Make EHRs run faster by using in-memory data management 18

The Time Has Come For Increased Transparency in Healthcare 20

IRS directive favorable to pharmaceutical taxpayers claiming research tax credits 23

Scientific Progress and Synergistic Partnerships: United States Air Force Pairs with Coriell Institute to Advance Genomic Medicine

Dr. Shilpa Gandre-Babbe (back), laboratory group leader, and Victoria Clements (front), laboratory technician.
Keynote Speakers

Dr. John Lumpkin, SVP & Director of The Healthcare Group, Robert Wood Johnson Foundation

Mary E. O’Dowd, M.P.H., Commissioner of NJDOH

Panel: Technologies Transforming Digital Health
Moderator: Ian Goldstein, Partner, Drinker Biddle
Panelists: Pat Barnett, RN, JD, CEO, New Jersey State Nurses Association
Gabriela Bowers MD, board-certified internist & Clinical Assistant Professor,
UMDNJ-Robert Wood Johnson Medical School, Windsor Regional Medical Associates
Al Campanella, EVP, Strategic Business Growth & Analytics, Virtua
Paul Katz, M.D., Dean Cooper Medical School
Bert Navarrete, GM and Managing Partner, Tigerlabs

Breakout Session: Financing Strategies for Digital Health Companies
Facilitated by: Elizabeth G. Litten, Partner, Fox Rothschild LLP

Presentation Theater: Digital Health Care Happening Today
Facilitated by: Steven M. Polinsky, Director, McGladrey
Presentations by:
William O’Byrne, NJ-HITECH
Rowan University

Register @ www.njtc.org
contents

On the Cover

14 Scientific Progress and Synergistic Partnerships: United States Air Force Pairs with Coriell Institute to Advance Genomic Medicine
By Matt Chimeno and Courtney Kronenthal, PhD
Discover how the United States Air Force pairs with Coriell Institute for Medical Research to advance genomic medicine.

Features

18 Make EHRs run faster by using in-memory data management
By Gagan Mehra
Explore ways to overcome performance bottlenecks by using an in-memory data management (IMDM) solution.

Columns

6 TALENT NETWORKS
Celebrate the Success of New Jersey’s First Technology and Entrepreneurship Week

8 CORNER OFFICE
Richard P. Miller
By Carly Bohach
Meet Richard P. Miller and find out how Virtua is using technology to help patients and communities to “be well, get well, and stay well.”

20 EXPERT VIEW
The Time Has Come For Increased Transparency in Healthcare
By Shamit Mehta
Learn how greater access to relevant information about topics such as physician performance and the relative efficacy of different procedures and medications can benefit everyone involved.

23 DOLLARS AND SENSE
IRS directive favorable to pharmaceutical taxpayers claiming research tax credits
By Tom Windram and Steve Pashley
Here’s what you need to know about how pharmaceutical taxpayers can claim research tax credits.

Business & Strategy

10 Optimizing the Design of Influence Scores: A ‘List’ versus the Dynamic Business Intelligence (BI) Tool
By Kelly Standen
Discover how to make Business Intelligence work for you.

11 The Telemedicine Revolution
How High-Bandwidth, Low-Latency Ethernet Communications Is Changing The Practice Of Medicine
By Michael Louden
Discover how telemedicine is breaking down barriers of distance and time to improve patient outcomes.

12 Keeping Your Smartphone Dumb
By Scott Mahnken
Explore how fingerprint biometrics will help secure your phone.

NJTC Connections

4 PRESIDENT’S MESSAGE
26 PHOTO GALLERY
28 NEW MEMBERS
30 CALENDAR OF PROGRAMS

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Summer’s here and schedules are filling up. Don’t let the summer months pass you by without some quality networking. Join the New Jersey Technology Council (NJTC) for its Health Information Technology Summit: Technologies Driving the Digital Healthcare Revolution, a full day expo. On July 11th, the NJTC and a diverse group of practitioners, educators, and industry leaders will explore what technologies are driving the healthcare revolution. Are practitioners, institutions, and educators embracing this revelation? How will medical devices change the patient healthcare provider relationship? What role does privacy, security and the reliability of digital information play? Now’s the time; identify the next steps and separate the hype from the promise of digital health. What are you waiting for? Sign up today.

Next up, the NJTC’s Annual Meeting; “Leading the Innovation Ecosystem” will take place on July 18, 2013 at The Palace, Somerset, NJ. This annual event is bringing something new to the table this year. In addition to an overview of the Council’s major accomplishments, the NJTC is bringing together several of New Jersey’s top thought leaders to take part in interactive discussions. Attendees will be able to choose a table discussion that best suits their interests. This is a truly unique opportunity for high profile networking. Furthermore, you won’t want to miss the keynote delivered by Lieutenant Governor Kim Guadagno.

Let’s help New Jersey’s innovation ecosystem continue to grow and thrive this summer. I look forward to seeing you at one of our upcoming events.

—Maxine Ballen, President & CEO, NJTC

EDUCATION AND INNOVATION IN NJ: BUILDING A STRONG INNOVATION ECOSYSTEM

Here at the NJTC we are very excited about promoting NJ’s innovation Ecosystem. After all, it’s something we’ve been doing for years—our top educational institutes and colleges working together with our businesses, our community, and our appointed officials in Trenton. Our recent appointment to the Governor’s Council on Innovation underlines our unwavering dedication to our ecosystem. We know how innovative we can be here in NJ; it’s time to let everyone else see it.

That’s why we’re dedicating our August issue of NJTC’s TechNews to Education and Innovation. We will be highlighting the strength and resources our universities and colleges contribute to the Innovation Ecosystem in our region.

We want to broadcast to everyone who doesn’t know—and remind those that do—why NJ is a great place to educate, start a business, to cultivate innovation, and to prosper.

We’re asking everyone connected to the ecosystem to participate in this issue. We want to showcase the innovation ecosystem at work in schools, incubators, research facilities and the public sector. We want to hear from you and share with more than 10,000+ influencers the great things you are doing to contribute to the ecosystem.

Please reach out to Leo Mennitt at the NJTC lmennitt@njtc.org for information on how you can participate.
At EisnerAmper, we understand that great ideas originate where creativity is encouraged, where the entrepreneurial spirit is supported by business professionals who share your vision and pursuit of the innovative edge.

EisnerAmper’s Life Sciences professionals have the expertise, resources and relationships to bridge the gap between business and science.

Combining expertise and experience with an understanding of how your business really works, we roll up our sleeves to help you meet these challenges.

Let’s get down to business.™
Celebrate the Success of New Jersey’s First Technology and Entrepreneurship Week

BY CARLY BOHACH

When it comes to New Jersey’s technology and entrepreneur sector, it is no surprise that Governor Chris Christie proclaimed April 22 through April 26, 2013 as Technology and Entrepreneurship Week in New Jersey. The technology industry is a vital part of New Jersey’s economy and an important part of the state’s quality of life and economic development. The Technology & Entrepreneurship Talent Network, The New Jersey Technology Council (NJTC), and the New Jersey Department of Labor and Workforce Development hosted the state’s first Technology and Entrepreneurship Week. The response was phenomenal; the week included a series of successful events that helped to ensure that New Jersey will be at the forefront of technology for years to come. The events, held throughout the state, connected the private and public sectors, job seekers, educators and allowed entrepreneurs to connect with thought leaders and volunteers to help grow their New Jersey businesses. “We were so pleased with how the week turned out; it was the perfect storm of many different components coming together,” said Maxine Ballen, President & CEO, NJTC. “From the first day’s compelling keynote delivered by Dr. Ali Houshmand, President of Rowan University’s regarding the value of S.T.E.M in New Jersey; to the Entrepreneur Bootcamp and People 2 Business event, the events continued to promote and enhance the innovation happening in New Jersey.”

In today’s fast paced world, technology and innovation are flourishing and New Jersey is emerging as a hub for technology companies and career opportunities. “Technology entrepreneurship is very alive and active in New Jersey. Holding a Technology & Entrepreneur Week places a focus on this sector and lets others see how active it actually is. This is also...
a great way to allow those in the industry to come together to discuss common issues and concerns,” said James C. Bourke, Partner, WithumSmith+Brown, PC. In fact, according to U.S. Census Bureau 2010 American Community Survey, New Jersey’s technology cluster accounted for 312,000 jobs or 10 percent of private sector employment statewide in 2011, and many of the state’s start-up companies are tied to that industry. As technology based industries and occupations continue to evolve, New Jersey will remain in a strong, competitive position on the global market. The growth of that entire industry cluster is supported by the state’s highly educated workforce, which includes nearly 240,000 New Jersey residents in science, technology, engineering and mathematics occupations. Bret Morgan, Founder - Jersey Shore Tech Meetup, DBL Systems and Co-founder - Coworkers, Asbury Agile, and BandsOnABudget.com, said, “I think that there is something special happening here in New Jersey. You’re beginning to see a true “start up culture” begin to gel. Meetups, accelerators, coworking spaces, conferences, service providers, and universities are all beginning to work together and it’s only a matter of time before you see some of the companies starting right here in our backyard break through.”

New Jersey: An Emerging Technology Hub
Each event focused on New Jersey’s technology sector and provided professionals with insight into the current market and allowed them to connect and network with industry leaders and peers. On April 22nd, Technology and Entrepreneurship Week opened with How to Make New Jersey a High Tech Hub, hosted by Rowan University. This event include a compelling keynote delivered by Dr. Ali Houshmand, President, Rowan University as well as an exchange of ideas about the technology and infrastructure needed for New Jersey to compete globally. In addition, the kick-off included remarks from representatives of the Department of Labor and Workforce Development, and the New Jersey Technology Council (NJTC). The crowded auditorium of attendees at the event also had an opportunity to participate in a panel discussion with business leaders from Verizon, AT&T, Atlantic City Electric, Coriell Institute for Medical Research, SRI Sarnoff and Tripod Technologies. Michael Christman, President & CEO of Coriell Institute for Medical Research, said, “While many different perspectives and business sectors were represented during Technology and Entrepreneurship Week, a common, pervading theme was that New Jersey has cultivated an ideal environment for progressive and ambitious organizations willing to embrace and challenge the ever-advancing technology model. This shared attitude was constructive as we recounted the many triumphs that have established New Jersey as a technology hotspot, and will also inform future developments.”

Meanwhile, the Entrepreneur Bootcamp presented by the NJTC and Rutgers University included speakers and discussions for pre-seed and early stage entrepreneurs. “We had a great turnout. In fact, the meeting ended at about 12:30 p.m. and I was still there at 2 p.m. with attendees who were following up on issues discussed at the event,” said Bourke. This powerhouse event included a wide range of speakers such as Richard Mammone, Executive Director, Rutgers Office of Technology Commercialization, James C. Bourke, Partner, WithumSmith+Brown, Brian Donohue, Co-Founder & Lead Developer, Echolocation, Michael Wiley, Senior Venture Officer, Technology & Life Sciences Division, NJEDA, Maxine Ballen, President & CEO, NJTC, and others. One aspect of the Bootcamp was a discussion entitled What is a Meetup? Facilitator Bourke said, “We had leaders from the three meetups located in New Jersey. The event was a complete success. Morgan agreed, “I’m really glad that the NJTC Entrepreneur’s Bootcamp focused on the rise of Meetups & Coworking in New Jersey. Over the past 3 years we’ve seen a huge grassroots movement for Entrepreneurship & Technology culture here in New Jersey and it’s only going to continue to grow. It’s hard to believe that it was less than 3 years ago that we struggled to put 5 people into a room for the Jersey Shore Tech Meetup. Our meetups typically have a waiting list and have helped us launch events such as Asbury Agile, Hacking Asbury and the New Jersey Spark Summit.”

Overall, the state’s Technology and Entrepreneurship Week brought together entrepreneurs, businesses, education officials and government leaders to highlight opportunities for employment and growth in this growing New Jersey industry cluster. Christman stated, “The collective energies of several local organizations have consequently situated New Jersey at the vanguard of technological achievement. So long as we sustain our investment in infrastructure, education, and exploration, New Jersey will operate on the frontiers of technology.”

Ballen also stated, “Technology and Entrepreneurship Week was a huge success. We were able to demonstrate that the region’s ecosystem is supported by a highly educated workforce and a committed public sector. The events highlighted many of the strengths New Jersey has to offer the aspiring entrepreneur.”

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<tr>
<th>Upcoming Events</th>
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<td><strong>June 6, 2013</strong></td>
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<td><strong>NJTC Bridging The Gap</strong></td>
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<td><strong>Job Interview Workshop</strong></td>
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<td>Gloucester County One-Stop Career Center</td>
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<td><strong>June 13, 2013</strong></td>
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<td><strong>Jobs4Jersey Training</strong></td>
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<td>Atlantic County One-Stop Career Center</td>
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**Did you Know?**

The NJ Department of Labor and Workforce Development rolled out three economic recovery initiatives designed to assist businesses and workers; Recovery4Jersey, Skills4Jersey, and Opportunity4Jersey. Please visit [http://lwd.dol.state.nj.us/labor/index.html](http://lwd.dol.state.nj.us/labor/index.html)
How did you become CEO of Virtua?
When an individual has the personal goal to become a CEO, he or she must begin working towards that position from early in the career. You must be “present” and take advantage of every opportunity that comes your way. At the time I was named CEO I was at the right place at the right time. I worked my way through the ranks in the West Jersey Health System and when the former CEO retired I was the right person to assume that role.

What qualities do you feel you need to possess in order to be a successful leader in the life science industry?
There are many qualities that an individual should have to be a successful leader. Among them are: be a good listener—understand your employee’s needs and what they go through each day on the job; humility—understand that you don’t always have all the answers; make tough decisions—these are usually “people” decisions and as a leader you can’t shy away from them; have fun and enjoy what you do—if not it will show in your results.

What do you want people to know about Virtua?
Virtua is a great organization with great people and a great culture. It is a healthcare organization that provides high quality and high level care and service. Virtua is on the move and growing. I am very excited about the future of healthcare as the delivery model changes—we will care differently for the communities we serve by managing chronic disease on an outpatient basis to keep it under control and focus on a wellness model to keep our communities healthy.

You created a values based culture at Virtua. Why is this important and how has it benefited the company?
A values-based culture is very important for any good organization. You can’t build a company without good people. The goal should always be to create an organization for the long term and that includes hiring people with values and integrity. If you hire the right people, your long-term success will follow. You can teach good people to do any task, but you can’t teach people how to have values and integrity. It is not necessarily the talent that you must look for when hiring, but the quality of the person. This culture leads the organization to success.

Virtua has been voted the Best Place to Work in the Delaware Valley for seven consecutive years. What makes it the best place to work?
Virtua employees like what they do and enjoy working in our culture and environment. We hear regularly from people who want to work at Virtua because they hear it is a great place to work. At Virtua, our employees are important. We have created a culture where employees are heard, their opinions are important and their feedback makes us a better organization. We offer benefits to our employees and their families to help them have a good quality of life at home as well as at work. We have a major wellness initiative in place for our employees and their families, complete with nutrition counseling, management of chronic disease, reduced gym membership fees and incentives for health coaching. We believe that healthy workforce can do a better job of keeping our communities healthy.

You transformed community-based hospitals into technologically advanced regional medical centers. What was the biggest challenge in doing so? What was the biggest reward?
The biggest challenge is to complete the transformation correctly the first time. Technology transformation is extremely expensive. That is why we visited many health systems prior to implementation to see what worked and what did not so that we wouldn’t make the same mistakes. We also had the advantage of partnering with GE to help guide the process. We implemented Six Sigma and LEAN process improvement tools to be sure that the required infrastructure was in place prior to any installation. All of this advance work has led to increased functionality of our technology systems and enhanced quality and safety for our patients. Virtua is now known as one of the most technologically advanced organizations in the region.

How do you continue to transform the company with technology?
Virtua is now taking technology right into our patient’s homes. The use of Telemedicine can help lower the cost of managing chronic disease. We can manage carefully off-site to be sure the patient is taking the appropriate medication as well as monitor specific health signs such as weight, blood pressure and pulse rates. This important information is transferred directly to caregivers so that any issue can be discovered quickly and corrective steps can be taken before the issue becomes so serious as to require hospitalization.

You have developed several critical clinical alliances. Please touch on the importance of these alliances?
The Virtua-CHOP alliance partners us with the Children’s Hospital of Philadelphia (CHOP). It aligns us with one of the most renowned children’s hospitals in the world. A partnership such as this prevents unneeded duplication of services while more importantly keeping children closer to home, close to their families and support systems which aid in recuperation. At the same time, for those children requiring advanced treatment, there is the opportunity to transfer them to CHOP for that care. Virtua has a similar relationship with its Virtua Fox Chase Cancer Treatment Center. We are able to provide excellent care to patients in our regions closer to home.

You have won several CEO awards throughout the years. How do you continue to be so innovative? What inspires you?
I am inspired by our patients and as well as by our employees. It is so rewarding to see our patients do well as a result of the high quality care and clinical treatment they receive at all of our facilities. It is also inspiring to watch our employees reach successes in their careers.

Think ahead. Where do you see Virtua in the next five years?
I anticipate significant growth in the outpatient area of healthcare. Proposed national healthcare reform will mandate that the focus be heavily concentrated in the management of chronic disease in our communities on an outpatient basis. The goal is to diagnose chronic disease in its early stages and treat carefully with participation by the patient and their family members to prevent the disease from becoming out of control and requiring Emergency Department visits and ultimately admission into the hospital. I see Virtua focusing on two tracks of care: (1) wellness, and (2) controlling chronic disease for the sick. The overarching mission of Virtua is to help patients and our communities to “be well, get well, and stay well.” We will definitely manage differently to keep our employees healthy and fit to avoid chronic disease as much as possible. And healthy employees help to promote health in our communities. It is definitely a win for everyone concerned.
Will all employers have to provide health care to their employees starting January 1, 2014 pursuant to the Patient Protection and Affordable Care Act, commonly referred to as “Obamacare”?

Despite what some media outlets have suggested, the answer is certainly no. The only employers who need to be concerned about this issue are those who employ 50 or more “full time” employees (the Affordable Care Act uses a very specific formula to determine who is considered full time) or those who employ under 25 employees and are looking to take advantage of the small business tax credit. If those businesses that employ 50 or more employees fail to offer “adequate” and “affordable” health insurance to their employees as defined by the Act, the employer will be subject to varying levels of taxes or penalties.

Ari G. Burd is an Associate at Giordano, Halleran & Ciesla and member of the Healthcare and Labor & Employment Practice Groups. For more information on this subject or to discuss your particular situation, you can contact him at (732) 741-3900 or aburd@ghclaw.com.

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Optimizing the Design of Influence Scores: A ‘List’ versus the Dynamic Business Intelligence (BI) Tool

BY KELLY STANDEN

When looking into the future at your plan and desired success for your product, service or device, what do you see? I am sure you see a successful launch that will yield high initial and continued adoption rates. You aim for the ability to positively affect the lives of your client’s patients. The ability to sustain growth and market share and to have a sales force that is capable and supplied with the best tools to help ensure all these successes come to fruition. So the question is are you living in the past or the present?

In the past sales forces were much larger and had easier access to physicians enabling them to drive successful product adoption. Times have changed; with new legislation and regulations gaining access to those who can make a difference in a product or devices success is harder and more restricted than ever. In addition, there is a wealth of data that is available but no real tools that integrate and transform data into meaningful and actionable insights that provide roadmaps to successful commercialization plans. The traditional multi-list environment of KOLs and Accounts is not enough to navigate the complex market place. Welcome to Business Intelligence (BI). No longer is it acceptable to only have “The List”; to stay on top adaptation is key.

Today cloud based solutions provide many benefits to that of a excel spread sheet, allowing healthcare companies to integrate and transform their investment in market research and industry data into customized and actionable insights. These tools apply multiple filters on data to allow for a more customized approach, can measure and track results and can guide the recalibration of the approach based on actual results. As data is continuously updated, the team can adapt to the results and adjust its plans accordingly. Cloud based business intelligence solutions provide a platform and environment for continuous analytics delivered through easy to understand visualizations. With market shifts and changes new scores can be developed based on existing attributes and rolling in additional data to produce current, accurate and precise results.

In order to keep up with the industry changes, it is critical to be able to identify and gain access to the right people who have the ability to influence those around them. Brand teams need to be sure they are engaging with the right people and organizations to penetrate the market. No longer will a single view of “Influence” get the job done. The ability to affect all known data attributes and to “identify the right types of influence” is key to success. Teams now need multiple views of influence among national, regional and local communities of practice and within hospitals, IDNs or group practices. These are different perspectives on influence and provide a comprehensive, customized approach to provider education and access. Cloud based business intelligence solutions, can provide these dynamic views and predictive analytics to fill in the information gaps.

Utilizing information gathered through secondary and primary market research KOLs are identified based off attributes most suited to the product or device. Influence Vector scoring allows each KOL to be given a score or rank based on their influence within a specific therapeutic area. This gives a brand team the ability to target high ranking KOLs who will have significant impact or influence in the market. Business Intelligence Influence Networks provide the understanding of the connections between KOLs on an individual basis showing the span of each individual’s impact on those in the network, field, therapeutic area, colleagues and other areas that could be leveraged to provide maximum exposure and impact.

Navigating a dynamic and complex market place requires true business intelligence where Brand Teams can be more effective and respond faster to changes in our business environments. Business Intelligence in the cloud provides a cost effective, dynamic analytics environment where data can be continuously updated and become more valuable to you and your team over time. Static lists are a thing of the past.
The Telemedicine Revolution
How High-Bandwidth, Low-Latency Ethernet Communications Is Changing The Practice Of Medicine

BY MICHAEL LOUDEN

High-speed, secure telecommunications networks are enabling unprecedented teamwork among medical institutions, researchers, practitioners and patients to create a new paradigm: telemedicine is breaking down barriers of distance and time to improve patient outcomes.

In rural areas where the doctor-to-patient ratio is high and where quality care can be hard to reach, telemedicine brings doctors and patients together. It is also bringing specialists together with other doctors and nurses in a variety of settings, including nursing homes and even prison hospitals.

As high-speed, high-volume telecommunications accelerates the speed of effective care delivery, the costs of delivering quality treatment can fall. Instead of requiring patients to travel physically, data transmitted from individual households can be centralized and monitored remotely, and doctors and patients can communicate without time and money expended on travel or slow records transfer. Patient portals permit patients and their families to participate actively in their own cases, to send and receive real-time information and to take daily steps to better health.

Health Information Exchanges (HIE) are also an important development in transforming healthcare, relying on secure sharing of electronic patient information between clinicians, administrators, and payers. When care providers can access all of a patient’s information at the point of care, including test results, current medications, allergies and previous history, better treatment decisions can be made resulting in lower costs and improved outcomes.

Virtual Grand Rounds are used as a teaching tool to permit medical specialists to consult on patient prognosis, evaluate patient status, and collaborate with colleagues without leaving their point of care location. Virtual Grand Rounds have dramatically changed the way Continuing Medical Education (CME) is delivered.

Many additional telemedicine applications already in use help improve the efficiency of medical treatment, training and information transfer, among them telepathology, in which tissue samples can be imaged digitally and transferred to pathology laboratories for review in real time without physical transfer, and Picture Archiving and Communication System (PACS), wherein large image files can be transmitted, stored and retrieved securely and accurately.

The key to the effective delivery of telemedicine is security and reliability along with high bandwidth and low latency in the connection between the medical facility, care team and the patient. Affordable and flexible Ethernet-based services are ideal for supporting such initiatives. As Ethernet services deliver greater bandwidth with low latency, both asynchronous and synchronous collaborations have emerged in every medical specialty.

A national leader in musculoskeletal clinical care, teaching and research uses Ethernet to link its 14 regional offices in Pennsylvania and New Jersey. Ethernet permits secure data transmission of even sizable files with far greater reliability than legacy T1 systems. Ethernet reliability meets the practice’s standards for quality in everything it does including transmitting medical images and information.

The financial advantages offered by Ethernet make it a better investment than legacy T1 systems. The advantages can be realized both at once, and on an ongoing basis as the system grows. The bandwidth of Ethernet is multiples of that of the legacy systems, and Ethernet is rapidly scalable to add additional capacity as technology evolves with no additional equipment. Speed and flexibility of expansion permit care providers to add practice areas and to collaborate with other growing networks instead of being limited by a network infrastructure whose capabilities are overwhelmed. Ease of activating new end users with minimal training, low equipment costs and the flexibility and functionality of the Ethernet infrastructure extend sophisticated capabilities into areas where the delivery of quality healthcare was sometimes problematic before.

The need to establish end-to-end service reliability and measurable performance guarantees, and the prerequisite of ensuring service continuity for legacy applications is also critical to effective use of telemedicine technology, and Ethernet service delivers on all of those needs. The sheer volume of data that Ethernet can handle permits doctors and researchers to innovate and collaborate in ways never before possible. Healthcare enterprises are already familiar with LANs and should have no trouble adopting Ethernet for network services. The size and scalability of Ethernet support applications such as high-definition video that are essential to quality diagnostics and treatment.

Telemedicine is impelled by market forces: aging populations, widespread increases in chronic illnesses, more patients who desire to receive treatment at home instead of in centralized facilities, financial pressures resulting from limited financial resources and the need for ever-greater cost-efficiency and time pressures—put simply, patients can’t wait. The key to this growing trend is robust multidirectional information flow among all involved parties: research institutions, health care practitioners, government and patients. It is Ethernet communications permitting vast quantities of this data to be moved securely, accurately and quickly, that is supporting these new capabilities, delivering critical, cost-management benefits, and helping to accelerate this revolution in medicine.

Michael Louden is a senior director of sales for Comcast Business Class, which offers businesses advanced communication solutions, including Ethernet, Business Class Internet, TV and Voice services for cost-effective, simplified communications management.
Keeping Your Smartphone Dumb

BY SCOTT MAHNKEN

Mobile technology is advancing at warp speed as new applications and functionality are introduced daily. Remember the day when the primary reason for your cell phone was to make phone calls? Those days are long gone.

We’ve certainly come a long way from that Motorola bag phone I used to tote around in 1990. The size of a Coach pocketbook, early cell phones required a battery one couldn’t store in a suit jacket pocket. The size war or the race to make a smaller cell phone, led to a more user friendly and affordable solution as mobile phones shrank to the point they couldn’t become any smaller because customers fingers were too large to press a single button at a time.

Today, your phone becomes outdated within six months of purchase as the next model is launched or a competitive product with new features is introduced. The mobile device market has been good for manufacturers, service providers, enterprise customers, retailers and the consumer. According to Gartner there will be 1.4 billion smartphones in use by end of 2013 and the market grew at a rate of 38% this past year.

What is that old saying “Be careful what you ask for because you might get it?”

If you’re fascinated with the capabilities of your smartphone today, beware of the future. You can expect your phone to replace your wallet, serving as your credit card, driver’s license, Passport, bank, online shopping portal and much more.

Thus two questions arise.
How do I secure access to all of these newfound capabilities?
Certainly one can’t expect to simply turn the phone on and have open access. Although we want to protect our most valuable assets and data we need to gain access to them in a convenient manner. Passwords aren’t the ideal solution because they can be lost, stolen, shared or borrowed. A card can also be lost, stolen or borrowed and might be inconvenient to access or swipe. Tokens cause unnecessary delays and can be compromised. Therefore alternate non-traditional solutions need to be identified.

Constellation: Green Tip of the Month!

The Business Problem Load Response May Be Able to Solve…

Missing Financial Opportunities During “Conservation Hours”

Electricity prices constantly fluctuate. Prices can spike during extreme weather, power plant outages, wind conditions and a variety of other situations that Constellation identifies as “Conservation Hours.” For these reasons, many of our business customers choose a fixed price electricity option to provide budget security and spending stability.

Additionally, did you know that fixed price customers can also get paid to use less energy during certain hours? For customers on a fixed price contract, you’re eligible to enroll in a no-obligation program called Price Response, in which we pay you to use less energy during times that we designate as “Conservation Hours.” Participants in Price Response will receive a notification about the times they can get paid to use less energy. Once agreeing to and initiating the conservation measure, we will calculate your payment and issue funds at the end of each quarter.

The New Jersey Technology Council has teamed up with Constellation as its endorsed power supplier to help members like you intelligently buy, manage and use energy. Learn more at www.constellation.com/NJTCAR1.
Many mobile device manufacturers are investigating the benefits of incorporating biometric technology on the device to support strong authentication. Biometrics can also be a perfect two-factor authentication solution.

Voice biometric technology is offered on most phones allowing the customer to dial a contact by stating their name. But we’ve all had calls connect with Larry when our voice asked to call Barry and vice versa. It can be quite embarrassing when you call the wrong person and using voice biometric technology is not ideally suited for use in public, especially as a layer of security.

Facial and iris recognition continue to generate interest from mobile device manufacturers seeking to find the perfect strong authentication solution. Some are testing this technology but to date, iris or facial recognition are not readily available commercially viable options.

One of the oldest and most trusted forms of authentication has been fingerprint biometric technology. We all can recall the look on the defendant that is proclaiming their innocence face as they learn their fingerprints were found at the crime scene; as it’s often, case closed. Today, finger biometric technology is used by law enforcement, FBI, US Courts, education systems, retailers, the enterprise and increasingly in the healthcare field. It’s already everywhere!

Your fingerprint is a unique identifier and when associated with your credentials becomes the ideal private secure and convenient solution for mobile identification and two-factor authentication. Identical twins have different fingerprints. Fingerprints cannot be lost stolen or shared and today’s fingerprint sensor technologies offer extreme accuracy and reliability.

Apple is established as a visionary leader in mobility and advanced technologies. When Apple purchased fingerprint hardware manufacturer AuthenTec the company was making a bold statement about the future of fingerprint technology and its role as a mobile authentication solution.

The second question that arises is “What if I lose my device?”

Some of us have had the misfortune of losing a cell phone. For me, it was 2004 as I was on a business trip in Chicago. As I jockeyed from one meeting to another, somehow my cell phone fell off the clip in one of the cabs I took to get across town. Urg, the sinking feeling as I reached for my hip and felt something missing; no phone.

It was a big problem. Not only was I without a cell phone during an all important business trip, but now I would have to painstakingly load in all of my contacts along with their information once I purchased a new phone. “What a nightmare,” I said to myself.

That same problem would be much worse if it happened today. I have countless photos, messages, applications, personal material, business data and more on my phone. It has become what my PC and laptop once were and more! Stop and think about it for a moment. What other thing holds as much valuable information as your phone? Remember that wallet or purse will be your phone; that’s when the rules change and security becomes a major issue.

The future likely includes your smartphone growing just a bit in size to accommodate an audience with a growing thirst for images and video. Your phone will become your own personal mall offering everything that today’s super centers offer from banking to shopping and alike; all from the palm of your hand.

To keep your smartphone from blame, allowing it to be “dumb” when you need it to be; that moment when your phone is in the hands of an inappropriate user, we recommend storing your information in the cloud. Allow the device to be just that a piece of hardware, something that you use to communicate and access information. Do not allow your phone to become an open book of your business and personal matters. Simply stated if you don’t want others allowed – store it in the cloud.

The leader in the race to secure your phone seems to be fingerprint biometrics. Companies such as BIO-key International, InterDigital Communication and others are pioneering the path to a secure mobile ecosystem.

Months from now when you are conducting banking transaction and other high security transactions, you might stop and ask “Why didn’t someone think of this sooner because the answer was right at our fingertips?”

The biometric technology industry is forecasted to produce revenues of $18 billion by 2018 and certainly mobility will play a key role. As of the date of this article it’s still unclear when Apple may introduce fingerprint log-on for their suite of iDevices. The CEO’s of leading biometric technology companies do sense that the next 18-24 months will offer opportunities for significant growth; especially for the companies delivering secure mobile authentication solutions.

Scott Mahnken, VP of Marketing, at Bio-Key can be reached at (732) 359-1113.
Scientific Progress and Synergistic Partnerships: United States Air Force Pairs with Coriell Institute to Advance Genomic Medicine
It was just ten short years ago when the Human Genome Project, a consortium of scientists banded together to map human DNA, completed the first genome sequencing. Considering it took more than a decade of exhaustive trials and upwards of $3 billion, it would have been inconceivable to envision the practical relevance of the development. But due in part to rapidly advancing technologies, coupled with the sustained concept of research as a shared international agenda item, genomic science has moved lightning fast. Now whole genome sequencing can be efficiently performed, costs nearing $1,000 per human genome, and is beginning to factor into a whole new area of important medical study, as patients and doctors grow increasingly interested in the clinical value of genetic information.

These types of modern, major milestones of scientific achievement are often marked by shared pursuit, collaboration, and accelerated progress, as evidenced by Shinya Yamanaka of Kyoto University and Sir John B. Gurdon of the University of Cambridge, recipients of the 2012 Nobel Prize in Physiology or Medicine. Separated by more than four decades of scientific discovery but partnered in purpose, Yamanaka made a key breakthrough in 2007 when he discovered...
that adult cells can be reprogrammed into naïve cells that can then transform into any of the body’s tissues, a development precipitated by the research Gurdon commenced in 1962.

Induced pluripotent stem cells, or iPSC as they have come to be known, have stimulated a tremendous interest from both biomedical researchers and the pharmaceutical industry. The ability to take skin cells or blood from a patient diagnosed with Alzheimer’s disease, reprogram those skin or blood cells into stem cells, and then trigger them to become neurons (they would be Alzheimer’s-diseased neurons), allows the study of disease progression within a Petri dish. This stem cell technology also allows us to examine and understand the efficacy of drugs in the lab before testing in humans, and promises dramatic improvement to the biomedical research paradigm. Meanwhile, the discovery of these cells and their impact on the future of personalized therapeutics moves this work from the lab into the clinic setting, specifically into the field of personalized medicine, a mode of medical care that is uniquely tailored to an individual through the interpretation of genetic information.

The enthusiasm for personalized medicine has experts in science, medicine, ethics and law around the world working together. This includes a local leader in the field of personalized medicine: the Coriell Institute for Medical Research, an internationally-renowned biomedical research facility based in Camden, New Jersey. In addition to its gold-standard biobanking program – regarded as one of the most diverse collections of cell lines and DNA available to the international research community – and its dynamic stem cell research initiatives, including research on the aforementioned induced pluripotent stem cells, Coriell is dedicated to an area of study that is beginning to have a profound impact on modern medicine.

The Institute is setting the agenda with the Coriell Personalized Medicine Collaborative (CPMC) research study, which aims to examine the role of genetic information in clinical care. Based on strong alliances with several pioneering institutions from around the country including the Ohio State University Medical Center, the University of Pennsylvania, Stanford and Boston Universities, and Fox Chase Cancer Center, the CPMC research study is helping to identify how personalized medicine can be used to improve health outcomes. Current examples of Coriell’s research collaborations include understanding patients’ behavioral changes in response to receiving personalized risk reports for obesity, and examining genomic risks for mood disorders.

Since its launch in 2007, the Coriell research study has enrolled more than six thousand participants and released genetic analyses and risk reports on several significant health conditions and drug responses (known as pharmacogenomics), including coronary artery disease, prostate cancer, type 1 diabetes, and the blood thinner, warfarin. Coriell has augmented the study’s success by embarking on an alliance with the United States Air Force and recruiting healthcare providers serving within the United States Air Force Medical Service as a part of the Air Force Patient-Centered Precision Care Research (PC2-Z) program. The Air Force selected Coriell to serve as lead investigators for the study, with the focus to evaluate the utility of genome-informed medicine, establish best practices in the implementation of personalized medicine, and assess changes in health and behavior after genetic results are disclosed to participants.

Retired Lieutenant General (Dr.) Charles B. Green, and former Air Force Surgeon General, said of the collaboration, “In support of the mission of the United States Air Force, the Air Force Medical Service provides world class healthcare for beneficiaries anywhere and anytime and represents an organization in pursuit of excellence through generation of knowledge and elimination of waste. When we looked to academia and industry for advances in the evidence base directing personalized care, we recognized Coriell as possessing the expertise, infrastructure, and leadership to execute the clinical arm of the PC2-Z study.” A longstanding advocate of personalized medicine whose goal was to bring the most cutting-edge medical advances to the Air Force, Lt. General Green proved to be instrumental in brokering this momentous partnership. “We are thrilled to collaborate on this exciting research program,” he added.

Chief of Personalized Medicine, Lieutenant Colonel (Dr.) Cecili Sessions adds, “PC2-Z will systematically review, evaluate, and summarize medical evidence regarding genomic associations that are clinically actionable for application in clinic settings, and develop and enhance existing AFMS information technology systems to capture and analyze genetic information for enhanced clinical decision-making. We are confident that Coriell will deliver first-in-class research on behalf of the PC2-Z program.”

Coriell works with the Johns Hopkins University Applied Physics Laboratory (JHU/APL), a non-profit division of Johns Hopkins University, who is providing systems engineering and technical oversight, and research development and program management, to
meet the Air Force’s personalized medicine program goals.

The project initially intends to enroll 2,000 Air Force Medical Service personnel. Along with online recruitment, Coriell has conducted a number of enrollment events on Air Force bases around the country – including stops at Travis in California, Wright-Patterson in Ohio, Nellis in Nevada, and Bolling Field in Washington D.C. – to educate interested participants about the study, provide informed consent and collect saliva samples for DNA analysis.

Prospective participants receive a comprehensive explanation of the study, learning that they will receive personalized genetic information about their risks for various actionable diseases and how they will react to certain medications. They are also briefed on the importance of answering follow-up questions to help the study determine whether giving people personal genetic information can improve one’s health or change behavior. Response to the Air Force study has been resoundingly positive – more than 1,000 participants have already been enrolled, positioning Coriell to meet the projected benchmark.

Excited by the opportunity to collaborate with the USAF, Coriell’s President and CEO, Michael Christman, PhD, says, “Air Force operates, literally and figuratively, on the front lines of advanced medicine. We recognize that our vision and their mission are very much aligned in personalized medicine, and anticipate achieving milestones over the course of our partnership that will significantly advance genome-informed medicine.”

Dr. Christman also recognizes the potential of long-term data collection. “The U.S. Department of Defense covers more than ten million lives – mostly enlisted members but also their families, those retired and those in the reserves,” he notes. Since the military is a single-payer system, those invested tend to remain in the health system for life. “This means we’re able to look at a much more complete and extensive data set. We will be able to see whether telling a person about their risk for melanoma prompted them to make lifestyle changes, including medical screenings, and then, ultimately, whether that individual was ever diagnosed with melanoma in their lifetime.”

“We feel there are a lot of very exciting things we can do with the Air Force as a research partner,” adds Dr. Christman. “There are still so many vital questions that need to be answered because they have bearing on the direction of this emerging field. How can genomic risk for drug response become routinely diagnostic? Are medical schools implementing the necessary instruction in the classroom? With genome-sequencing more readily accessible than ever, are health insurance providers responding and providing access to new technologies?”

Preparing for a not-so-distant future where genetics is a routine component of medical care is a top priority, speculates Dr. Christman. “It’s very realistic to conceive that it soon will be simple for a physician opening a patient’s electronic medical record to see that they can order a whole-genome sequence – and that this measure will be a customary step in the clinical process. A physician, say in a small town in the middle of America, who has a patient with breast cancer, will be able to get an interpretation developed by an expert across the country at a cancer center in California without having to leave his or her office.”

The prospect of treating patients more efficiently and effectively is encouraged by the growing acceptance of personalized medicine. In fact, there is a new noninvasive genetic test being ordered with increased frequency during prenatal care. It’s a tool that allows medical professionals to detect small chromosomal changes in a fetus by testing a drop of the mother’s blood. Not only does it eliminate the risk of miscarriage posed by today’s common tests such as amniocentesis. Consider also that Dr. Yamanaka’s revelatory stem cell work in 2007 warranted the Nobel Prize a mere six years later – a virtually unprecedented occurrence. This rapidity speaks to, among other things, the incredible technological strides powering today’s – and tomorrow’s – scientific advancement. As the borders of possibility and preconceived notions continue to be tested, personalized medicine is an area of study that clearly stands to gain.

And Coriell Institute is poised to meet that challenge with the United States Air Force and other respected institutions – partnered in purpose.
These days almost every hospital uses an electronic health record (EHR) solution that is used to manage patient records. The patient records hold the full patient history and are accessed multiple times during the same day by different departments like anesthesia, cardiology, radiology, etc. Since the EHR saves all the information on disk, every request for information has to go through the expensive process of disk read or disk write. As a result, the doctors and other medical practitioners end up losing precious time that could be used for better treatment of the patient or treating more patients. This article talks about how to overcome this performance bottleneck by using an in-memory data management (IMDM) solution like BigMemory. An IMDM solution allows maintaining the complete EHR data set in memory and that drastically improves the performance of accessing patient records leading to better utilization of time and money. This article will first explain an IMDM solution and then take leading EHR solutions from Cerner and Epic to demonstrate how they can benefit from using an IMDM solution.

**In-Memory Data Management Solutions**
The last few years have seen an explosion in data resulting in ‘big data’ becoming a common term. Fortunately, at the same time we have seen a steep drop in the prices of memory i.e. RAM. This has led to some exciting new opportunities to redesign the way data is managed.

Most applications in the past where designed to persist bulk of their data in the database and keep only the most frequently used data in memory. The availability of cheap memory has resulted in development of IMDM applications that can keep almost all the data in-memory with persisting only the minimal amount to the database on an ‘as needed’ basis. These IMDM solutions replace the caching tools used in the past by providing a platform that can guarantee high availability, scalability, security, low latency and data persistence. These solutions integrate easily with an existing application and allow the application to move all or a subset of the data to memory to improve the overall performance of the application. In some cases, deploying IMDM solutions also leads to lowering the total cost of database licenses as the volume of data kept in the database is reduced and thus it requires fewer servers to store and process it. IMDM solutions are an ideal fit for one or more of the following use cases:

1) Application is having a performance challenge and the usual performance tuning techniques have failed to improve the performance. IMDM solution can integrate with the application, move data into memory, improve data access times and resolve the performance challenge.

2) Application is not able to meet the defined service level agreements (SLAs) because the data volume has grown since the SLAs were defined, then an IMDM solution is a perfect fit for integrating with the application and improving the performance of your application to meet the defined SLAs.

3) If your environment is running into big data challenges and you need a solution that can not only deal with large data sets but also process them quickly then an IMDM solution is the ideal fit.

Whatever your use case, an IMDM solution, like Terracotta BigMemory, can be deployed in 8-10 weeks and can resolve your pain points quickly.

**Using IMDM with your EHR**
Now that we understand what an IMDM solution is, let’s see how it can help improve the performance of leading EHR products like Cerner and Epic.
Both, Cerner and Epic, have a widely deployed customer base that includes several hospitals. Even though they both are functionally similar, they have clear architectural differences where Epic takes a slight lead in presenting a truly integrated system for use by physicians. On the other hand, Cerner is known for more features on the hospital side compared to Epic’s offering. Regardless of these differences, both products handle large data sets on a regular basis to support the EHR functionality. They maintain all details related to a patient like lab reports, x-rays, pharmacy prescriptions, etc. in a single record and each record can easily add up to several megabytes or even gigabytes of data. It is not unusual for Cerner or Epic to be used to support thousands of patient records and that result in handling hundreds of gigabytes of patient data on a regular basis. For physicians, the system needs to show them the complete list of their patients and the latest updates for each patient. This can also easily run into gigabytes of data as each physician has at least 5-10 patients assigned to them.

These datasets are a couple of examples of big data that is being handled by Cerner and Epic. There are several more instances within the EHR world where a similar opportunity exists to access these large data sets faster. Going back to these two datasets, they are accessed multiple times a day and every time the hundreds or thousands of gigabytes of each record is read from disk. We all know that reading from disk is a lot slower than reading from memory. And that’s where an IMDM solution can save the physicians, nurses and other medical professionals several minutes (or even hours) daily by maintaining not gigabytes but hundreds of terabytes of data in memory with guarantees of low millisecond response times and high availability. To get started, the IMDM solution can be setup to bulk load all the data into memory one time and then can use event listeners to make updates to the data as changes are made in connected systems e.g. as new X-ray or new lab test results are made available, they update the IMDM solution directly. This ensures that the most current data is always available in-memory thus improving the overall performance of the Cerner and Epic EHR systems.

IMDM solutions can be integrated with Cerner and Epic using two different approaches. The first option is to pre-integrate the solution with the product and then start with the implementation process. This approach helps build a generic integration between EHR and IMDM solution, test it thoroughly and then start the deployment process. This is the preferred approach as it bundles IMDM as part of the EHR product reducing the integration costs for future deployments. Also, a generic solution can be deployed to cover multiple use cases compared to something built specifically for a single use case. Though, this approach is not preferred if the hospital is trying to solve performance challenges with an existing Cerner or Epic EHR system. In this scenario, the right approach is to focus on solving the specific EHR performance challenges by deploying the IMDM solution. In some cases, there may not be any performance challenges but deploying an IMDM would still make sense to further improve the performance of Cerner or Epic EHR system by accessing critical data quickly, resulting in saving of time and money.

A hospital spends tens of millions of dollars to implement a Cerner or Epic EHR system over a period of several months. The whole process has several unknowns and challenges. Performance is a big challenge that is part of every implementation. Deploying an IMDM is an easy, inexpensive and effective way to overcome this challenge in a short period of time.

If you are interested in learning more, please send email gagan@terracotta.org.
The Time Has Come For Increased Transparency in Healthcare

BY SHAMIT MEHTA

If you’ve ever tried to make an informed, rational decision about your healthcare options, including price comparisons of insurance plans and the fees charged by doctors, clinics and hospitals, the lack of useful information should make it clear that the time has come for increased transparency in healthcare.

Lack of transparency in pricing structure is only part of the problem. We all stand to benefit from greater access to relevant information about topics such as physician performance and the relative efficacy of different procedures and medications.

Pricing Structure
With an increase in consumer directed health plans, health reimbursement accounts, and new healthcare regulations, there is a strong need for more pricing transparency. Consumers expect to be able to quickly compare prices and find reviews for the goods and services they want to purchase, except in the area of healthcare. There is a wide discrepancy in the price and costs of healthcare. For example, patients who receive the same exact hospital care are charged three different prices depending on their level of coverage: government plan (Medicare/Medicaid), private insurance or self-pay.

What’s more, transactions costs in healthcare are an astonishing 14 percent, as compared to 2 percent for retail transaction costs. Clearly, there is a need for greater efficiency in the system. Potential solutions include implementing analytical platforms that can quickly churn through enormous amounts of claims data, both in coded form for Medicare/Medicaid and private insurance, and unstructured information from providers. Multiple payment networks for patients, such as Paypal, BillMeLater and credit card networks will also help to make the system work more efficiently.

A company on the forefront of change is InstaMed, a healthcare clearinghouse and payment for providers and payers. InstaMed’s integrated network allows thousands of practice and payers electronically transfer funds which increase efficiencies and speed of payment for all parties.

Access to Relevant Information
With the introduction of higher deductible healthcare plans and a variety of health reimbursement accounts, employers and employees need better and more specific information to make informed decisions. For example, consider a patient seeking knee replacement surgery. They need specialist care, diagnostic testing, a surgical procedure, time in the hospital and medication. The provider and payer should be able to give the patient relevant statistics on physicians, as well as quality of care reviews.

With increased transparency in medical information, facilities with lower-rated doctors will take steps either to improve their performance or replace them with better-performing physicians. An employer seeking to keep costs down will want to provide employees with better data and decision-making tools. Insurance companies will want to work with physicians who make the least amount of mistakes and who manage resources the most efficiently. Possible solutions include 1) setting up highly integrated benefits programs for employers that tie into the payer, provider and pharmacy networks 2) harnessing social networks to share information and 3) simplifying information for all stakeholders.

This will help people answer such questions as, how good is this doctor at this procedure, and what are my physicians’ overall ratings? How can I receive less expensive medications? Why does your procedure cost more than in another care setting? How much do you make from each procedure? If I choose a different provider, will I be charged less?

One company, Managed Markets Insight & Technology (MMIT), provides formulary data to physicians, pharmaceutical companies, and consumers. Providers now have the ability to review a consumer’s benefit plan at the point of care and prescribe the most economical medication for a patient. Similarly, the information is provided to pharmaceutical companies to provide information on how their drugs compare to other plans.

Overall, the continued evolution of the healthcare industry will be achieved through better technology platforms that capture and synthesize information for payers, providers, employers and employees. Organizations that get started earlier in giving out this data will be the winners, and those that hoard information or refuse to take full advantage of it will become less competitive in the marketplace.

Shamit Mehta is an investor with Susquehanna Growth Equity, an investment firm that focuses on healthcare software and technology companies. Contact: Shamit.Mehta@sgep.com
Soligenix Initiates Phase 1 Clinical Study with SGX203 for the Treatment of Pediatric Crohn's Disease

Soligenix, Inc. (OTCQB: SNGX) (Soligenix or the Company), a clinical stage biopharmaceutical company focused on developing products to treat inflammatory diseases and biodefense countermeasures where there remains an unmet medical need, announced today that it has initiated the first clinical study for development of SGX203 (oral beclomethasone 17,21-dipropionate or oral BDP) for the treatment of pediatric Crohn’s disease. The program has previously received Fast Track and Orphan Drug designations from the U.S. Food and Drug Administration (FDA) for oral BDP as a treatment for pediatric Crohn’s Disease.

The objective of Study BDP-PCD-01, entitled “A Phase 1 Pharmacokinetic/Pharmacodynamic Study of Oral Beclomethasone 17,21-Dipropionate (BDP) in Healthy Adolescents and Young Adults”, is to determine the pharmacokinetic (PK) and pharmacodynamic (PD) profile of oral BDP in healthy young male and female adolescents and adults. This study will enroll 24 subjects, with assessments to be completed in June 2013.

The program has been designed in collaboration with an expert in PK modeling and simulation, Jeffrey S. Barrett, PhD, FCP. Dr Barrett is Director of both the Laboratory for Applied PK/PD and also the Pediatric Pharmacology Research Unit at The Children’s Hospital of Philadelphia. He is also Professor of Pediatrics at the University of Pennsylvania Medical School.

“There are currently no FDA approved corticosteroid therapies for pediatric Crohn’s disease and we believe that SGX203 has the potential to meet an important medical need in children with this serious illness,” stated Kevin J. Horgan, MD, Senior Vice President & Chief Medical Officer of Soligenix. “Data from this study will be used to refine the PK model we have established with Dr. Barrett. The PK model provides the justification for limited PK sampling in a subsequent clinical study in the pediatric population which is planned to commence later this year. The resultant PK data will play an important role in dose selection for Phase 3. The use of PK data in this way reflects the current state of the art in pediatric drug development, leveraging the maximum amount of information from the enrolled subjects.”

Crohn’s disease is an ongoing disorder that causes inflammation of the gastrointestinal (GI) tract. Crohn’s disease can affect any area of the GI tract, from the mouth to the anus, but it most commonly affects the lower part of the small intestine, called the ileum. The swelling caused by the disease extends deep into the lining of the affected organ. The swelling can induce pain and can make the intestines empty frequently, resulting in diarrhea.

Crohn’s disease can appear at any age, but it is most often diagnosed in adults in their 20s and 30s. However, approximately 30 percent of people with Crohn’s disease develop symptoms before 20 years of age. Pediatric Crohn’s disease is a subpopulation of approximately 80,000 patients in the United States. Crohn’s disease presents special challenges for children and teens. In addition to bothersome and often painful symptoms, the disease can stunt growth, delay puberty, and weaken bones.

SGX203 contains BDP, a highly potent, topically active corticosteroid that has a local effect on inflamed tissue. SGX203 is a two tablet delivery system of BDP specifically designed for oral use that allows for administration of immediate and delayed release BDP throughout the small bowel and the colon.

Soligenix is a clinical stage biopharmaceutical company developing products to treat serious gastrointestinal diseases where there remains an unmet medical need, as well as developing several biodefense vaccines and therapeutics.

For more information visit: http://www.soligenix.com
In what will be the harbinger of major advancements in the life sciences as well as scheduled to Rutgers life scientists joined U.S. Sen. Robert Menendez in announcing the opening of the world’s largest university-based biorepository after a major expansion project largely funded by the Recovery Act.

RUCDR Infinite Biologics, the world’s largest university-based biorepository, recently completed a $10.8 million renovation project to add 10,500 square feet of laboratory, office and storage space in three buildings on Rutgers’ Busch Campus in Piscataway. The new Genomics Technology Center was built with a $9.6 million NIH grant through the American Recovery and Reinvestment Act of 2009, or The Recovery Act.

RUCDR Infinite Biologics is one of the world’s leading providers of genomic research technologies directed toward understanding the causes of common human diseases. The Genomics Technology Center will serve the NIH and other government agencies, foundations and private sector clients throughout the world, including major pharmaceutical companies. RUCDR helps strengthen research and workforce development in New Jersey, creating high-technology jobs and establishing growing partnerships with both the government and the pharmaceutical/biotechnology sectors.

For more information visit: www.rucdr.org
IRS directive favorable to pharmaceutical taxpayers claiming research tax credits

BY TOM WINDRAM AND STEVE PASHLEY

Taxpayers in the pharmaceutical industry stand to benefit from a recent IRS directive. The directive instructs revenue agents to not challenge qualified research expenditures arising during either Stage 1 or Stage 2 of a drug’s development. For pharmaceutical taxpayers, this provides welcome relief from the onerous documentation requirements that have been imposed on an industry that is obviously performing a high level of scientific research.

Taxpayers in the pharmaceutical industry stand to benefit from a recent IRS directive. On December 7, 2012, Heather Maloy, head of the IRS Large Business and International (LB&I) division issued a memorandum to all LB&I employees directing them not to challenge qualified research expenditures (QREs) claimed by taxpayers in the pharmaceutical sector arising during the Stage 1 discovery and preclinical stage or the Stage 2 clinical trial stage.

In order to receive this treatment, taxpayers will be required to submit a certification statement signed by an individual authorized to execute the taxpayer’s Federal income tax return for the taxable year under audit. The individual must certify, under penalty of perjury, that the taxpayer’s computation of QREs is consistent with section 41 of the Internal Revenue Code. The taxpayer will be required to maintain documentation necessary that would enable an examiner to determine that the taxpayer’s computation of QREs meets the requirements of section 41. If a taxpayer fails to provide the necessary supporting documentation when requested, the IRS can determine that the directive will not be applied to the taxpayer.

The directive represents an acknowledgement that the vast majority of activities occurring during the early stages of a new drug’s development qualify for the research tax credit, and that an examining agent’s time would be better spent examining other issues.

Pharmaceutical drug development process

Most new drugs go through a four-stage development process. The first stage is the discovery and preclinical phase. During this phase, researchers and scientists spend much of their time formulating hypotheses and performing tests on new compounds that might be useful in the treatment of some condition or disease. Also during this phase, potential drug formulations are tested to determine whether they will be safe to administer to humans and also to assess how to administer the drugs.

If a drug shows sufficient promise during this initial stage, the drug developer may submit an Investigational New Drug (IND) application to the FDA. Once the application is in effect, the drug developer can move on to clinical trials, the second development stage. Clinical trials involve using human subjects to determine whether a drug is effective and what potential side effects may occur.

If the drug developer determines that there is enough evidence that the drug is sufficiently safe and effective to meet the FDA’s requirements for marketing approval, it will enter regulatory review, the third stage of development. During this stage, the developer will submit a New Drug Application (NDA) containing additional information specific to the drug.

If the FDA approves the NDA, the medicine can be manufactured and marketed for the approved indications. At this point, the drug would enter post approval, the fourth development stage. During post approval, companies continue to monitor the drugs to evaluate performance and to identify any new side effects. Also during this stage, the drug developer may continue to perform clinical trials to evaluate long term effectiveness of the medicine and may perform testing to compare the drug to other products.

Research Tax Credit Implications

To adequately support research tax credit claims, the IRS often required pharmaceutical taxpayers to go to great lengths to link individual researchers’ time to specific projects. Performing this allocation is very time consuming and burdensome for larger companies. As noted in the Bayer case, during the credit years in dispute, Bayer developed more than 100,000 business components and it would have taken several years just to perform the project allocations that the IRS requested.

The IRS directive should benefit taxpayers in the pharmaceutical sector to the extent that it will reduce the amount of effort spent documenting Stage 1 and Stage 2 QREs. Provided the certification requirements are met, taxpayers will no longer need to invest significant time and effort to allocate individuals’ time to specific projects or attempt to allocate supplies to specific business components.

While conceding Stage 1 and 2 QREs, the directive’s lack of guidance regarding Stage 3 or 4 activities raises the possibility that the IRS will argue that activities occurring during these stages do not qualify for the credit. While a majority of activities qualifying for the credit generally occur during Stage 1 and Stage 2, many potentially qualifying activities take place during Stages 3 and 4. It remains to be seen whether the IRS will permit taxpayers to claim QREs during these stages.

Tom Windram, is partner, Washington National Tax and Steve Pashley, manager, Washington National Tax.
NJ Hospital Association, Princeton, NJ

The explosion of technology innovation is leading to real-time intelligence and harnessing information to alter the way that healthcare is being administered, how clinical trials are being conducted, how R&D is using predictive modeling and the ultimate promise of reducing healthcare cost.

What are these technologies that are driving the digital healthcare revolution? Are practitioners, institutions, and educators embracing this revolution? How will medical devices change the patient healthcare provider relationship? What role does privacy, security, and the reliability of digital information play?

Join the NJTC and a diverse group of practitioners, educators, and industry leaders in identifying the next steps and separate the hype from the promise of digital health.

See page 2 for details.
LEADERSHIP SUMMIT
October 31, 2013
NJHA Conference & Event Center
Princeton, NJ
The NJTC Leadership Summit is a unique gathering of technology executives and thought leaders from the NJ technology community. It is an opportunity for many discussions in a relaxing atmosphere where all of the participants are focused on common goals: becoming better leaders, taking the company to the next level, building alliances, promoting exchange and developing partnerships.

NJTC ANNUAL MEETING
July 18, 2013
The Palace, Somerset, NJ
The Annual Meeting is an excellent place to introduce the council to your colleagues, connect with fellow members, and learn about Council activities in the coming year. This is also an opportunity to both maximize your membership investment and your company’s presence with the technology community.

Featured Speaker
Kim Guadagno, Lieutenant Governor, State of New Jersey

This is a Members Only event. To find out if membership is right for you contact Paul Frank at pfrank@njtc.org

NJTC AWARDS CELEBRATION
November 21, 2013
The Hyatt, Princeton, NJ
Save the date
Visit www.njtc.org to submit your nomination
What’s Next In Mobile, IT & Security

The program featured an array of research and development efforts at companies involved in Mobile, IT and Security throughout the region. The product demonstrations offered glimpses into technologies and developments in areas such as embedded technology, BYOD, software define networks, M2M capacity. Work Groups in Application Development, Cyber Security, Mobile Learning and What’s Next Internationally were also offered.

Photo 1: Moderator: Doug Schoenberger, Vice President, Public Policy, Verizon
Photo 2: Panelists: L-R: Joe Weinman, SVP, Cloud Services & Strategy, Telx; Alberto Blois, Executive Director, RIOsoft; Beauford Atwater, Head, Strategy & Business Intelligence, Business Unite Support Solutions, Ericsson; Rob Horner, Mobile Solutions business Development Lead, Juniper Networks; Jiren Parikh, CEO, Snap One, Inc.; Ron Guida, Principal Consultant, Cloud Services, Verizon/Terremark

SBIR Workshop
For Life Science Companies
How to Get this Vital Funding

The NJTC Life Science & Health IT Industry NetworkS offered a workshop on SBIR Funding for C-Level members of the Council. The Workshop highlighted how to access funding under the Small Business Innovation Research Program. Attendees learned how to apply for and win the grants and contracts available through SBIR, and how to stay on track for success and achieve next level funding.
Technology and Entrepreneurship Week

The Technology & Entrepreneurship Talent Network and The New Jersey Technology Council hosted the first annual NJ’s Tech & Entrepreneur Week. This week was dedicated to creating awareness of the many opportunities for employment and business growth in the NJ Technology sector. A series of events were offered throughout the week to create state-wide attention and awareness of career opportunities in Technology & Entrepreneurship that will provide continued economic prosperity in New Jersey.

Photo 3: L-R Maxine Ballen, Founder, President & CEO, NJTC & Aaron Fichtner, Deputy Commissioner, NJ Dept. of Labor & Workforce Development

Photo 4: Rowan University L-R Dr. Ali Houshmand, President, Rowan University; Maxine Ballen, Founder, President & CEO, NJTC; Aaron Fichtner, Deputy Commissioner, NJ Dept. of Labor & Workforce Development

Photo 5: 4/23/13 Entrepreneur Bootcamp-Rutgers University L-R Brian Donohue, President & CEO, Echolocation; Joan Praiss, COO, NJTC; Aleta You, Associate Director, Rutgers, MPS; Donna Levin, Dir. Technology & Entrepreneurship Talent Network

Photo 6: Rowan University L-R Badri Nittoor, CEO, Tripod Technologies, LLC; Sandy Fisher, Dir. of Substation Trans, Engineering, Pepco; Mark Clifton, VP, Products & Services, SRI Sarnoff; Doug Schoenberger, VP, Public Policy, Verizon; J. Michael Schweder, President, AT&T Mid-Atlantic States
NJTC NEW MEMBERS  As of April 2013

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Mojgan Mohtashami, President
AID is an infrastructure research and design-driven organization established in 1998, offering services in all areas of geotechnical and pavement engineering. The company is comprised of engineers with many years of practical experience with roadways, bridges, airports, ports, statistical modeling, and database development. This extensive level of experience uniquely complements the advanced education, substantial research and design experience of the AID team. AID is committed to deliver the highest quality engineering services and calculations supported by the state of the art methods and approaches and data collection equipments. Pavement engineering and geotechnical engineering are the center piece of AID’s operation. AID’s other areas of expertise, such as: Materials Engineering, Specification Development, Construction & Materials Inspection, Traffic Engineering, Database Development & Design, life cycle cost analysis, information technology, Geographic Information Systems, Bridge Deck Evaluation, Statistical Support Services, Data Gathering and Analysis, and mathematical modeling enables the company to investigate and design projects covering a wide range of geological formations, pavement types, and conditions. AID is a certified WBE, DBE, SBE, and ESBE in the State of New Jersey.

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www.alternateesource.com
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Anil Sabharwal, Partner, Sales
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DataBanker, Inc.
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973-652-4435
www.databanker.com
Thomas Wilson, CEO
DataBanker is a start-up focused on capturing and monetizing personal behavioral data originating from the Internet of Things for the direct financial and wellness benefit of the individual, as well as for corporate partners.

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14 Walsh Drive, Parsippany, NJ 07054
973-889-5420
www.ipredictus.com/
Monica Smith, CEO/Founder
I.Predictus is the first of its kind marketing technology solutions provider for marketers, media outlets and brands, providing data transformation, attribution, and strategic database services to optimize media placement and improve return on media investment. The heart of I.Predictus is to provide a tool to marketers that can help decipher the complex nature of how consumers consume media, especially branded DRTV media.

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Eileen Morrissey, President
MobiTech -- innovative ‘data-as-a-service’ model on mobile apps allowing patients, caregivers, doctors and other stakeholders to view treatment options along objective and patient focused outcome measures. Patient can add medical history and preferences. Resulting in greater patient engagement in decision making and an overall learning healthcare system.

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Aunova Medchem will provide two services. First, we will sell the special organozinc reagents and second we will provide medicinal chemistry support to pharmaceutical and biotechnology companies.

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100 Technology Way, Mount Laurel, NJ 08054
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Doodle Labs is focusing on the development of best in class, rugged, embedded OFDM WirelessBroadband transceivers for Military, and Commercial applications. Doodle Labs products help OEMs to leverage the cost effective IP capabilities of Wireless Broadband to enable cutting edge applications.

CXO-HEALTHCARE
Armand Leone, MD, JD, MBA
175 Rock Road
Glen Rock, NJ 07452
201-444-6444
Has started 2 healthcare companies; Timbrel systems and Regenerative Technologies. Currently president of Regenerative Technologies working on cartilage repair products.

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NJTC CALENDER OF EVENTS

FINTECH CONFERENCE
June 5 • 8:30 AM - 2:00 PM
Opera Solutions
10 Exchange Place, Jersey City, NJ
Members $150.00 • Non-Members $300.00
For Full Information on the 2013 NJTC FinTech Conference visit: www.njtc.org

What’s all the buzz about? The financial technology environment is a dynamic, high-pressured, fast-paced world in which developing fast and efficient technology and systems is of primary importance. This conference addresses the needs of the growing financial sectors as they seek to develop and implement an effective FinTech framework. Discussions will cover key topics in "Capital Markets” and “Payments and Consumer Financial Services” including the evolution of algorithmic trading to high-frequency trading, and how mobile payment, and social applications are transforming consumer behavior. This Conference will highlight the region’s foothold as a place to be recognized for all financial technologies. Attendees will include financial executives, venture capitalists, industry analysts and fintech entrepreneurs. Last year’s event created quite a buzz in the financial and tech communities and the 2013 Conference is taking shape with much anticipation.
Keynote Speaker: Eric Noll, EVP, Transaction Services, NASDAQ

CFO AWARDS BREAKFAST
June 12 • 8:00 am - 10:30 am
Forsgate Country Club
375 Forsgate Drive, Monroe Township, NJ
Members $55.00 • Non-Members $110.00
NonSponsor/Professional Service Provider:$150.00
The New Jersey Technology Council is pleased to announce the 2013 CFO Awards Breakfast, an annual event recognizing the accomplishments of financial executives from our region’s diverse technology community. NJTC is pleased to honor and celebrate the outstanding contributions of these leading CFOs/Investors. The program offers awards in four categories: CFO of the Year, Financier of the Year, Deal of Year and the Hall of Fame Award. Join us to meet and celebrate these fine individuals. And the Finalists are….• Joanne Ferris, EVP & CFO, Applied Communications Sciences • Tom Hopkins, CFO, Softgate Systems • Judi Pullig, CFO, Yorktel • Chris Rogers, CFO, ImprovingCare Deal of the Year Award • Douglas Cox, CFO, Primus Green Energy • Javier Daly, CFO, Terracycle, Inc. • Jurgen Paulis, CFO, DSM Nutritional Products NA

Software development may include research, new development, prototyping, modification, reuse, re-engineering, maintenance, or any other activities that result in software products. Jim Eichmann, Billtrust will discuss environment and procedures and Subroto Mukherjee, Verizon will discuss development systems and various tools. Software Engineer Leaders luncheons are forums for an open discussion among peers and all attendees are encouraged to share their experiences, ask questions and learn from one another.
Software Engineering Leaders Network
The NJTC launched this peer networking group to bring together VP and Director level leaders of Software Engineering teams. This is a great opportunity to share experiences and learn from other leaders across our region. Meetings are open to VP and Director level leaders of Software Engineering teams.
Network Sponsors: Sparta Systems, Inc. and Szaferman, Lakind, Blumstein & Blader, PC

MOBILE APPS FORUM & COMPETITION
June 20 • 2:00 PM - 6:30 PM
Fairleigh Dickinson University
The Mansion
285 Madison Avenue, Madison, NJ
Members $25.00 • Non-Members $50.00
Students $10.00
Building applications for wireless, mobile Internet and broadband services is one of the most exciting areas of development in the technology arena. The New Jersey Technology Council looks to foster this innovation in the region so that developers, entrepreneurs, market leaders and investors can come together to discuss strategic direction, showcase and share their ideas and connect with resources and partners. We will present some of the best applications in development in the US. NJTC will present two panels and a Mobile Application Showcase where selected developers from the US and other parts of the world will make presentations of their applications.
1:00-2:00 - WorkGroups : Application Development, Mobile Learning & Social Entrepreneurship
2:00-3:00 - Panel 1: Mobile Marketing – Obtrusive or Beneficial
Mobile App Showcase
3:00-4:00 : Presentations by SubCategory Winners of the Mobile Application Competition
You can complete a submission form by visiting our website at: www.njtc.org
4:00-5:00 : Panel 2: Mobile Apps Management
5:00-6:30 - Networking Reception Mobile Apps Forum Signature Sponsor: ObjectFrontier

CIO ROUNDTABLE SERIES
June 27 • 9:00-10:30 AM
PSEG, 234 Pierson Avenue, Edison, NJ
Attendance at this program is limited to CIOs (or equivalent) and the Series sponsors only. CIO attendance is free of charge. NJTC is pleased to introduce the CIO Roundtable Series that will offer CIOs the opportunity to share insights and advice while networking with each other in a small intimate discussion format at an interactive breakfast or lunch. At each CIO Roundtable session, our CIO group will discuss today’s most concerning business topics and provide a look at the needs and wishes of today’s CIO. Roundtable Discussion Leader: Jonathan Bransky, Director IT Engineering and Security, PSE&G For the past 15 years Jonathan has been a member of PSEG’s IT organization, his current role as the Director IT Engineering and Security includes oversight of the Chief Information Security Organization (CISO). In his years at PSEG, he has focused on defining strategies, investigating technologies, and leading IT initiatives within information security, infrastructure technologies and services, desktop standards, and web applications. In his current role, he leads a team of 30 people in the development of infrastructure engineering and security standards, delivery of life cycle investments for infrastructure technologies (voice, data, wireless, and video networking, core infrastructure services, platforms and storage, radio and microwave, network and systems management, web infrastructure, directory services, remote access, and thin application delivery solutions), security architecture and engineering, IT Compliance for SOX and
NERC Critical Infrastructure Protection, and the operational management of user identities. Also, he oversees the department-wide budget for IT operating and capital investments. Series Sponsorships are available – Contact Karen Lisnyj at Karen@njtc.org.

NJTC / DaVinci Technology Corporation Breakfast Series
July 9 • 8:30-10:30AM
Urban Table
40 West Park Place, Morristown, NJ
Members $25 • Non Members $60
Join NJTC and DaVinci Technology Corporation for the second quarterly breakfast series in downtown Morristown. The presentations are inspired by the daily advances in technology that affect our lives in countless ways. The breakfast program includes a featured speaker, two elevator pitches by NJTC member companies and networking time.
Our presenter on July 9th is Craig Cuyar, Global CIO, Cushman and Wakefield. With 227 offices in 59 countries and more than 15,000 employees, the firm represents a diverse customer base ranging from small businesses to Fortune 500 companies. Prior to joining Cushman & Wakefield, Dr. Cuyar served as the CIO for the Realogy Franchise Group. Dr. Cuyar has served as an adjunct faculty member and designed curricular materials for various academic institutions and currently serves as a mentor to students enrolled in the Masters of Technology Management program at Columbia University. Dr. Cuyar holds Bachelor’s, Master’s and Doctoral degrees from The Pennsylvania State University and an MBA in Finance from the Rutgers Business School. He is a regular speaker on the Business Value of IT and serves. Upcoming Breakfast Series Dates: October8, 2013 and January 2014

Health Information Technology Summit
July 11 • 8:00 AM - 3:30 PM
New Jersey Hospital Association
760 Alexander Road, Princeton, NJ
Members $60.00 • Non-Members $90.00
Lunch and Afternoon Session Only $40.00
For Full Information on the 2013 Health Information Technology Summit see page 2 or visit: www.njtc.org

NJTC Annual Luncheon Meeting
July 18 @ 11:00 AM - 2:00 PM
The Palace at Somerset Park
333 Davidson Ave , Somerset, NJ
The Annual Meeting is an excellent place to introduce the council to your colleagues, connect with fellow members, and learn about Council activities in the coming year. This is also an opportunity to both maximize your membership investment and your company’s presence with the technology community.
Featured Speaker: Kim Guadagno, Lieutenant Governor, State of New Jersey
This is a Members Only event.
To find out if membership is right for you, contact Paul Frank at pfrank@njtc.org

For updated information or to register for NJTC events, visit www.njtc.org

NETWORKS
NJTC Industry Networks present programs about opportunities and challenges facing NJ technology companies by industry segment.

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NJTC Peer Networks bring together like-minded technology professionals to share common issues, learn best practices and gain perspective across all technology industry segments.

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