VMI's DEMO Fall 2014 Review

1 About

Welcome to VMI's review and top picks for DEMO Fall 2014, which took place **November 29-20, 2014** in San Jose, California. DEMO attracts insightful media, critical venture capitalists, respected technology business development professionals, connected corporate IT professionals, and the most promising new technology companies in the world.

Produced by IDG, the DEMO conferences in the United States, China, Brazil, Russia and Vietnam focus on emerging technologies and new product innovations. The DEMO conferences have earned their reputation for consistently identifying tomorrow's cutting-edge technologies and have served as Launchpad events for companies such as Palm, E*Trade, Evernote, Salesforce, Webex, Tivo, VMware and Fusion-io and thousands of others, helping them to secure funding, establish critical business relationships, and influence early adopters.

VMI attends DEMO and other technology shows to gain insights on the latest trends and emerging technologies and players across a variety of industries. We do this for our customers to help them stay in the forefront of their industries by investing in the right technologies and partners, adapting to new, more competitive business models, or tapping into talent or acquisition targets.

Here's to *Seeing What's Next, Being What's Next*.

1.1 San Jose, California Notable Attendees

"To go fast, run alone. To go far, run as a team. At DEMO we believe it is better to go fast and far. That's why we are here today." said Neal Silverman, SVP and General Manager, of DEMO. The target audience of this year's DEMO couldn't agree more. They were there to seek and invest in the next emerging market leader. Silverman and Executive Producer, Erick Schonfeld, kicked off the events over this two day fast-paced showcase of players pitching their emerging technologies to an audience filled with some of the most elite investors, CTOs and innovators from Silicon Valley:

- *Irene Au, Operating Partner, Khosla Ventures*
- *Stephan Biller, Chief Manufacturing Scientist, GE*
- *Ansgar Chorhummel, Head of Innovation & New technology Strategy, Dell*
- *Stephen Elliott, VP of Research, IDC*
- *Benedict Evans, Partner, Andreessen Horowitz*
- *Ron Guerrier, VP & CIO, Toyota Financial Services*
- *Philippe Khan, CEO, Fullpower; founder LightSurf Technologies --Inventor of the first camera phone solution, and Borland*
- *Ariaz Kazi, SVP, Product & Innovation Platform Strategy and Adoption, SAP*
- *Emily Melton, Partner, DFJ (Draper Fisher Jurvetson)*
- *Matt Rogers, Founder & Engineering, Nest Labs*
- *Alex Rosen, Managing Director, IDG Ventures*

- *Shanna Tellerman, Partner, Google Ventures*
- *Peter Thiel, Entrepreneur and Venture Capitalist (outside investor Facebook, Co-Founder of PayPal and Palintir)*
- *James Thomason, CTO, Dell Cloud Marketplace*
- *Trae Vassallo, General Partner, Kleiner Perkins Caufield & Byers*
- *Marcus Weller, PhD, CEO, Skully Systems*
- *Steve Wozniak, Principal Partner and Chief Scientist Primary Data and Fusion-io, and Co-founder Apple*
- *Tim Young, Founding Partner, ENIAC*

1.2 Disruption

It's about mobile and its multiplier effect. The increased sophistication from mobile is as important as the increase in scale. According to Andreeson Horowitz partner Benedict Evans, close to a square foot of LCD display screen has been sold to every adult on earth. The fact that low cost mobile devices are personal, taken everywhere, offer frictionless access, have sensors and cameras, know their location, are used for payments, are a social platform and are much easier to use, means they offer ten times the opportunities of desktop computing. Evan goes on to state that, this mobile scale will allow for more Amazons… from the kid next door or on the other side of the world. What we are seeing today is that this amazing technology has outgrown the tech industry. New business will be built around mobile. Fidelity Investments – the brick and mortar place – needs to be in fear. Twenty year olds with the power of the DRAFT app, and others just like it, are going to turn these industry giants into the next Kodak moment unless enterprises fully embrace a totally native, mobile business model.

And we all thought we were safe… *So what comes after mobile?*

1.3 This Year's Demo Categories

Forty companies launched at DEMO and were segmented into the following categories:

- Assortment: Gateway, Wearables & Drones
- Smart Data
- Messaging
- Enterprise
- Bitcoin & Personal Finance
- Internet of Things (IoT)
- Mobile
- The Work Cloud

1.4 For More Information, Contact VMI

While this briefing has covered top findings, if you are interested in gaining further insights, we would be happy to arrange a teleconference to discuss them in further detail. Please give us a call at 480-488-5707, or contact Laura Byers directly at Laura@e-vmi.com.

2 VMI's Top Pics

2.1 An Assortment: Gateway, Wearable, and Drones

As computing spreads everywhere from our bodies, to our homes and to the skies, new classes of smart devices are emerging.

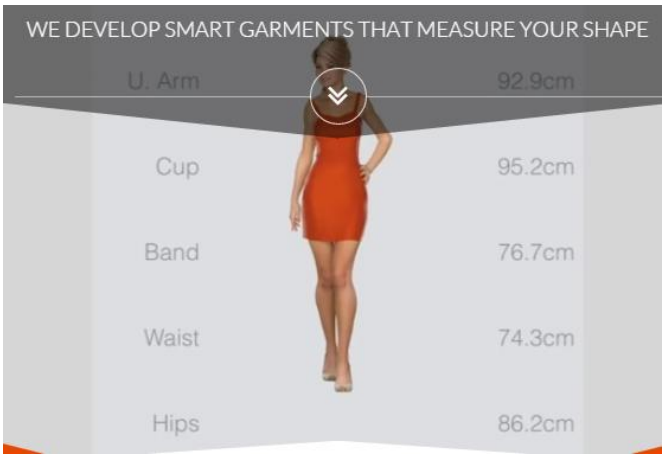
Of the four companies in this "assorted" showcase, we will highlight three. One stands out because of its interesting utility for measurement; the next because of, in drone terms, it is all about SWAPc (Size, Weight and Power/cost); and the third, because it is an elegant, single point of realtime energy monitoring for your entire home. This last innovation is VMI's first top choice among the assorted showcase– is where we'll start:

Curb (Austin, TX) is a device/appliance that you place on your home's circuit breaker box that reads and deciphers energy consumption of every appliance, electrical equipment, laptops, etc. in your home. A cloud app dashboard provides you with understandable dollars and cents usage information that even your mom can understand! It gives you tips and alerts about your home's energy use, down to individual rooms ***and appliances***, so that you can be more efficient across your entire home. With just a single sensor you get mobile notifications if you've accidentally left something on, making all of your devices smarter and your home safer.

- Technology: Proprietary algorithms for identifying signatures of electrical appliances (your fridge, TV/display, A/C, sound system, connected devices, etc.) and *detecting when they start failing* because of the changes in those unique signatures. This last piece is really difficult – and makes what Curb does pretty unique in the consumer industry (i.e.: no competition).
- What a great complement to Nest... and other technologies which can then be used to turn appliances down/up or off.
- The kicker to me was the appliance itself which takes 1 million samples a minute, then prepares just the right amount of data for feasible use by any Cloud application.

- Wow-factor: This means you can get your appliances repaired before they bite the dust, saving you big money. It also means that you can identify the biggest wasters of power across your entire home… helping you make better choices on where you want to put your energy dollars.
- Side note: And maybe your GE repair person will show up to repair your fridge without you having to make a service call.

LikeAGlove (Tel Aviv, Israel) is an elastic fabric pitched as a smart garment that measures your shape to help you find the perfect "fit" when shopping online. *Shopping???* This invention is being profiled here because I believe it has far greater application in other areas than the one pitched.



- No cameras, no measuring tape. Micro sensors are woven into the stretchable, elastic fabric- sleeve. Stretch it over your body –or surface area that expands and contracts, and you can get real time changes in surface… monitor changes as you inhale/exhale.
- Wow-factors: Overlay real time images onto any CAD/MRI, etc. image-structural diagram. You can now measure a patient's swelling – knee, ankles; expansion or contraction of material structures due to absorption of fluids; and the list goes on.

Top Flight Technologies (Malden, MA) Introduced true serial hybrid power integration into a small, multi-rotor drone at industry disruptive price points.

- The Top Flight Hybrid Propulsion Engine™ has a demonstrated world **record of 2.5+ hours,** ~100 miles in range, with 1 gallon of gasoline and removes numerous challenges for UAV business solutions that require enhanced endurance and extended payloads.
- The hybrid utilizes conventional gasoline, packs eight times the amount of propulsion energy as lithium batteries of the same weight and is 50% more efficient than some of the best fuel cell technology.
- In six to twelve months they expect to start shipping drones that can carry nine-kilogram payloads for two hours, at a list price of $20,000 to $25,000.
- Wow factor! Today even the biggest **and best battery-powered UAVs of this size only travel 20-40 minutes**. This does for UAVs what hybrid technology has been doing for similar hybrid-powered cars.

- Who: Represent many years of R&D and commercial development in the UAV market space that includes members from MIT Lincoln Laboratory, Georgia Tech, Charles Stark Draper Laboratories, Adaptive Flight, and other commercial and aerospace industries.
  - Dr. Long Phan, CEO & President, Top Flight Technologies
  - Eric Johnson is the Lockheed Martin Associate Professor of Avionics Integration at Georgia Tech.
  - Paul is a Principal Member of the Technical Staff and the Perception Systems Group Leader in the Embedded Navigation and Sensors System Division at Draper Labs
  - Dr. William Hall – Advisor (Aerospace/MIT) – Managing Director of the Commercial Applications and Services for Mosaic ATM

2.2 ENTERPRISE

Businesses large and small are the biggest buyers of technology. The products launched in this session give businesses a leg up in productivity, communications, sales, developer tools, and IT.

Of the four showcased two companies stand out for solving two entirely different trust issues with **regard to hacking/spoofing and 100% availability**

Suvola Corporation (Austin, TX) offers secure and trusted computing… period! Suvola is an enterprise software company creating the world's first tamper-proof platform for the system-on-a-chip (SoC) based microserver market. Packaged and sold as self-contained enterprise application appliances, or as public cloud and private enterprise SaaS, products based on the Suvola tamper-proof computing platform will address the need for greater protection against cybercrimminals. These systems also provide a cost-effective, easier to manage information technology infrastructure to support end-user desktop, tablet, mobile and IoT applications. Suvola enhances, integrates and optimizes the best-of-class industry-standard open source and proprietary software for SoC-based microserver architectures to provide exceptional security and trust, while maintaining high levels performance and reliability.

- Core technology: Utilizes Hyperscale Technology from alliance partner Freescale Semiconductor (QorlQ multicore SoC products)
- Technology: Secure and trusted, High Density Low Power (HDLP) computing device. The combined solution provides hardware cryptography, tamper-proof key stores, trusted software execution and SSL network acceleration to support web-based applications for mobile and IoT applications.
- Wow-Factor: Simplifies the deployment of SaaS (and Metal as a Service!) and other software applications for mobile and IoT devices by allowing them to be delivered as a self-contained, secure, and trusted appliances for on-premise or cloud deployments.

Primary Data (Palo Alto, CA) is developing data virtualization solutions that improve enterprise efficiency and ability by aligning applications, servers, and storage systems into a single, global dataspace. In other words, data is logically separate from the processors and infrastructure… and can move dynamically without disrupting applications – no interruption to services. Pedigree: **Founders are from Fusion-io and SanDisk**; Steve Wozniak, Chief Scientist.

- Technology: Uses traditional access protocols and existing infrastructure; Dynamic data mobility unifies enterprise infrastructure across vendor solutions from servers in the cloud.
- Wow-factors: This means enterprises can move the right data to the right place at the right time to dynamically respond to evolving business needs *without disrupting always-on users*.

2.3 Mobile

Mobile phones and tablets are quickly becoming the main way we communicate with each other, access the internet, and discover the world around us. They are also becoming "remote controls for real life" – helping to shake up industries by matching local supply and demand on the fly. The mobile apps launching at DEMO take advantage of the scale and unique device characteristics of mobile computing and communications, to deliver new services or expand computing into new areas.

Out of the four demonstrators, PathSense wins VMI's vote for best innovation.

PathSense (Carlsbad, CA) provides precise location without GPS and with 90% less battery drain than GPS. SDKs are available for iOS and Android. GPS battery drain causes users frustration, one of the leading reasons users permanently delete apps. The idea for PathSense came out of a problem faced by the founders' previous company--Trapster, an app that alerted users in real time to speed traps, red light cameras, and the like. Tapster's app ran GPS in the background, quickly draining phone batteries -- once users figured that out, many deleted the app.

- Technology: As judge Benedict Evans said, and I agree… "You had me at INS" – as in Inertial Navigation Solution. **PathSense couples INS and MEMs** (sensors like accelerometers, etc. within the phones) **to provide exact location via sophisticated algorithms once an initial GPS location is identified**. Thereafter… you can go anywhere including urban canyons to inside of buildings where GPS signals cannot reach.
- Not easy to duplicate: PathSense validates ALL location mobile phones for precision. No easy task and lots of proprietary tricks
- Founders originally started with a Speed-trap App – highly successful until users found that it drained their batteries big time. But, they found a great, unmet need that they have now been able to solve.
- Applications… any mobile device or platform. Think… unmanned, autonomous systems.

2.4 Smart Data

With the explosion of data from consumers and enterprise, big data has taken center stage. But what people really want is smart data—ways to filter, analyze, and make sense of all the data spewing from all the computers, devices, and sensors around the world now connected together. The Smart Data products at DEMO makes big data actionable.

Out of the four demonstrators, two win VMI's vote for best innovation.

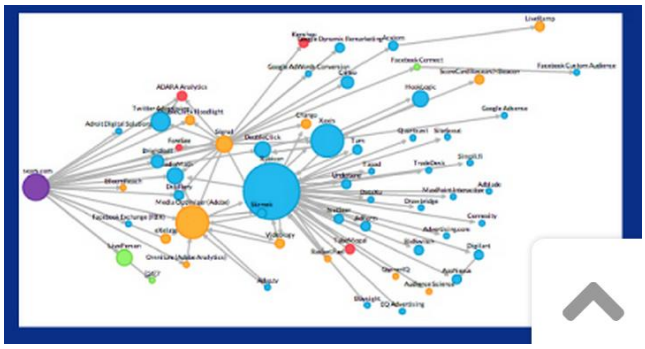
Celect Optimization Platform (Cambridge, MA) Funding round – Angel; Amount: $100K-$500K.

A predictive analytics platform, Celect allows retailers to understand how a specific customer shopping at a specific location chooses from an assortment of products.

- Technology: Celect Choice engine, a machine learning system
- Wow-factor: **Ranked one of the top innovations in last 50 years by MIT**, these guys are fascinated by how we choose among a rich choice of selections.
- The wow: Use of Celect to enable merchandisers, retail planners, and inventory analysts to better determine "what to put where" increased revenue for several stores by 7-8% (where movement of1-2% points is big).

Ghostery (New York, NY) Funding round – Series B; Amount: $10M-$25M

Ghostery Enterprise's Marketing Cloud Management software, fueled by data from 26 million websites worldwide, showcased a new app for businesses that can track delays and security vulnerabilities in vendor websites. The highly visual display makes it easier to see where the blocks are occurring and fix



- Technology: It has an amazing visual analytics system that makes all those that connect to you or serve you (cloud partners) be completely transparent (via visual maps).
- Wow-factor: How often do you run into sites that force pop ups about lacking security certificates or pages take forever to load? Poorly managed digital marketing clouds, create security holes, hurt site performance and drive customers away. Ghostery removes the chaos for digital businesses that experience security violations and lag times because of their cloud partners and suppliers. It enables them to fully control their customers' experience.
- Plus: Over 40 million people globally rely on their free browser extension to see and control the tracking technologies that follow them across the web.

During his DEMO presentation, Ghostery CEO Scott Meyer mentioned one of the most infamous users of his products: Edward Snowden. The NSA whistleblower disclosed that he used Ghostery while addressing a tech conference in Austin, Texas via video feed from Russia earlier this year. http://blogs.wsj.com/personal-technology/2014/03/10/privacy-snowden/

2.5 Bitcoin and Personal Finance

Bitcoin and its underlying blockchain is fast becoming the payments protocol for (our youth on) the Internet. It is distributed, frictionless, and offers a transparent ledger for transactions. The Bitcoin startups in this session are building new services on top of the blockchain that will take it the community much closer to mainstream than ever. And, we are seeing personal and corporate finance being outsourced to the cloud where elegant apps supply big data and analytics that meet or exceed in-house or financial investment analysts' efforts.

Surprisingly this group of six demonstrators got a lot of tractions from the audience, judges and myself. Three are profiled below:

Pavillion.io (Sunnyvale, CA) Funding Round: Seed Amount $0-100,000

- I will just say, "Bravo" to a couple of 17 year old local kids who broke down the trust issue surrounding Bitcoin exchange for goods simply and elegantly, (and who will both be bazilliannaires by the time they are 19!) Their Trustless Exchange is a patent-pending, automated escrow release mechanism, driven by the transportation companies' pick-up/delivery service (i.e. FedEx, UPS, DHL, etc.), that removes third-parties and escrow fees.

DRAFT (Austin, TX) Funding Round: Angel Amount: $500K-$1M

- DRAFT is a new online portfolio management company targeting millennial investors that redefines how average investors access and allocate their investment accounts. Millennials, having recently gone through unemployment after college and who feel the financial industry is broken (huge fees for what?...), will look to this new mobile platforms and crowd-sourced technologies to provide them, as new investors, the education and assurances they want in a simple mobile approach.
- "Fees add up, only if you add them up!" This is where DRAFT begins, by informing their clients. By the way, Draft gets its name from the idea of bicyclists following closely to a big vehicle… gaining that extra pull, without all of the effort.

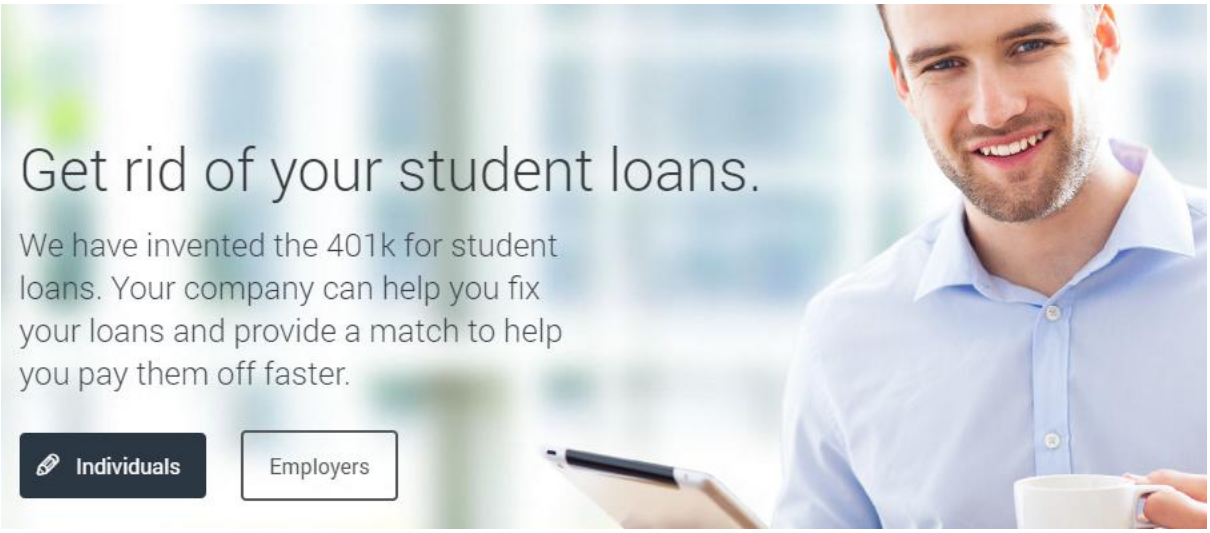
AppZen (Sunnyvale, CA) Funding Round: N/A Amount: $0-$100K

- AppZen provides the world's first ambient solution for time and expense compliance and audit. AppZen, with more enterprise outsourcing apps to come, offers patent pending, datascience based technology that automatically creates expense reports, provides real time compliance to IRS rules and company policies, and automatically audits and assigns a risk score to every expense to detect fraud and misuse.
- The app will certainly keep the honest employees honest – and it is a great time-saver. The not-so-honest employees who try to game the system will have a tougher time of hiding those inappropriate expenses.

2.6 The Work Cloud

As more and more businesses run on the cloud, more problems are being solved by new Software-as-a-Service and backend infrastructure companies. The cloud companies launching at demo are tackling those problems

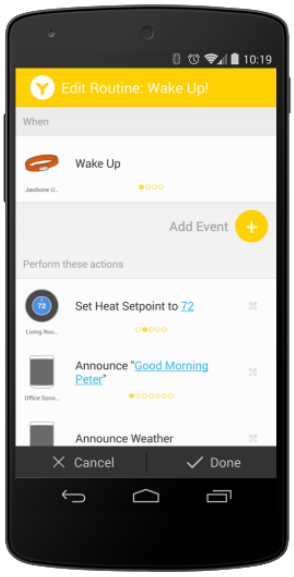
Out of the five technologies being demonstrated, one stands out as an absolute star!



Student Loan Benefits, (Austin, TX) invented an Internet-based 401k for student loans. Their website, which is being marketed to employers as a workforce benefit, collects student loan details and determines the best options for easiest repayment for your employees.

Partnering with Student Loan Benefits is an easy choice.
Our 401k – like match will help you generate more business with existing customers and give you a shiny object to attract new ones

2.7 The Internet of Things (IoT)



As sensors and computer chips make their way into more and more devices in our homes, factories, and businesses, we are approaching a time when there will be more smart "things" than mobile devices. These startups are building products for a future when trillions of devices are connected to the network.

Yonomi (Austin and Boulder) - Connects everything through an app.

Yonomi is trying to make it easy to make your devices work with each other; the app searches your home (and body) for IoT gadgets, and then allows you to set up sequences of events. Even a non-techy can figure it out. As an example, when your wearable detects you waking up, turning on lights, playing music, or, perhaps, talking to you over your Sonos sound system. The app is available for Android now and iOS version is coming. Yonomi's approach seems straightforward, but it may be ahead of its time.