects to begin installing new computer terminals by mid-2011.

Striking the right balance on the amount of money to request in the application was tricky, according to Blake. "If you asked for too much, that would become a burden on your own resources, but if you didn't ask for enough, the government was going to say, 'Well you don't really need us.' It had to be somewhere in between."

The library's share of the stimulus funds will be roughly $500,000, which will go mostly for purchasing computer hardware. The BPL needed to contribute $100,000 in matching funds. Half of it came from reserving money from its existing budget for wiring the terminals. David Leonard, CTO of the BPL, found the remaining $50,000 from other city sources.

partnerships. A public-private partnership network would largely be driven by the vendor, but it would need buy-in from the governments affected by it. That could give governments authority to require the network to serve various aspects of their communities in exchange for their endorsements.

MIDDLE-MILE MOP UPS

Applications for middle-mile broadband infrastructure got most of the funding during the first round — more than last-mile, sustainable adoption and public computing applicants. "Middle-mile" refers to the backbone fiber that cuts broadly through sections of the country. "Last-mile" is a term for projects extending equipment from the backbone to buildings requiring services.

Winogradoff said middle-mile projects dominated because they're simpler to implement. Last-mile projects often involve more points of approval and have more potential for unforeseen challenges. Most of the last-mile projects were for rural areas, typically rife with obstacles to broadband.

"We're talking about people who live in out-of-the-way places where the cost would be horrendous," Winogradoff said.

That doesn't necessarily mean the federal government is afraid of the challenge. For the second funding window, RUS announced it would focus on last-mile projects, while the NTIA would stay focused on middle-mile proposals.

While telecoms dominated middle-mile applications in the first round, governments were more successful with broadband adoption and public computing grant applications. Those awards often went to consortiums of local government agencies, usually involving public libraries and community centers. Strategies for public computing typically involved expanding existing computer centers, while broadband adoption efforts took the form of added usage classes.

Digital Does It

Multimedia digital signage helps police officers stay up-to-date on criminal activities — with videos, photos and text.

The Honolulu Police Department (HPD) likes innovative ideas. In early 2009, two of the department's officers made a proposal to their commander and the Waikiki Business Improvement District Association (WBIDA), a nonprofit organization dedicated to maintaining Waikiki — a neighborhood of Honolulu — as a clean, safe and attractive world-class resort destination. The officers suggested using digital signage technology to improve information sharing among officers. With the conceptual and financial backing of the HPD and the WBIDA, the pilot project was successfully launched before the end of the year.

Since December 2009, the department has used digital signage to share multimedia information with officers at three separate police locations. The results have been impressive. In just the first few weeks of operation, the displays played a key role in three arrests, with a fourth pending.

Two 46-inch monitors and two 20-inch monitors display up-to-date information, such as photos of suspects, surveillance videos from break-ins, text information related to burglaries and much more. Because the digital signage system is IP-based, the department can display a variety of digital information.

The pilot project covers the main station, the Waikiki substation, and another location that houses the criminal investigation and crime reduction units. The monitors are viewed by police officers only.

The department named its system MTAC, for Multimedia Technology Assisting Cops. MTAC is based on AT&T Digital Signage. Since AT&T maintains the end-to-end infrastructure — including the hardware and software — the department doesn't have to worry about maintaining it, and can focus its efforts on the content displayed.

Although the pilot project has been under way for only a short time, early results have been very positive. "It has greatly increased the communication of information to the officers," said Sgt. Dave Barnett of the department.

Familiar Police Work, Better Approach

Barnett said the information displayed on the monitors is similar to what people used to see on TV, "on the old cop shows," where officers would disseminate information to others verbally and with paper handouts. That can include data on warrants, suspects being sought, crime trends and more.

While information shown on the monitors is similar to data displayed on laptops in patrol cars, the monitors also display data that can't be sent to vehicles in a practical manner, such as video. Video files can take too long to download to the mobile laptops, so it's much better to show them on the digital signage system.

The system makes officers more effective. "If you're looking for a blue Honda, for example, and you notice a blue Honda parked illegally, you're more likely to take some sort of action," said Barnett.

So if an officer knows ahead of time that a certain person or vehicle might be involved in a crime — because the officer saw the information on the digital signage — the officer is more likely to notice that person or vehicle if they cross paths during his or her shift. "The monitors call attention to particular individuals, vehicles and locations that wouldn't otherwise stand out on your beat," Barnett said. "This enables officers to react to something that might be commonplace at any other time."

With three arrests to its credit, the digital signage system has already helped the department get criminals off the streets. While citizens don't necessarily know about the information displays, they do benefit from their use.

> "The monitors call attention to particular individuals, vehicles and locations that wouldn't otherwise stand out on your beat."
>
> **Sgt. Dave Barnett,** Honolulu Police Department

Suspect Apprehended

In one case, the department was seeking an unknown suspect in a burglary. An officer recognized the suspect on one of the digital signage monitors. The suspect was then investigated and arrested on two separate warrants.

In another case, a gray car was reported as the getaway vehicle in a series of robberies. The car would park illegally in order to make a quick getaway. An officer — who had seen the information posted on the digital signage — noticed a light blue car parked in a manner similar to the reports of the getaway car, and investigated. It was indeed the car that authorities were seeking. The digital signage system helped officers find the car even though the witness's description of the car wasn't completely accurate.

The department also uses other communication tools, such as I-HUB, a blog-like internal Web site for officers to share information with one another. Like the MTAC, it's a way to efficiently put more information in front of officers. With either tool, photos can be a powerful aid. "An officer might say 'I saw the picture of this vehicle. I think that's one I stopped two or three weeks ago,'" Barnett said. "We can then go back and look for certain information, check the date and time, the plate that was run, and follow up that way."

Barnett said the monitors can also assist with emergency preparedness. He noted that when the entire island of Oahu lost power two years ago — due to an earthquake on Hawaii's Big Island — the MTAC system would have helped had it been in place then. The system's backup generators would have allowed it to keep working, to display maps for example, which would have helped the department manage traffic issues.

In the future, the monitors could keep officers informed during emergencies such as earthquakes, tsunamis and hurricanes. For redundancy, HPD is using a wireless wide area network (WWAN) router that leverages AT&T's 3G network, providing a backup in case the LAN goes down. In an emergency, the displays will give officers more information, which they can pass along to the public.

Since the pilot project is still in the early stages, long-range plans haven't been made yet. But in the near future, one enhancement that's planned is the connection of traffic cameras to the system, so officers can get a better view of traffic issues on the display monitors.

Variety of Methods

The department has a lot of flexibility with AT&T Digital Signage. Different information can be displayed at each location simultaneously. While the main station is showing video related to a break-in, photos of suspects can be shown at the substation and emergency preparedness data could be displayed at the third facility. This lets the department easily distribute information to different "audiences" within the department — one type of data for patrol officers, another type for detectives and a third type for the crime reduction unit, for example.

Content can be sent in real time, on a time-delayed basis or in a recurring pattern according to a programmed playlist. Numerous media formats can be used, from a variety of sources. Overall there is a lot of flexibility within the system.

That's just one of many reasons why it's been working well for the Honolulu Police Department. "I think it's a good project," said Barnett. "And it's a good thing that we have officers who think outside the box. Otherwise we'd still be doing things status quo, and this probably would not have happened."

PHOTO BY KIMBERLY SMITH/AJC.COM

Rethinking Education

Lt. Gov. Casey Cagle works to build Georgia's work force.

BY MARINA LEIGHT | CONTRIBUTING WRITER

AS LIEUTENANT GOVERNOR of Georgia, Casey Cagle has worked to strengthen his state's work force through innovative education programs. Cagle focuses on giving Georgia residents the technical skills required for economic success in the 21st century.

With programs like Georgia Quick Start, Georgia Work Ready, the Career Academy Network, and research and education at colleges and universities, Georgia is equipping its students with training and resources to thrive in up-and-coming careers — even during these difficult financial times.

WHAT ARE THE GREATEST CHALLENGES FACING PUBLIC EDUCATION — ESPECIALLY FROM YOUR PERSPECTIVE AS AN ELECTED OFFICIAL?

What I believe as a businessman first is that we really are stuck in a 1960s era. We haven't really moved to the 21st century as it relates to public policy and education. I believe very strongly that for a child to learn and succeed in education, they have to see the relevance in what they're learning. We have not allowed a paradigm shift from a top-down style of management to really a bottom up, where you enable teachers to ultimately design an educational curriculum around the needs of the individual student.

Eighty percent of the work force in Georgia is going to need some kind of technical training. If that is true — and we know that it is — then more kids need to be on a path of technical learning. That brings the career academy concept to fruition to where we take a traditional high school and a technical college and blend them together in a stand-alone facility. What's fascinating is that shows relevance. Students understand that if they're studying to be a pharmaceutical technician and that motivates them, then in the classroom, they're getting the core curriculum but also the technical background in how the two merge. I think it all comes down to changing the paradigm. I think it comes back to demonstrating relevance in the classroom.

HOW DO YOU DEFINE CAREER PATHS?

The best definition of a career path is a clear road to employment in a defined, growing and relevant industry. We see, even here in Georgia, individuals who go to four-year institutions of higher learning and may end up with a psychology degree but they aren't employable. Oftentimes, they return to a technical college and get the necessary skills that are relevant to industries here. We need to be more proactive at an earlier stage with kids to get them clearly focused on a road to employment. If you look at the career academies we have in Georgia — there's one in Newnan that has a partnership with Yamaha whose technology is integrated into the curriculum. They also have an internship program for students studying film. One individual loved NASCAR and thought he'd become an automobile technician, but he really got [excited] by film and now looks

at NASCAR through a lens. He's one of the youngest producers at Turner Broadcasting where he did an internship as a high-school student. There were numerous college students there, and he was offered the job at the end.

The relevance comes into play here — the career academies specifically aligned with student's needs and are creating strategic partnerships with the emerging industries out there: The biotech, bioenergy, bioscience focus is huge in Georgia. The Walton Career Academy [in Monroe, Ga.] just developed a new bioenergy corridor within their region, and they're focusing more on kids in this new emerging industry. Down on the coast of Georgia, the Golden Isles Career Academy is closely connected with the ports in Savannah, the fastest growing ports in the nation. It has a strategic relationship particularly as it relates to operations and logistics, and they're training students to go immediately into the work force.

WHAT STRATEGIES CREATE EDUCATION THAT ALIGNS WITH BUSINESS AND INDUSTRY?

The career academies, these are charter schools. They are ultimately free from the bureaucracy. Instead of having a principal, they have a CEO. We've worked very hard not to make this just the old-model trade school, but an entity that's driven through technology, through the changing environment in the workplace.

Ten years ago, an individual operating a bulldozer would be doing it all by hand and by grading stakes. But today, bulldozers are operated through GPS. It's highly sophisticated, and technology is integrated into everything that goes on. The reason the charter model works so well is because they have to write a contract with the state. They must determine what businesses they're going to align themselves with, what industries, what focus and what career paths they're going to have. The business community has to buy into this. It's a great collaboration with a region, with students, but ultimately the work force as well. I think that's a big part of the reason the model has worked so well. We've shown 98 percent graduation rates and 100 percent placement rates when they're finished. The benchmarks we've tried to set, these academies are meeting or exceeding.

HOW DO YOU RUN THE ACADEMIES?

We run this program through [the Technical College System of Georgia]. The charter application and approval process goes through the Department of Education, and we have a charter advisory council that approves that process. The final approval comes by the State Board of Education. In the charter, there are certain guidelines we look for, and one of the mandatory guidelines is the strategic partnerships with the business community within their geographical service area.

IS THERE ANYTHING ELSE YOU'D LIKE TO ADD ABOUT HOW YOU'VE ENCOURAGED INNOVATION IN PUBLIC SCHOOLS?

The best way to encourage innovation in public schools is to break down barriers. It's not to have a one-size-fits-all system. I think the 21st-century educational system is really going to be defined by breaking those barriers down, focusing specifically on what the child's needs are, and then prescribing an educational curriculum around that student's needs. That comes in a lot of shapes and forms. We need to allow teachers, administrators, parents and the business community to be a part of the process. That's why the charter concept is so vital — it's a contractual agreement. Through that agreement, benchmarks are set, and goals, priorities and missions are all outlined very clearly.

It's not that every child is going to learn in the same manner. Children are motivated and challenged very differently. We've got to allow the innovation within the classroom to guide students and put them on the path where they can fulfill their hopes and dreams as they relate to the American dream through a good, solid foundation in education.

MARINA LEIGHT IS VICE PRESIDENT OF STRATEGIC INITIATIVES FOR e.REPUBLIC, PUBLISHER OF *GOVERNMENT TECHNOLOGY* MAGAZINE.

Viewpoint

Who's Your Hero?

BY TODD SANDER | DIRECTOR OF DIGITAL COMMUNITIES

There's something about the American spirit that causes us to need heroes. Perhaps it's the legacy of self-determination passed on to us — along with democracy — from the ancient Greeks. Those guys loved a good hero.

Throughout history, we have looked to military men and women, explorers, scientists, astronauts and even an occasional politician to help us believe that anything is possible. More recently, our most popular heroes have come from the ranks of professional sports.

Only a few years ago, when Michael Jordan epitomized the pinnacle of professional basketball, media campaigns for products like underwear and sports drinks were telling us to "Be like Mike!" And we wanted to be.

More recently, advertisers encouraged us to "Be a Tiger." For a while that looked pretty good. Now, not really.

I've been thinking about what kind of hero I should have, and I've decided that I want to "Be like broadband." I think it's the perfect choice.

Broadband certainly is popular. The recent federal Broadband Technical Opportunities Program grants prove that, and it's hardly surprising. Everybody loves broadband. Even people who don't really know what they'll do with it if they get it are sure they must have it. And why not? Broadband promises to make all things possible. It connects us to one another and to the world around us. It will make our government more efficient, communities safer, businesses more prosperous, tax rolls fatter, entertainment more entertaining and children smarter. What's not to love?

Broadband brings us hope for a better tomorrow.

So if you're in the market for a new hero, like I am, I suggest you try to be like broadband: full of optimism and promise, available whenever needed, and ready to deliver to organizations and communities.

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BY ELAINE PITTMAN
STAFF WRITER

Movers and Shakers

Seismologists create an early warning system to alert Californians before an earthquake occurs.

Earthquakes are unlike hurricanes or floods because they can't be predicted. But what if there was warning system to alert residents that the ground would start shaking in 10 to 15 seconds? Although this doesn't sound like very much time, it would provide the opportunity for:

- people to move out of a hazardous environment;
- technology to go into safe mode or save an important document;
- elevators to stop at the next floor and open their doors;
- trains to decelerate; and
- alarms to sound in operating rooms so doctors can put down potentially dangerous tools.

In only 15 seconds, people would have the opportunity to improve their safety and prevent data loss. This is what seismologists and the U.S. Geological Survey (USGS) are trying to provide California residents — a publicly available early warning earthquake system.

"The idea is that you detect the beginnings of the earthquake, and then you rapidly assess the magnitude that earthquake poses, and provide a warning to people before the shaking starts," said Richard Allen, seismology professor at the University of California (UC), Berkeley. "We're talking about very short periods of time — a few seconds to a few tens of seconds."

The combination of new technologies and expanded understanding about earthquakes is letting seismologists move closer to issuing public alerts before people feel the first tremor. "There's a recognized need for more rapid earthquake information, particularly in our digital age," said David Oppenheimer, a seismologist for the USGS. "There are certain applications that could be used with earthquake early warning to mitigate the impacts of an earthquake. That's our mission."

SYNOPSIS
Seismologists test a network of sensors designed to warn California residents a few seconds before an earthquake strikes.

AGENCY
U.S. Geological Survey; Swiss Seismological Institute; Southern California Earthquake Center; and University of California, Berkeley.

PHOTO COURTESY OF FEMA

The 6.7 magnitude Northridge Earthquake caused $2.5 billion in damages to roads and buildings, according to FEMA.

Proof of Concept

Earthquake early warning isn't a new idea. On Oct. 1, 2007, the Japan Meteorological Agency launched the most advanced early warning system to date, which provides alerts through media outlets and Internet applications when an earthquake is detected. Systems also have been established in Mexico City, Turkey, Taiwan and Romania, Allen said.

10-15 SECONDS
The amount of time the early warning system would give residents to prepare for an earthquake.

Early warning systems detect primary waves, the first tremors of an earthquake that travel at about 1 to 5 mph in the Earth's crust, according to the Nevada Seismological Lab at the University of Nevada. The damage comes from the next round of waves, called shear or secondary waves, which can topple buildings and cause the damage associated with large temblors. These "s-waves" move more slowly than their predecessors, which provides a window of time in which the public could be alerted. The time between the two sets of waves is fairly constant, which lets seismologists estimate when the ground will begin shaking in a given area.

In August 2006, the USGS funded a $900,000 project to take the algorithms that various groups had developed for earthquake prediction and get them running on real-time seismic systems. The effort is a collaboration among the USGS, Swiss Seismological Institute, Southern California Earthquake Center and UC Berkeley. Seismologists monitored the

performance of three algorithms that are running statewide in California, according to Allen. He said the algorithms constantly detect earthquakes and accurately predicted the two largest quakes during the three-year test period. They were magnitude 5.4 earthquakes, one in the San Francisco Bay Area and one in the Los Angeles region.

The initial test period proved the concept was technically feasible. In August 2009, phase two began as another three-year project funded by the USGS for $1.2 million. "The goal of this three-year project is to develop a prototype warning system that actually provides warning to a small group of users, maybe 10 institutional users," Allen said. "So we're currently in the process of taking the best from each of these three algorithms and combining them into a single algorithm that will form this prototype."

When completed, the pilot system, called the California Integrated Seismic Network ShakeAlert System, will send a warning to the test user group comprising emergency response groups, utilities and transportation agencies.

Going Underground

The early warning system consists of seismic networks that are distributed throughout California. The instruments are buried approximately 3 to 7 feet underground. "They're all across the state, they're very sensitive to ground vibrations, they easily detect earthquakes on the other side of the planet," Allen said. "So when there's an earthquake close by, they easily detect it and send that signal to us for processing."

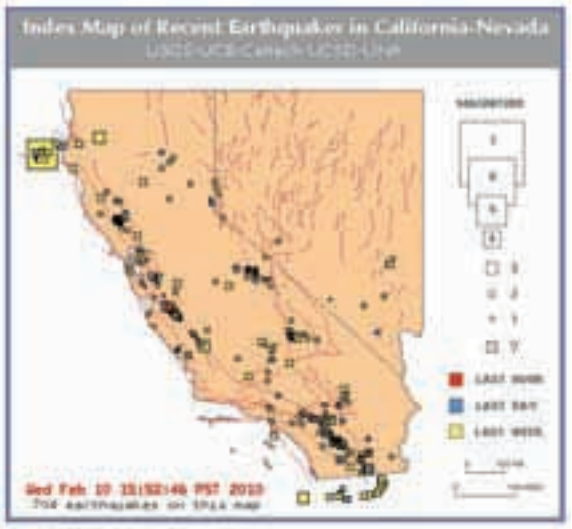
He estimated that there are more than 3,000 seismic instruments located in California. But only about 400 of those are sophisticated enough to work with the early warning system. Allen said the system becomes better as more seismic stations are connected to the network. California needs about 100 additional stations to fully utilize the system and provide warnings to all communities.

"The more seismic stations you have, the faster you can detect the earthquake because you will have a seismic station closer to the epicenter," Allen said. "And the faster you have multiple stations detecting the earthquake, the system becomes more accurate and more robust."

Most seismic stations are located near San Francisco and Los Angeles, leaving gaps in other areas of the state. Adding seismic stations would increase the number of earthquake warnings residents would get.

Cost is the major barrier to implementing a publicly available early warning system. Allen estimated that it would take $80 million to install additional seismic stations, create a control center and run the entire operation for five years.

Another challenge is that California cities have been built directly above where earthquakes happen. By contrast, Japan and Mexico have subduction zones that are located offshore, so they can deploy seismometers along the coastline, Allen said. This allows warnings to be publicized with more advance notice than earthquakes that originate on the mainland. "In our case we need to detect that earthquake as soon as the p-waves, the first energy coming from the earthquake, reach the surface," he said. "That's why our system has to be as rapid as possible."



704 The number of earthquakes that occurred on Feb. 10, 2010, according to a real-time map available on usgs.gov.

Digital Age

The USGS is funding the seismology part of the project, Oppenheimer said, to produce a system that's reliable, accurate and optimally has no false alarms. The next step hasn't been taken yet, which will develop the delivery mechanisms that will alert the public and automate precautions to keep people safe, like decelerating Bay Area Rapid Transit trains.

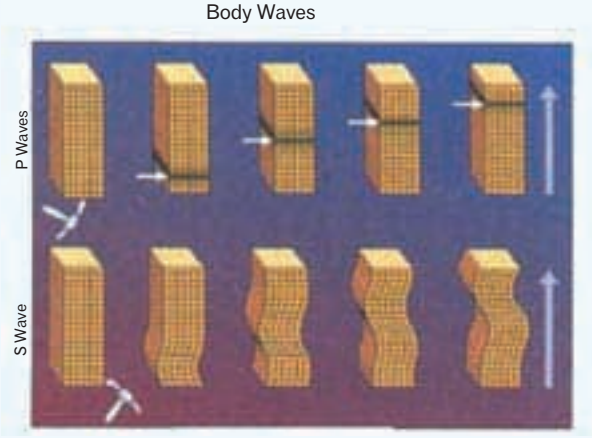
"The prototype period will be over in 2013. At that point, we'll probably start talking about delivery mechanisms," Oppenheimer said. "Some of it will definitely go over the Internet. It could be wireless, but we'd have to think about that."

Oppenheimer said the alerts couldn't be delivered via text message because it takes most people too long to find their cell phone, open it and press the buttons to view the message. Something may have to be developed that causes portable devices to enunciate the alert.

Another option could be something like Japan's Internet-based warning application. The application pops up a message on a computer screen once it receives the alert and counts down to when the shaking is forecasted.

But even the best warning system can't prevent earthquake damage. "It's important to remember that earthquake mitigation really revolves around improving our infrastructure," Oppenheimer said, "and this shouldn't be looked at as a solution to at-risk structures that we live in." GT

Body Waves



EARTHQUAKE ABCs

A **P wave**, or compressional wave, is a seismic body wave that shakes the ground back and forth in the same direction and the opposite direction as the direction the wave is moving.

An **S wave**, or shear wave, is a seismic body wave that shakes the ground back and forth perpendicular to the direction the wave is moving.

SOURCE: U.S. GEOLOGICAL SURVEY

Spectrum

Reports from the IT horizon

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40
The average number miles traveled by Americans each day, according to the U.S. Department of Transportation's 2001 *National Household Travel Survey*.

Wi-Fi on Wheels

Wi-Fi hotspots are everywhere — parks, cafés and airports — but now motorists with the **Ford Sync in-car Wi-Fi system** can transform their cars into a mobile hotspot. By inserting a USB-compatible mobile broadband modem into Sync's USB port, a Wi-Fi signal is broadcast, providing users with a secure wireless connection throughout their car. Such a technology might be beneficial to public safety officials or government workers in the field.

SMITHSONIAN ON VIDEO GAMING

More than 70 percent of American households play video games on a regular basis, and many families now have two generations of gamers at home.

In keeping with this trend, the **Smithsonian American Art Museum**, beginning in March 2012, will have on display an exhibition depicting how video games have impacted society. The display will run until Sept. 9, 2012, and will show the emergence of video games as narrative art over the past four decades. Presentations of game footage, video interviews with developers and artists, large prints of in-game screenshots, and historic game consoles will be on display, as will working game systems visitors can play.

SOURCE: SMITHSONIAN AMERICAN ART MUSEUM

Viral Communication

Although membership and content sharing at various social media sites continue to climb, the *Social Influence Benchmark Report* found **e-mail** still leads with **37 percent** of users responding that it's how they share content.

46% of social media users worldwide said they can easily tell if the information they get online is true, according to Crowd Science.

Dry Cleaning & Taxiing Data

Approximately 4,500 memory sticks that were forgotten in clothes were taken to dry cleaners in the UK — but that's not the only place electronic gadgets are left behind. More than 12,500 handheld devices, such as laptops and iPods, are found every six months in London and New York taxis.

Portable devices like USB flash drives that store valuable data can cause security breaches if they fall into the wrong hands. In the UK, under the Data Protection Act of 1998, organizations could be fined up to $800,000 by the Information Commissioner's Office if clients' data isn't sufficiently protected.

SOURCE: CREDANT TECHNOLOGIES AND WWW.ICO.GOV.UK

Send spectrum ideas to managing editor **Karen Stewartson** kstewartson@govtech.com

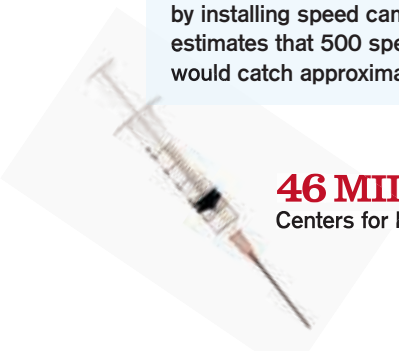
California Budget Solutions

To offset California's budget crisis, Gov. Arnold Schwarzenegger proposed in his 2010/2011 spending plan that cities and counties would raise nearly $400 million by installing speed cameras. The Department of Finance estimates that 500 speed cameras deployed statewide would catch approximately 2.4 million violators.

Speeders could be fined:
$225 for going up to 15 mph above the speed limit.
$325 for going more than 15 mph above the speed limit.

SOURCE: THE SACRAMENTO BEE

$400 MILLION
The estimated revenue California cities and counties will generate by installing speed cameras.



46 MILLION Americans received the H1N1 flu vaccine as of December 2009, according to the Centers for Disease Control and Prevention.

index

special report

BY MATT WILLIAMS ASSOCIATE EDITOR

New York to Consolidate E-Mail

Office for Technology to migrate nearly 100,000 additional users to NYSeMail.

New York will move all state employees to a single e-mail system by summer 2011, a migration that CIO Melodie Mayberry-Stewart said could be the biggest of its kind in state government.

Mayberry-Stewart said the aggressive time frame and the migration's size pose challenges, but she is confident the state will meet the deadline imposed by the governor's office.

The e-mail consolidation was announced in a Jan. 28 memorandum from State Operations Director Valerie Grey to state agency heads. Gov. David A. Paterson's Executive Budget estimates that moving to a single e-mail system will save $4 million when implemented. Mayberry-Stewart and the state Office for Technology (CIO/OFT) have been tasked with developing a migration plan.

> "Whereas we're standardizing, we know that each agency may have its own unique needs, so that's going to be the challenge."
>
> **Melodie Mayberry-Stewart,** CIO, New York

New York isn't the first to consolidate e-mail systems, although it may be the most populous state to do so. Alabama, Michigan and others have reported cost-savings by doing it; others, such as California, are in the planning or discussion phase.

In January, Mayberry-Stewart's staff met with state agencies at a kickoff event to begin coordinating the e-mail plan, followed by meetings with individual agencies that tailored migration plans to meet their specific needs.

"Whereas we're standardizing, we know that each agency may have its own unique needs, so that's going to be the challenge — to address those unique needs while we continue to move forward with enterprise service levels," Mayberry-Stewart said.

In a similar vein, another challenge will be standardizing security practices and how information is used, she added. "That may vary by agency, and we're going to try to standardize on that as much as possible without sacrificing the unique needs of those agencies," she said.

All state agencies will migrate to NYSeMail (pronounced "nice-mail"), the enterprise system managed by the CIO/OFT and stored in its data centers. Built on Microsoft Outlook and Exchange, NYSeMail currently is used by 25 state agencies and 50,000 users. The system's features include anti-virus and spam control, Web-based access, calendaring and scheduling, and support on mobile devices.

But another 24 agencies (totaling 93,000 users) currently work on one of at least five other e-mail systems, most which are Lotus or Novell. Those will be migrated. "We don't know what we'll encounter in terms of their own applications that might have been embedded in their own e-mail systems," Mayberry-Stewart said.

The CIO/OFT will iron out service-level agreements with each agency.

Mayberry-Stewart said it's unknown if the CIO/OFT will need to buy additional servers to manage the added users and data. The goal is to keep the project cost-neutral for the agencies, she said. GT

1 HD VISION

The Canon VIXIA HF R11 high-definition camcorder features a new 2.7-inch touch panel LCD with an advanced tracking feature to keep any subject — such as people or cars — in focus and properly exposed, even in a busy scene. The R11 provides full 1920x1080 HD video and incorporates 32 GB of internal flash memory. Relay recording lets users continue recording, even when the primary recording media is full, by switching from one memory source to the other as it fills up. WWW.USA.CANON.COM

2 ON THE ROAD AGAIN

Garmin nüvi 1690 navigator provides real-time GPS content on the go, including fuel prices and Google local search. The 1690 also has preloaded maps, lane assist with junction view, hands-free calling and ecoRoute, which calculates fuel-efficient routes. The display resolution is 480x272 pixels, and the rechargeable lithium-ion battery lasts up to three hours. WWW.GARMIN.COM

3 A SMARTER SMARTBOOK

The Freescale smartbook tablet is designed to fill the gap between smaller-screened smartphones and traditional, PC-like netbooks or notebooks. The smartbook features a 1024x600, 7-inch touchscreen, 802.11 b/g/n Wi-Fi and Bluetooth 2.1 wireless connectivity. The tablet uses the Freescale i.MX515 applications processor, and has 512 MB DDR2 of memory and 64 GB of internal storage. WWW.FREESCALE.COM

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Learning On The Go

Mobility in the classroom and on campus enhances teaching and learning, as proven by several programs that work.

One day, the leaders at Abilene Christian University got an idea — to capitalize on the ubiquitous mobile devices on campus to advance teaching and learning.

To explore the idea, a team was formed, and it included ACU Chief Information Officer Kevin Roberts. Roberts, along with the ACU faculty and other team members, noticed that the majority of students came to campus with a mobile device. This triggered an idea: to build a program at ACU around mobile devices — in particular, the iPhone and iPod Touch

"If you really want to use mobile devices as part of teaching and learning, everybody has to have one," said Roberts, who is also director of re-engineering. "We decided that to ensure this, we would give one to each incoming freshman. We put out a request for proposals to our faculty to see if any would rethink how they teach in order to take advantage of the devices — over half the faculty applied."

In fall 2008, ACU became the first university to distribute Apple iPhones and iPod Touches to the incoming freshman class, allowing the university to explore a new vision for mobile teaching and learning. This program's success would depend on what Roberts calls "the ubiquity of deployment."

ACU's program began by giving devices to 30 faculty members, who quickly reported great satisfaction with the experience. Based on that, Roberts said, ACU began scaling up to a campus-wide initiative.

A Growing Movement

Soon after ACU rolled out its program, other colleges and universities started similar programs, including Freed-Hardeman University (FHU) and Oklahoma Christian University. And other schools like Stanford University, Duke University and Ball State University began making applications available to staff and students via computers and handheld mobile devices to better meet their "on the go" needs. Mobile applications for students were offered to help them navigate around campus and receive class schedules and assignment information. Additional mobile applications enabled instant access to the school's digital directory, allowing students to find an instructor's name and contact information by tapping a screen.

K-12 school districts have also been participating in education's "mobility movement." Teachers see the benefits of increased student engagement and collaboration when they incorporate a cell phone in classroom projects. Students are familiar with these technologies, as they have integrated them into their daily routines outside of the classroom. As these devices become more advanced, educators see an opportunity to explore new teaching and learning strategies using new mobile applications available on today's devices.

In higher education and K-12, incorporating the technologies familiar to students improves and enhances not only their campus experience, but their learning experience as well, better preparing them for life after their formal education.

Hand-Held Learning in Higher Education

When a critical mass of university students shows up with iPhones in their pockets, forward-thinking educators at schools paying close attention to student needs and preferences see an extraordinary opportunity.

In 2008, for example, Vanderbilt University in Nashville, Tenn., released a version of its Web site's home page designed specifically for the iPhone, so smart phone users could easily access the site's content, e-mail, online directory and other resources.

And at ACU, officials understand that when students can access Web-based support via iPhone, they're engaged in a comfortable way, making them enthusiastic about their school experience. As such, it has made resources accessed via smart phone a prime vehicle to serve its students.

"Our job is to prepare students for the world they are going to inherit, not the world that they live in now," Roberts said. "So this idea of keeping cell phones or technology out of the classroom is not only so far from what we want to do — it is absolutely the antithesis of what we want. That's not how any of us work and it's not how people are going to work five years from now, six years from now, so that drive to prepare students for the world they are going to inherit is really important to us."

Dr. Mark Wagner, president of Educational Technology and Life Corporation, noted that for many of today's students, if it's not in their pocket, it may as well not exist. As such, using mobile devices in education engages students in a way they understand. And with so many students arriving to school with them, educators are already using the technology to their benefit.

Hand-Held Learning in K-12 Education

In the K-12 environment, mobile devices expand learning by offering students what Karen Fasimpaur, president of K12 Handhelds, calls "differentiation."

These devices provide differentiation by delivering content, Fasimpaur said, but also by customizing the content to fit the learning styles of individual students. For instance, Jose Marti Middle School in Union City, N.J., uses iPods as part of its afterschool language-acquisition program for bilingual students. With the iPods, students can watch downloaded instructional videos whenever they want, participate in quizzes and record themselves, said Media Specialist Grace Poli.

And near Fort Worth, Texas, the Keller Independent School District Trinity Meadows Intermediate School use mobile devices to improve visual learning. After realizing how many fifth-grade students already had cell phones, two math and science teachers started incorporating them into the lessons.

"At the very least, you can take pictures with them," said Matt Cook, one of the teachers. "And that's how I started using them — taking pictures of science experiments as a way to document things we were doing in the lab."

But these tools do not solely benefit kids. Near Atlanta, Rockdale County Public Schools gives administrators and staff mobile devices to keep them connected and informed when out of their offices. The iProfile program from Microsoft Certified Partner Otis Educational Systems gives them password-protected access to important student data in case of an emergency.

"This includes student schedules, attendance information, student health information — like allergies and medicines — and also a photo, so that if a student doesn't have an ID card with him, you can still make a positive identification," said Grover Daily, the district's director of technology. "Working with this system becomes a habitual thing. Each morning, you synch your hand-held and it uploads the data that was generated the night before. So all day or all weekend, you've got current data that you can get to quickly."

The Benefits

As methods for teaching and learning continue to evolve in the 21st century, both students and faculty reap the rewards of using mobile devices.

For students, these tools support collaboration by synthesizing information. Students can send and receive text messages, pictures and a plethora of other necessary data from peers and teachers. And with the iPhone, students can collaborate on social networking sites such as Twitter.

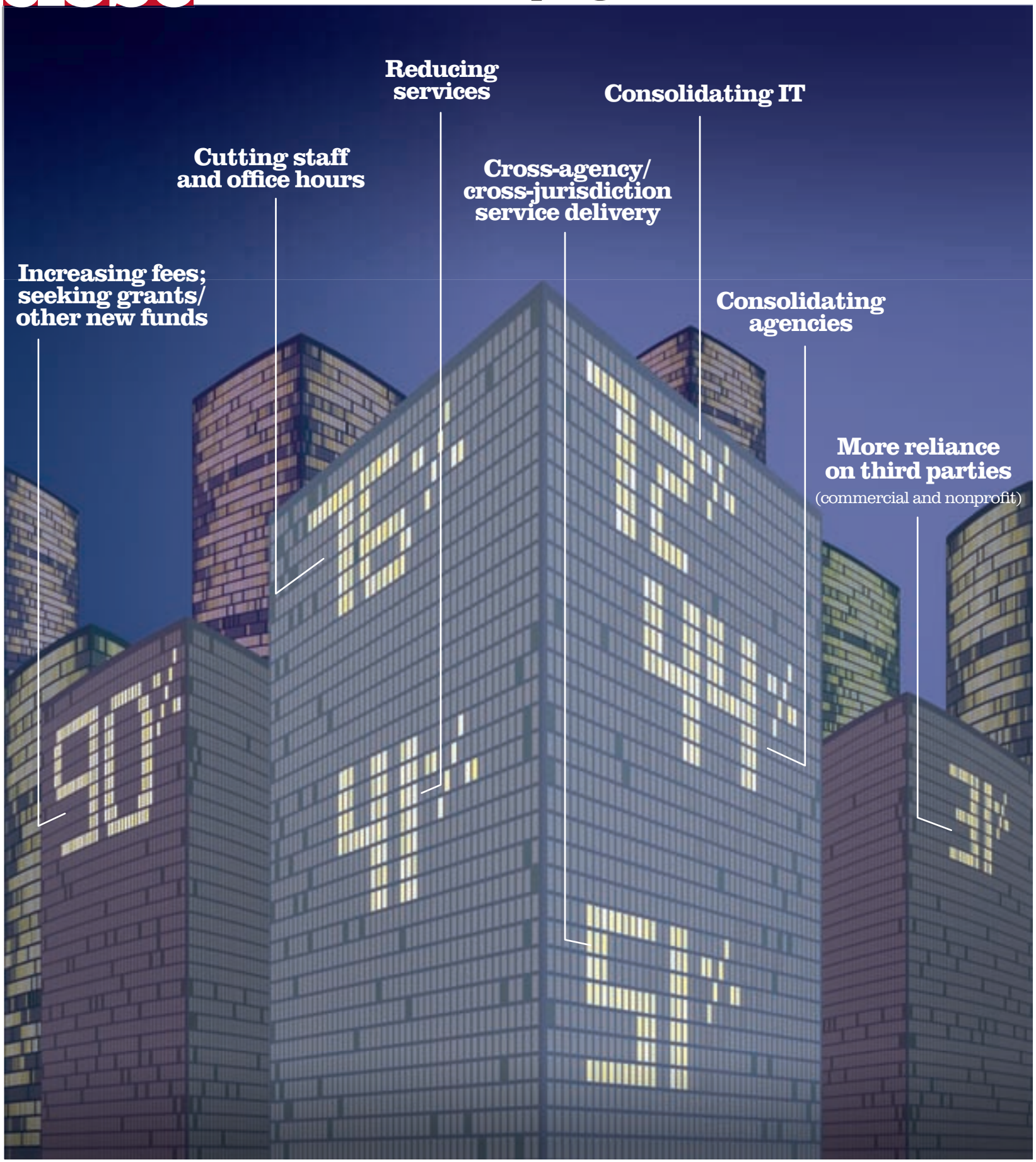
Hand-held devices also put quality assessments at the fingertips of faculty. Rather than scribble notes after the fact, teachers can plug data into a hand-held device and receive instant responses pertaining to individualized goals and specific reading activities. And if they have connections to the Internet, they can log onto social networking or class sites to post updates and content. Teachers can also use podcasts for professional development on the go.

Across school districts and college campuses, mobile devices expand opportunities for connectivity. Teachers and students can access downloadable, portable, on-demand content. Through online collections such as iTunes U, students can find open source educational videos, podcasts and virtual presentations. When it comes to education, mobile devices, such as the iPhone and iPod Touch, support and enhance teaching and learning at all levels.

Get up to speed on what's going in with mobile learning in K-12 and higher education — think about the benefits — read the *Learning On The Go* handbook: **www.convergemag.com/paper/ATT-handbook.**

up close

How Cities Are Coping With the Recession



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