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California Saga

The October issue of INTERNET TELEPHONY included our standing Regulation Watch column by William B. Wilhelm, a partner, and Jeffrey R. Strenkowski, counsel, from the global law firm of Bingham McCutchen LLP. The headline of the column in that particular issue was "California Considers VoIP Deregulation."

It talked about how, in recent years, several states have enacted legislation deregulating VoIP services. And it noted that California was among the latest to do so with its SB 1161, which aimed to limit the state's oversight of VoIP services.

Well, as it turns out, California Gov. Gerry Brown signed the bill into law on Sept, 29, 2012. It remains in effect until Jan. 1, 2020.

Rachel Greenberg in her blog on VoIPReview. org, notes that the legislation, of which AT&T and Verizon were strongly supportive, is intended to retain VoIP outfits' ability to provide services from anywhere in the state and is consistent with the national trend away from Internet regulation.

Indeed. Whether we're talking about the Internet at large or VoIP services in particular, a popular refrain over the years has been that too much or the wrong kind of regulation can quash budding businesses in this space – although there are now plenty of established businesses on both fronts. But, as we are all aware, businesses of all stripes tend to like to avoid regulation, which they frequently indicate can add costs and limit their growth prospects, and in the process limit benefits to the economy and workforce at large.

Strenkowski and Wilhelm in their INTERNET TELEPHONY column earlier this year suggested that if this bill were passed, as has now happened, it could become a model for other state legislation.

That may be good news to some readers of this magazine, but Susan Crawford in an opinion piece for WIRED magazine that appeared in late August (before the bill was signed into law), suggested the California legislation creates a state of emergency on par with the recent wildfires in the West.

Susan Crawford is the (Visiting) Stanton Professor of the First Amendment at Harvard's Kennedy School and a Visiting Professor at Harvard Law School. She was a board member of The Internet Corporation for Assigned Names and Numbers (ICANN) from 2005-2008, and served as Special Assistant to the President for Science, Technology, and Innovation Policy in 2009.

SB 1161, she wrote, "leaves Californians without a protector to keep watch on the cost, service quality, safety, and availability of access to information, data, and entertainment – everything on which modern life depends. Because just a few giant companies control the wires, they'll be picking the economic and social winners and losers in America. Burning trees, burning up the state's future – it's all cataclysmic."

The problem, she goes on to write, "is that the bill covers all 'IP-enabled services.' Pursuant to some current Federal regulatory gymnastics, 'IP-enabled services' includes not only content and functions that use wires and airwaves but also the physical wires and towers themselves."

She goes on to say that the assumption is that competition between cablecos, wireline telcos and wireless service providers, among others, will protect consumers by making enough options available that they can vote with their feet. "But that confident prediction hasn't come true," she says. "There has been a tremendous amount of consolidation in California, and across the country, leading to a situation in which the wireless and wired providers have divided up the market: AT&T and Verizon are abandoning their residential wires and focusing entirely on wireless; Comcast and Time Warner have a lock on local monopoly wired services."

For their part, Strenkowski and Wilhelm point out that while the new California legislation removes state authority to regulate many aspects of VoIP services, it does allow for certain types of regulation related to existing universal service and E911 surcharges, video franchising requirements, interconnection under Sections 251/252 of the Federal Communications Act, as well as the authority 'to require data and other information' pursuant to the portion of the Utility Code governing ILEC forbearance petitions. **IT**

Tablet Wars

Microsoft, are you serious? You want to take on Apple with a tablet that needs a patch already? Recently I asked if this tablet endeavor, called Surface, by Microsoft was mission impossible.

Microsoft, here is your mission: Take a device that has become synonymous with the term post-PC era and topple it. Go up against a company that is considered cool and somehow transform your image to be as cool. If you decide to accept this mission you must take your reputation for developing bloated operating systems and software and scale it all down to run in a tablet form factor where a person can use the device for an entire day without recharging.

Furthermore, you have to eliminate the blue screen of death, or BSOD – the tablet has to work. It must be as reliable as a cell phone. It can't crash. Moreover, it can't have monthly updates due to security holes that slow the device to a crawl. There is no possibility to run antivirus software constantly – the device has to be protected inherently but at the same time open in-contrast to Apple.

These goalposts are a no-brainer. Microsoft is very late to the game and has issued a critical and important bulletin. According to the company, a critical vulnerability is one whose exploitation could allow code execution without user interaction. These scenarios include self-propagating malware (e.g. network worms), or unavoidable common use scenarios where code execution occurs without warnings or prompts. This could mean browsing to a web page or opening e-mail.

It is worth noting Microsoft also had some issues with its Touch Cover ripping – again, the company needs to be doing things better and should have this product perfected by now.

On the flipside, Redmond can be considered a newcomer to the tablet hardware market and perhaps we should cut it a very small amount of slack.

While we're on the subject of tablets, let's take a closer look at Apple and its new iPad.

It may seem obvious that Apple needed to offer a smaller iPad now, but when I suggested the idea in November of 2011, I received criticism from many who thought Apple didn't need to dilute its product assortment of iPods and large iPads. Steve Jobs also disagreed with me but as Henry Blodget points out, Steve was wrong.

This was a rare misstep for Jobs, who showed a God-given ability to know what consumers want across various industries – before even they did.

The challenge, however, for Apple remains the same as the one I pointed out when I first tested the Motorola Droid X. The reason Apple lost the PC war had to do with the open nature of the PC market – where competition led to a huge price/performance advantage for computers based on the Microsoft operating system. An array of PC makers pushed the PC market forward and took share from Apple rather rapidly. At a certain point developers of leading-edge applications abandoned releasing their applications for Macs first and started to develop for the PC as their primary platform.

In the mobile world things are very different but still the same. Mobile devices have varying screen sizes and resolutions as well as differing performance specifications. In the PC world – monitors and graphics cards could vary widely and be added on a base PC configuration. It is very difficult for consumers to determine which mobile device is fastest but they can differentiate screen sizes quite easily.

So screen size is a very important area of differentiation.

Now that Apple has a smaller tablet at a premium price it has blunted the expanding ecosystem of seven-inch tablets from the likes of Google and Amazon.

The next front in this war is the Samsung line of large phones: the Galaxy S3 and the Note II – both devices have expansive real estate. The iPhone 5 in landscape mode is much better than the 4S but it still isn't big enough. Apple needs something wider than its current offering. Let's call it the iPhone Plus.

This is the only way to blunt the onslaught of wider Android phones, which continue to take share. **IT**

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COVER STORY

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By Hunter Newby

Broadband Networks – The Relationship Between Availability, Usage and Frustration

Fact: If there is no physical network there is no wireless network, and without the physical network there can be no broadband, no Internet and no cloud.

Fiction: The United States has a nationwide broadband wireless network with full LTE coverage everywhere for everyone.

Wireless networks that support LTE, both mobile and microwave, require physical assets to operate. This reality escapes the minds of many for some reason though. They expect everything to work all of the time, get frustrated when it does not, but have no idea how it all actually works, or got there in the first place.

Perhaps it is because many people believe the commercials they watch on television. Most probably live and work in an area that already has physical network assets, and they simply have no care, or concern, to know how those assets came to be. To them, the assets just are and are supposed to be. It is as if they just expect it all to be there naturally.

Sadly, wireless towers and the fiber necessary to support LTE do not grow up out of the ground and in the ground, respectively, like a tree and its roots. Those physical assets need to be built, and the builders need the rights to place them where they are needed and that all takes time, planning and capital. This is an inconvenient reality of all communications networks.

International Data Corp. published a report in March 2012 on fixed and mobile broadband traffic volume growth in which the firm provides the following conclusions:
 * Internet-generated broadband traffic will increase approximately 50 percent year over year on fixed networks and double on mobile networks; and
* end user demand for worldwide wireline and mobile broadband traffic will increase from 9,665 petabytes per month in 2010 to a jaw-dropping 116,539 petabytes per month in 2015.

"The enormous growth in end user demand for both fixed and mobile broadband services is staggering," says Matt Davis, director of consumer and SMB telecom services at IDC. "Despite enormous growth projected in IDC's forecast, it is difficult to overestimate this phenomenon. Fixed and mobile operators will have to deal with a new reality that will tax network resources to the limit – and perhaps past the limit."

IDC also points out that "Bandwidth usage strongly correlates with the availability of faster broadband speeds. This trend can be seen when comparing networks within countries and more widely from region to region. This tells us that capacity and usage are interwoven, and that increasing capacity will ultimately lead to the adoption of new services and greater use. The relationship between availability and usage is important when considering the question of how much bandwidth is enough."

The takeaway from the IDC findings that capacity and usage are interwoven is key because if it exists it will be used, to its limit and probably beyond. That seems to indicate that it is a worthwhile investment to make – even and most importantly if it does not currently exist.

As IDC says, bandwidth usage strongly correlates with the availability of faster broadband speeds, which also means by default that there is no usage if there is no network at all, whether completely lacking existence (no bars), or being completely flooded with users actually using it. Based on these facts, it is difficult to overestimate the enormous growth in end user dissatisfaction and the way the network's customer service departments will be taxed to their limits and beyond while the rate of consumption outpaces the rate of investment in the physical networks. **IT**

Hunter Newby is CEO of Allied Fiber (www.alliedfiber.com).

> **The takeaway from the IDC findings that capacity and usage are interwoven is key because if it exists it will be used, to its limit and probably beyond.**

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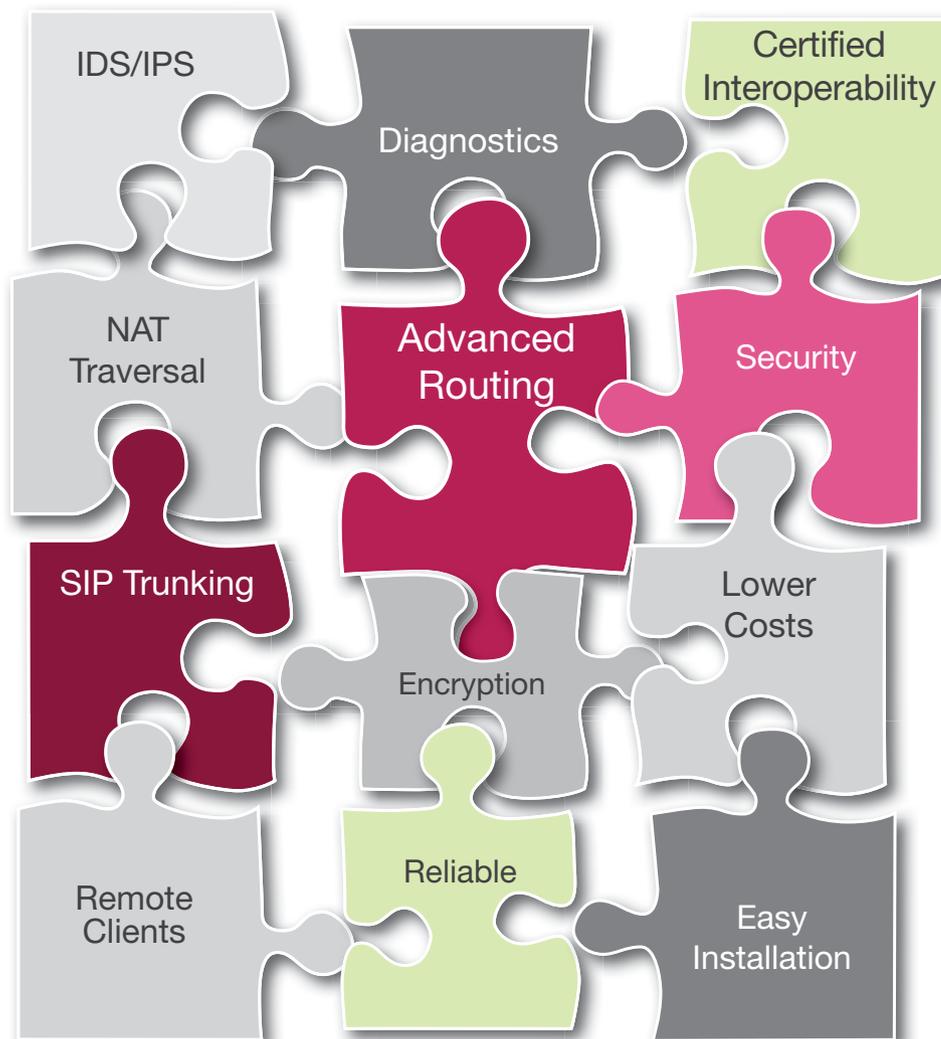
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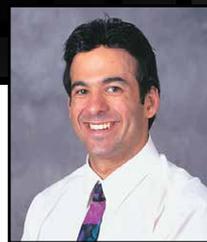
By Rich Tehrani & Max Schroeder

Many SMBs and small enterprises are still under the impression that a full BC/DR plan is out of reach. However, today's cloud technologies provide even small organizations access to affordable protection. It is not too late to put together a 2013 BC/DR plan, but you need to get started now.

The list of hosted service options seems to be growing exponentially and most provide a unique blend of features perfectly suited for the BC/DR market. First, for small organizations, hosted or managed services are simple to deploy and maintain. Second, they can provide significant cost savings compared with the traditional arrangement of customer premises equipment combined with a separate DR site.

Data storage, software as a service and VoIP were some of the earliest hosted cloud solutions and continue to be widely popular. Current hot items include IT as a service, suites like Microsoft Office 365 plus some hybrid newcomers like hybrid ITaaS and hybrid fax services. Hybrids combine CPE with cloud architectures and are particularly attractive for industries like health care that prefer to maintain on-premises customer records. Two hybrids offer unique opportunities suited to these types of industries. Entreda's IT as a service and etherFAX's fax hybrid both offer CPE deployments combined with a secure cloud service.

Both service offerings tout their high levels of security and both utilize advanced encryption as part of their solutions. For etherFAX, which never actually stores faxes off site at their facilities, encryption provides a secure pipe to the customer to safeguard the TIFF formatted documents and transactional data. Entreda's ITaaS Suite manages every device on the customer network so encryption is used to ensure that information and data access are fully secure.

Hybrids are relatively new to the cloud picture but, being one of the first a couple of years back, etherFAX can definitely be classified as an established service. Entreda is in the launch stage but has already been recognized by TMC as "Best Onsite Launch" at ITEXPO Austin, so it is on the right track.

Speaking of ITEXPO, don't waste time. Get online now and register for ITEXPO Miami, Jan. 31-Feb. 3, 2013, so you can see and learn about technologies like the above firsthand. **IT**

Max Schroeder is the senior vice president of FaxCore Inc. (www.faxcore.com).

Rich Tehrani is the president and group editor-in-chief at TMC, and conference chairman of ITEXPO.

By Daniel Brecht

Power Outages from Hurricane Sandy Suggest Value in Smart Grid Architecture

Hurricane Sandy caused 48 fatalities in the state of New York alone, and a total death toll over 110 across the Northeast at the end of October. This Category 1 hurricane affected a handful of Atlantic states and caused a lot of destruction, particularly in New York City and New Jersey, where many streets and subway tunnels were flooded from a violent coastline.

The winds also brought down trees and power lines as the area faced winter-like temperatures.

The continuing exposure to weather-related risks in the U.S., however, teaches an important lesson in emergency preparedness and risk planning for electric companies people must count on to help prevent power failures.

Electric utilities need better tools to predict and prevent potential losses of power. That solution may be as simple as deploying smart grids to improve our use and supply of electricity.

The smart grid, an electric power system, is a fairly new concept that has been re-engineering the electricity services industry. Used as an alternating current power grid and distributed power source, it can deliver electricity when needed most.
Even uses of smart meters, which are software-controllable devices dedicated particularly to electricity metering, have also proved their worth for power restoration efforts. Their capacity of two-way communication provides utilities real-time data if there is any loss of power, alerting those areas where the break has occurred.

Meter readings, or lack thereof, provide the vital information for those responsible for taking the appropriate action, either to solve the problem associated with the fault of the meter or power outage from extreme weather conditions, or to restore power remotely from a linked smart command center – which can turn power back on.

As either part of a smart grid or used by itself, smart meters can help ensure electricity is available whenever a disastrous storm like Sandy hits. To avoid having millions of people left without power for days, utility companies should plan to have in place smart grids and/or smart meters. Their technologies would have kept them informed of the damaged and destroyed power lines, and have relieved many workers in the electricity industry from having to physically drive to each one to check them out. **IT**

Daniel Brecht is a contributor to TMCnet.

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By Mike Sheridan

What Technology Convergence Means for Businesses

One of the more exciting trends in technology today is the convergence of different applications and functionality into a common platform. Convergence is the process of technological evolution where one device can perform multiple tasks that used to be thought of as separate. We see it everywhere: from our cars (most are available with GPS, satellite radio, and various other sensors) to our entertainment (the Xbox offers access to movies, live sports, social media, chat and, of course, video games) to the most recognizable symbol of convergence, the smartphone (with applications for controlling your music, your TV, your security system, and just about anything else). And even with all these very visible examples, convergence is still in its early stages.

Convergence can be broken down into two components: platforms and devices. For instance, where we once had the Walkman (devices), we now have music solutions (platforms). Thanks to iTunes, music has found a home on a multitude of devices, helping create a

which promotes efficiency and collaboration but also supports the ongoing bring your own device trend. For the individual, we see some spillover from that same BYOD trend, with employees now able to work from anywhere.

Convergence is a trend that will only accelerate, both as new channels emerge and as UC platforms evolve and adapt to include them. Take, for instance, the recent announcement that the new version of Microsoft Lync (Lync 2013) will integrate Skype. This combination, long-anticipated since Microsoft's $8.5 billion acquisition of Skype in 2011, will include new capabilities for rich presence, IM, and voice. What's more, it will dramatically extend the reach of UC, with the potential for a federation of more than 1 billion users – including all active Skype and Facebook users.

And this trend isn't just for existing channels such as Skype and social media. With mobile payments and video chat expected to

> **Convergence is a trend that will only accelerate, both as new channels emerge and as UC platforms evolve and adapt to include them.**

digital music ecosystem that supports convergence. As music moves from being stored on your computer or phone to the cloud, it's not hard to conceive of convergence producing a larger entertainment ecosystem that can be accessed from anywhere on any device.

We can see examples of the same type of convergence in the way we communicate. For years, the business and consumer worlds were treated to a steady influx of new communication channels such as e-mail, voice, IM, video, text and social. Initially, there was nothing to bring these new channels together, leading to multiple conversations on different platforms, and ultimately an incomplete and inefficient communication experience.

Then came the next logical step: unified communications. UC consolidated these channels on one platform that is device agnostic and supports mobility. This last factor is especially important, considering the fact that devices such as smartphones and tablets are now blurring the line between communication channels and devices. Convergence helped give rise to UC,

make their way into the mainstream in the coming years, convergence will absorb these functions as well. As smartphones and tablets help us become a more mobile society, convergence-centric systems such as UC will only grow more valuable.

Convergence will likely have a similarly transformative impact on customer contact. Envision a dynamic app that presents customers with a full range of contact options – from self-service to text chatting to video chatting with a live agent. Similarly, the traditional contact center as we know it will cease to exist, replaced by a virtual platform that seamlessly distributes customer queries and outbound calls to agents around the world.

Several years from now, we will look back on 2012 and shake our heads about how we got by. I, for one, can't wait to see what the future holds. **IT**

Mike Sheridan is executive vice president of worldwide sales with Aspect (www.aspect.com).

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By Jon Arnold

Rethinking the Contact Center

If there was ever an area that needs rethinking in the communications space, few things come to mind faster than the contact center. This could easily take a few columns to explore, and I'll just keep things at a high level for now. Of course, if readers indicate a specific direction, I'm happy to do that, so your comments and suggestions are most welcome.

To understand the rethink premise, consider the semantic shift in language a few years back when the call center became the contact center. This change is subtle, but quite profound in terms of technology and how the dynamics of customer service are changing. The call center frame of reference falls squarely into the bucket of legacy telecom; both are rooted in a world where telephony is the hub of communications, around which workers or agents are tethered to a fixed line phone system.

Hopefully, you're rolling your eyes wondering why anyone would work this way anymore. Well, the business world still has a long way to go in migrating to IP, and as long as legacy systems keep working, they will continue to remain in use. Like anything else, however, the laws of diminishing returns take effect if the status quo stays for too long. If that describes your current situation, hopefully this article will get you on the right path.

The first thing to do is understand the changing dynamics cited earlier. Back in the day, when customers needed service, they had three options – make an in-person visit to the store/company, send a letter in the mail, or phone the call center. Each approach can be effective, but as lifestyles became busier and our attention spans shorter, using the call center was the most convenient. Of course, the price for this convenience was a hit-or-miss experience, and for every problem solved many call centers drove a customer or two away.

Telephony-based call center technologies have certainly evolved, but we are quickly moving into a world where multi-modal, multi-channel interactions are becoming the norm. Not only are customers comfortable using a variety of modes other than voice to engage with agents, but many like to use multiple modes concurrently. This is very different from the conventional method of providing customer service, and for that reason, the term contact center is more appropriate.

While the technologies have advanced – as have customer expectations – voice remains central to providing good service, and this presents a dual set of challenges for how businesses invest in their contact centers. On one level, they must provide a quality telephony experience, and with the right tools, VoIP can deliver this. A basic IP telephony deployment can do the job, not to mention reduce costs compared to TDM service.

The benefits are even greater when VoIP is coupled with SIP trunking, and that merits a separate article to explore. In short, the contact center can save even more by cutting back on toll-free numbers, as VoIP enables click-to-call, which customers can initiate from their PCs or smartphones. Also, with domestic calling being free, VoIP provides another option for agents to make outbound calls to customers, allowing them to be more responsive or even proactive. In terms of enhancing the customer experience, SIP trunking also enables HD audio, which can be a real differentiator for your company.

Thinking on the business level, these technology considerations are important, but even more critical is how they enable the contact center to meet today's customer expectations. In a telecom-centric model of service, problem resolution could easily be measured in hours or even days.

That is clearly not acceptable now, as always-on consumers expect their problems to be addressed in minutes, or even seconds. Contact centers need a lot of agility to do that, not just to keep customers happy, but to keep them, period. Competition is relentless in a global economy, and with so much information just a click or two away, consumers have little loyalty and will buy elsewhere even if a routine inquiry comes up short.

This puts great pressure on the contact center, not just to keep those customers, but to protect the company's brand. Consumers have many tools at their disposal – especially social media – to share their experiences, and as you know, bad news travels faster than good news. This seems like an unfair burden to place on the contact center, but it also presents new opportunities to strengthen customer bonds. Any agent will tell you their best moments come when they turn an unhappy customer into a happy customer, and by using the same tools the customers can use against you, the contact center can turn things around when happy customers become brand advocates. That may not be the norm, but the potential is very real, and cannot effectively be leveraged in a legacy-based environment.

The contact center is rich in possibilities, starting with VoIP and then SIP trunking, but even more so with unified communications. Consider this article a primer for what's shaping the contact center, and I'll continue the thread in my next article. **IT**

Jon Arnold is principal of J Arnold & Associates, an independent telecom analyst and marketing consultancy with a focus on IP communications, and writes the Analyst 2.0 blog. Previously, he was the VoIP program leader at Frost & Sullivan.
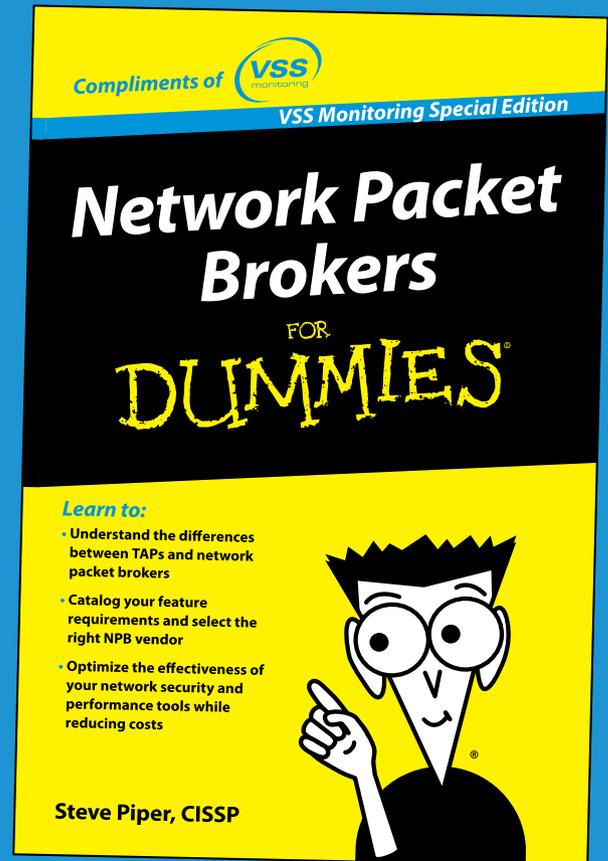
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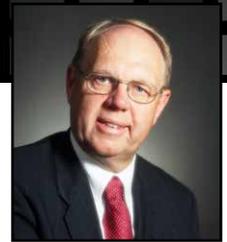
By Steven Johnson

E-SBCs: Beyond Security

Enterprise session border controllers play a number of key roles in the enterprise network. Security is one very important function of the E-SBC, and just as a CIO would not tolerate connecting any server directly to the public Internet, or even to a private MPLS network, neither should they allow the IP telephony system to be configured with a publicly routable IP address. The E-SBC also provides the means to give the IP PBX a private IP address, and traverse the NAT with SIP signaling and related media. And because of the nature of the product, it is the place to stop denial of service or theft of service attacks before they wreak havoc on the network and the business. Today's E-SBCs all support the tools necessary to manage, control and secure the IP PBX away from these risks.

But the best E-SBCs do more than secure the perimeter of the network when introducing SIP, SIP trunking and unified communications. The E-SBC also enables SIP trunking, interoperability, routing, diagnostics, troubleshooting, encryption, authentication, disaster recovery and much more. The E-SBC has evolved to be an important element in the implantation of any SIP-based communication and to perform a variety of necessary functions.

We're going to be taking a deeper dive into some of these important functions to help end users get the most for their E-SBC investment. First up: troubleshooting.

Placed at the enterprise edge, E-SBCs serve as a demarcation point between the delivery network and the customer. Many service providers want a clear hand-off point between their networks and the end customers. Using an E-SBC as the demarcation point, the ITSP can see both the LAN and the WAN side of the customers' networks. This is a powerful troubleshooting tool, as it aids in determining where messaging and/or media is reaching. The E-SBC can also show detailed logging information, including debug messages which can assist in troubleshooting issues throughout the enterprise network. In this way the E-SBC can gather the statistics necessary to monitor service delivery to maintain quality of service.

In other cases the end user installs the E-SBC and uses it to determine whether the service provider is delivering satisfactory service based on the service level agreement that is in place. This may include generating call quality statistics, often called MOS scores, to demonstrate whether the service is as advertised. The E-SBC may also be used to isolate the issue between the WAN and the LAN, thus helping to pinpoint the source of any issues that may develop. **IT**

Steven Johnson is president of Ingate Systems (www.ingate.com).

By Jeff Hudgins

New Microprocessors are Impacting Deep Packet Inspection

Intel's new Xeon E3 and E5 series microprocessors, code named Sandy Bridge, are changing how deep packet inspection applications run and perform on server platforms. General-purpose microprocessors have traditionally served within the control plane of communications and networking equipment, leaving ASICs, FPGAs and various accelerator cards to handle packet processing in the data plane. Intel's faster and more efficient Xeon E3/E5 processors are better equipped to handle deep packet inspection security algorithms and will replace many of the network processors commonly used in today's enterprise- and carrier-class servers.

Changes to Intel's Xeon E3 and E5 series microprocessors include new instructions to accelerate common encryption tasks and floating point calculations, as well as increased core counts and cache per CPU. Intel's processor enhancements are also transforming how pre-integrated server application software interoperates with on-board memory, disk drives, RAID controllers, and the operating system.

The E3 and E5 series of Xeon CPUs are based on a new microprocessor architecture that is manufactured on Intel's 32 nm geometry process. The technology is designed to enhance a range of applications that run on notebooks, desktop computers, and enterprise-class servers. The new architecture has been trial-demonstrated to provide up to 17 percent more CPU performance (clock-for-clock) compared to Lynnfield 45 nm quad-core Xeon X34xx processors.

Additionally, the Xeon E3 and E5 series is optimized to deliver up to 60 percent more performance and 30 percent greater energy efficiency compared to its predecessor. With more available cores, each core running faster, built-in PCI Express 3.0 capability, more memory channels and faster QuickPack Interconnects, this new micro-architecture has the potential to create entirely new application categories.

So what's the final score?

The E3 and E5 series processors' ability to increase CPU processing, memory, and I/O performance, while reducing bottlenecks for applications that demand real-time data rates, make them better equipped to handle deep packet inspection algorithms that support network port expansion. **IT**

Jeff Hudgins is vice president of product management at NEI Inc. (www.nei.com).

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FCC Considers New International Traffic Reporting Requirements for VoIP Providers

By William B. Wilhelm and Jeffrey R. Strenkowski

In 2011 the FCC conducted a rulemaking proceeding under its "Data Innovation Initiative" aimed at reviewing and modernizing reporting requirements related to international telecommunications traffic. The commission sought comment on how to streamline its data reporting requirements in this area to ensure that it is collecting the data it needs, and only the data it needs, to carry out its statutory responsibilities. As part of that review, it sought comment on whether to impose new international traffic reporting requirements on certain types of VoIP providers.

The commission appears prepared to move forward with its international traffic data collection reforms and to impose new reporting requirements on interconnected VoIP providers and one-way VoIP providers (when traffic touches the PSTN at either end). The FCC claims that a sizable percentage of international voice traffic is now handled by VoIP providers and as such the agency needs to obtain traffic data from VoIP providers in order to get an accurate picture of the United States' international traffic. Under such a requirement, VoIP providers will be required to submit annual reports regarding: (1) international traffic and revenue; and (2) any international facilities they may control. In practice, VoIP providers that do not currently separate their traffic and revenues by jurisdiction (or domestic versus international) may need to begin doing so in order to comply with any international traffic reporting requirement the FCC may impose.

Since 2005 the FCC has applied a number of carrier-type requirements on VoIP providers. If approved, the new international reporting requirement will remove one of the last remaining significant distinctions between unlicensed VoIP providers and those traditional telecommunications providers authorized by the commission to provide international services pursuant to Section 214 of the Communications Act. **IT**

William B. Wilhelm is a partner and Jeffrey R. Strenkowski is counsel at the global law firm of Bingham McCutchen LLP (www.bingham.com).

CATCH MORE FLIES

vGRC: Virtual Governance, Risk, and Compliance

By Lori MacVittie

One of the truisms of technology is that it advances far faster than regulations and standards. It is usually the case that widespread adoption is the impetus for standards and specifications that deal with a variety of concerns, not the least of which is security. Virtualization is no different, having perhaps a longer adoption curve than most but in the end still subject to the same lagging standards and specification around security.

That's problematic, particularly with respect to GRC initiatives and the need for organizations to balance pressure to adopt newer technology with risk and compliance.

While some standards, such as PCI DSS, have begun to address virtualization others remain silent on the subject or are in progress, with no real indication of when or if such standards might emerge. Cloud computing environments, the majority of which are based on virtualization, provide little specific guidance. While groups such as the Cloud Security Alliance work on defining guidelines and frameworks through which cloud providers

For example, consider the ISO 28000 series framework, one section (ISO/IEC 18028) of which describes specific techniques and controls related to "securing communications between networks using security gateways." The section goes on to describe a variety of functions performed by "security gateways" and best practices with respect to deployment and responsibility of the device.

None of this changes when moving from hardware or software to a virtual form factor provided feature parity or equivalency is maintained. What may change is the addition of new network elements that may need attention, such as virtual switches that coordinate east-west traffic between multiple virtual machines hosted on the same physical server.

That's not to say that virtualization – especially of network infrastructure – has no impact on GRC initiatives. There are certainly questions and concerns raised by the introduction

> # The good news is that the vast majority of compliance initiatives require certification that is achieved via an audit process because so much of it is dependent on architecture and functions, not products.

and customers alike can exchange knowledge with respect to security and compliance, still most customers are left to fend for themselves when it comes to determining whether cloud and, in particular, virtualization impacts GRC efforts.

The good news is that the vast majority of compliance initiatives require certification that is achieved via an audit process because so much of it is dependent on architecture and functions, not products.

Thus form factor is not nearly as much an issue provided virtual appliances have feature parity with their hardware predecessors. If and when virtualized infrastructure is being considered it must be evaluated based on organizational GRC requirements. If controls are currently implemented via hardware devices, it must be asked whether a virtualized equivalent can provide the same control.

of virtualization with respect to specific controls around interfaces and management mechanisms, all that must be addressed. But by and large these controls are not specific to virtualization; they are simply one more entry point that must be secured.

Simply because specifications and standards do not mention or call out virtualization does not mean they are not applicable. Nor does it mean virtualization is not compliant. Consider the controls and best practices embodied by standards with an eye toward what they are trying to accomplish and whether or not equivalent controls can be implemented in a virtualized solution before declaring virtualization out of scope. **IT**

Lori MacVittie is senior technical marketing manager at F5 Networks (www.f5.com).
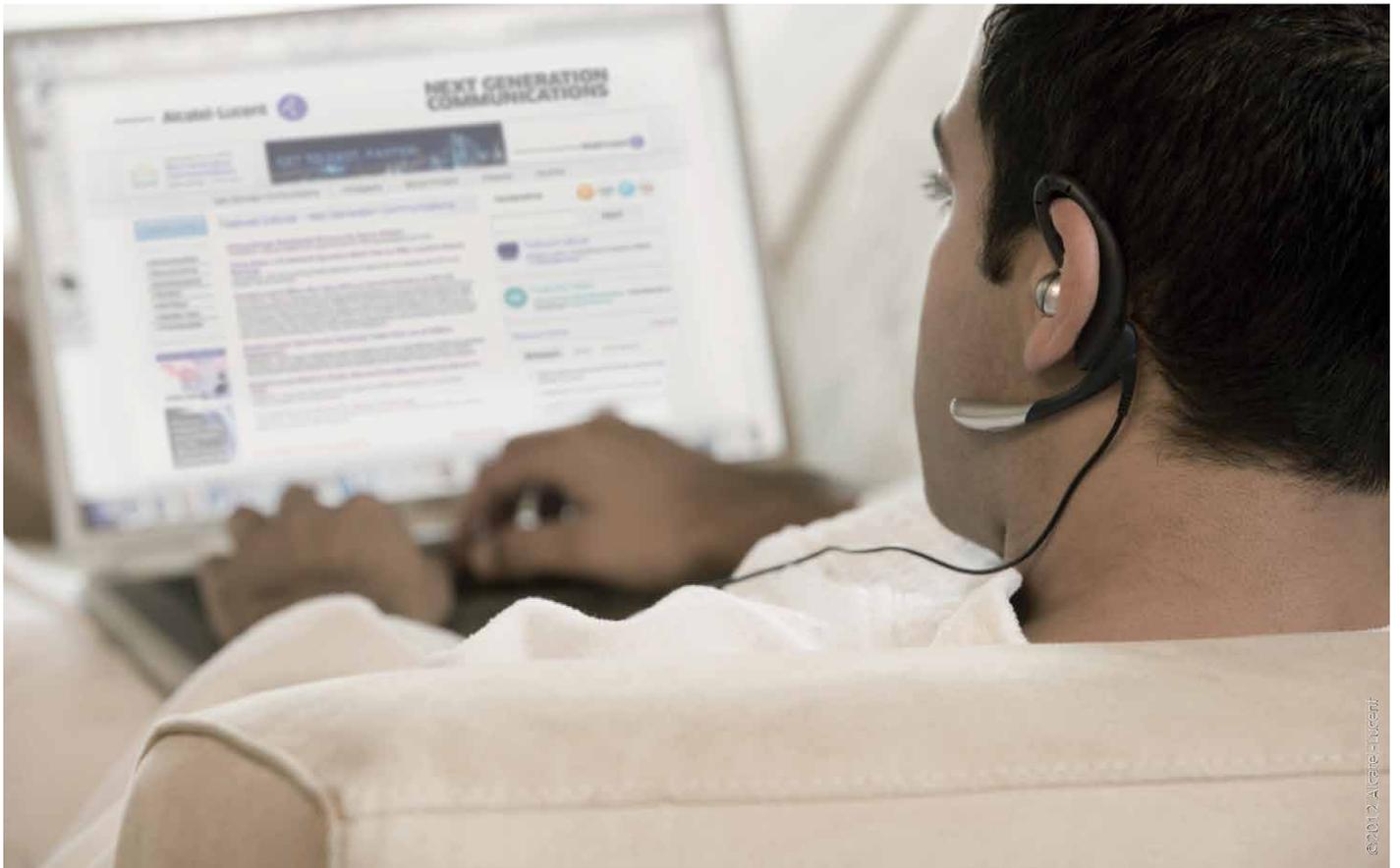
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By Peter Bernstein

Let the Gains Begin

If you are like me and aspire to be a trend-spotter but sometimes are more like a fast follower, you may not be as current about the gamification of business processes as you should be. Good news, I am here so that you and I have something to talk about at the next cocktail party we attend. After all, along with lookin' good, we should also sound smart.

For little background on the trend of applying game-design thinking to non-game applications I suggest you check out the cover story of INTERNET TELEPHONY November. You might also want to take a look at www.gamification.org.

I thought gamification might be just another fad until I read that former Vice President Al Gore believes "Games are the new normal." And, if you are still doubters based on how you feel about Mr. Gore's veracity, the site mentions that Gartner is estimating that by 2015 more than 50 percent of organizations that manage innovation processes will gamify them. Who knew? Will your sales force be happy or grumpy?

business unit. Hence, as a voice of experience, I can attest to adoption by the sales people being the biggest challenge we faced. I can also vouch for how excited the C-levels were about getting all the analytics generated, and the additional spring in the steps of sales managers.

That said, I can also assure you that the reason for the lack of enthusiasm by the sales people was based on the exposure of their sales activities to a wider internal audience. They were particularly perturbed by visibility into their contacts, which they viewed as personal rather than company property. I find it hard to believe that making the process a game would have been a game-changer with the sales team.

Do not get me wrong. I believe gamification can and will be an important tool for business process optimization going forward. I also think it's possible that the most profound impact in CRM will be from the customer's perspective and not from the agent vantage point. As customer interactions with contact centers become more multi-channel and more visual, it should almost

Gartner is estimating that by 2015 more than 50 percent of organizations that manage innovation processes will gamify them.

What spurred my interest in the subject was an alert from a company called UruIT Dynamix (a spin-off of Uruit with offices in the U.S., Chile and Uruguay), which has released a beta version of what it is calling CRM Gamified. This is being touted as, "A groundbreaking add-on for Microsoft Dynamics CRM 2011 On-line and On-premises that will change the way you do business."

The promotion of the capability gets better. As the website states: "Not only you will motivate your sales force like never before by rewarding them for fulfilling your predefined goals, but you are also going to be able to track every single step in real time…. Now, if you've already invested in a Microsoft Dynamics CRM project you do know that adoption is the key challenge you face. You've done everything right but your end users are not motivated and they just don't get involved. Our solution? Let them have fun with it!"

The flash on the site for signing up for a demo says this, "The easiest and funniest way to drive user adoption and get the best return on your Microsoft Dynamics CRM investment." Of course the users they are referring to are your sales folks and not your company's actual customers.

I lived through the introduction of Saleforce.com at a large company in a previous life. In fact, I was part of the implementation team for my

go without saying that the more engaging/fun the customer experience, let's call that the more gamified, the better.

That would be better as in:
- Self-service options would be made more efficient and effective, including relieving the strain on live agents to field unnecessary calls.
- Customers might be friendlier if their waiting times were more compelling.
- Speed to problem resolution could be increased through the simplification of many if not all aspects of customer interaction sessions.

While there is a certain attraction in making sales activities more fun to drive agents to make full and proper use of such powerful tools as Microsoft Dynamics CRM, and UruIT Dynamix is properly focused on enabling its customers to derive more value from their CRM solutions, it seems to me the big future buzz around gamification in CRM is going to be when the gamification of the mass market customer experience side of the equation is more fully engaged.

That really will be something to talk about. In the meantime, I hope this gives you a leg up with your colleagues and friends. **IT**

Peter Bernstein is senior editor at Technology Marketing Corp. (www.tmcnet.com), the parent company of INTERNET TELEPHONY magazine.

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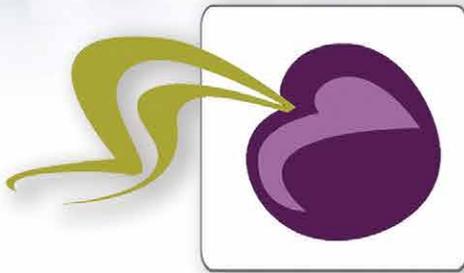
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By Rick McFarland

Fine-Tuning Your Channels for Success

As someone who's been in the telecom business for a long time, I've seen trends in hardware, software, and applications ebb and flow like the tides. I've studied endless reports and white papers where pundits predict, analysts test and engineers introduce industry breakthroughs that all offer game-changing possibilities.

Everyone hunts for the next new thing that will punt them ahead of the pack. But there's one stubborn constant that remains the universal equalizer: No technology product sells itself, except, perhaps, the lightning-in-a-bottle anomaly of the Apple iPhone. For products to achieve meaningful success, they must create real meaning for the customer. They must be presented and positioned in terms they understand – in easily relatable and applicable models that result in tangible advantages.

Beyond Sales 101

It sounds like Sales 101, I know, but don't write me off so fast. The truth is, we operate in an industry far too dazzled by the sparkle of new technologies. We revel in the sizzle of scientific stuff, in the tectonic shifts new technologies create, and we expect our customers to recognize potential that to us seems so self-evident. When they don't, we're left not only frustrated, we end up under quota.

It's easy to blame the customer for lagging behind the speed of change, but if you're a technology provider, like I am, you know there is a buffer between you and the customer that also needs a jolt of inspiration: your channel partners. Are they positioning your products to customers through a business operational standpoint, or are they still thinking parts and part numbers, lines and licenses, connections and configurations? Without question, these technicians are skilled at applying products to specific problems, but do they have the vision and vocabulary to articulate macro business solutions – to frame your technology in the context of how to perceive and pursue opportunity? This goes beyond Sales 101; this is graduate-level Business Process.

When we don't see the numbers or feel market demand, we hold our channel partners responsible. Where are their loyalties? How hard are they working? Is my brand top of mind? These valid questions often apply, but I believe deeper self-reflection more effectively extracts the root concern: that we, as manufacturers, are failing to compose the messages that resonate with customers. What more can we do to help partners convert their leads into comprehensive deals?

From Product to Performance Training

We need to move beyond product-specific training to institute sales performance programs, strategies transforming customer encounters from technical monologues into needs-based dialogues. You can whine and pine and wait for your partners to implement such programs themselves, or you can take a much more proactive role in co-developing these initiatives together. Begin by investing in marketing tools that speak to business process and not just to product, that rise above technical sizzle and fluff to shout out business automation. Sweeten the pot with meaningful channel incentives that are tied to aggressive but realistic thresholds. Explore forming Navy-SEAL-like tactical vendor/partner teams that trust in each other enough to target larger opportunities together. Arm them to the hilt with value propositions that address true customer challenges, like how to evolve legacy equipment to extend capability and competitiveness.

As vendors who hold a vested interest in how our channels perform, we need to change the conversation from cool-factor whatnots and new-fangled widgets to demonstrating how these innovations improve the daily life of the business – making employees more productive, stretching ROI, and nudging the revenue needle. Let's resist the technocratic urge to fuss over cosmetic functions and barely needed beauty features and begin collaborating with our channels in offering customers substantive answers. Because there's nothing more beautiful in business than building a solution that yields returns. But that impetus begins with us, then spreads out to the channel.

The Biology of the Bottom Line

Vendors should consider launching bold new members-only partner programs that completely redefine the vendor/channel/customer dynamic. They should institute permission-based access to a variety of dealer-targeted tools, such as high-performance solutions training, enhanced customer-facing materials, third-party sales education, scaled incentives as well as opportunities for exclusives. These tools combined constitute a whole new approach to sales. And innovative partner relationship management programs such as these will greatly interest dealers, because when they begin to perceive their vendors as trusted advisors, together they'll all achieve greater results.

Joint planning, development, and execution in this model begins at the start of the sales cycle, initiating whole new conversations that gain and sustain better traction. From my perspective, partners should no longer approach

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customers with advanced communications technologies; they must replace such monolithic data-centric lingo with language the C-Suite understands, like agents booking more business; resources scheduled at the right time and for the right purpose; shorter service calls with swifter resolutions; and business intelligence and role-based autonomy for improving the customer experience. Channel partners must look beyond infrastructure and instead focus on the larger business ecosystem, where if one area is failing to perform, the holistic environment suffers.

When you frame your solutions into a business process context that executives can comprehend, directors tend to listen, close ratios rise, and deals get signed. But don't expect your channel partners to achieve this cultural shift on their own. Like the customer ecosystems you are charged to improve, you must live and breathe this change together, tuned into each other's strengths and needs, and working to succeed as one. **IT**

Rick McFarland is founder and CEO of Voice4net (www.voice4net.com), a provider of customer interaction management software.

As vendors who hold a vested interest in how our channels perform, we need to change the conversation from cool-factor whatnots and new-fangled widgets to demonstrating how these innovations improve the daily life of the business.

By Peter Radizeski

The Insurance Lesson

There is a lot of talk about insurance in this political season. Insurance companies decide who they will cover, like in home owners' insurance in Florida. In health insurance, the insurance company decided not only who they will cover but what they will cover. This maximizes profits for the insurance companies. Maybe this is a model that CLECs and ITSPs should look at.

In a small way, fiber companies and MSOs have a similar strategy, but it revolves around fiber build out and three-year payback models. If the customer can be profitable to the carrier in three years, then the company will construct a fiber route to his premises. If not, either pay for the construction or find someone else.

Being choosy and able to say no is significant. Right now, Cox wants a signed LOA before quoting out a prospect's site. Prospect doesn't like the LOA, so no quote from Cox. Prospect is flummoxed. There is a reason that companies have policies, and one of them is to be profitable.

Recently, I spoke with a hosted PBX company exec about the difference between a CLEC sales approach and the hosted PBX company approach. The CLEC was working on lower margin while grabbing market share. The two CLECs have access to the capital to win deals on lower margin. The hosted PBX company wanted to maintain margin, but didn't like losing deals. Either you chase market share or you chase profitability. In some ways it is a public versus private debate. Public companies don't have the same objectives or metrics that a

private company does. Public companies have more access to capital, but are slaves to the transparency and need to maintain a share price. This mindset is anathema to many private companies struggling for growth amid cash flow and capital issues.

I am a big proponent of selective selling for four reasons. It is more profitable to be selective. The take-away close – the idea that someone can't have your service – works in many cases. It is easier to create a value statement or USP for a target audience. It is also cheaper to market to a target audience as opposed to the general marketplace. Learn from the insurance industry – be picky about who you target and sell to. **IT**

Peter Radizeski is head of telecom consulting agency RAD-INFO Inc. (http://rad-info.net/).

TransLattice Joins Cloudera Program

Database and application platform company TransLattice has joined Cloudera's Connect Partner Program. The partner program is designed to grow the use of Apache Hadoop for a range of business applications. Technology vendors, value-added resellers and managed service providers offering Hadoop-based solutions and services are members of the program. TransLattice is able to help customers avoid some of the hurdles associated with deploying and managing Hadoop clusters. The TransLattice Elastic Database, a geographically distributed relational database management system, is designed to give organizations additional capabilities to handle big data. Many Hadoop-based solutions need to interact with relational data in a RDBMS for further processing, and TransLattice indicates that TED is well-suited for that role due to its scalable architecture, high availability and policy-based data.

DigitalRoute, SAP Partner

SAP and DigitalRoute have announced a global reseller agreement. Through the deal, SAP will offer DigitalRoute's MediationZone to its customers for support to key use cases for telecommunications, high-tech, banking, postal and logistics companies across the globe. The SAP Convergent Mediation application by DigitalRoute helps customer optimize data streams to shorten time to market and respond quickly to changes in network infrastructure or regulatory demands. "SAP Convergent Mediation allows our customers to address new business requirements

and drive profitable growth," says Jens Amail, senior vice president of services industries at SAP. "Working with DigitalRoute to provide out-of-the-box integration with SAP Convergent Charging for transaction rating and charging allows us to extend our support for the billing requirements of new telco 2.0 services and evolving customer demands."

Avaya Brings Scopia to Connect

Members of the Avaya Connect Channel Partner Program – a reseller program of approximately 10,000 companies worldwide – are now authorized to sell Radvision Scopia video solutions as part of their unified communication offerings. The company says this is an important milestone that gears up the Avaya Connect partner force for the next phase of collaboration – real-time video. Through the end of this year, Avaya Connect channel partners with existing video experience are being selected for fast-track authorization to sell Radvision Scopia solutions. To date, more than 50 Avaya Connect partners with significant experience delivering video communications have already been selected. The authorization program will be available to all Avaya Connect partners beginning in January 2013. Avaya acquired Radvision earlier this year, bringing Scopia video products and technologies into Avaya's portfolio of UC solutions. This combines Avaya and Radvision solutions, providing a simple way for partners to choose and deliver ad-hoc desktop and mobile video solutions that connect separate islands of video for improved business-to-business and business-to-consumer communications.

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By Paula Bernier

WebRTC: The Next Game Changer in Communications

Communications is poised to get a whole lot more interesting in the next few months as a new technology called WebRTC comes to bear. It's unlikely that most people will know what it is that is enabling this sea change in communications, but many important companies believe WebRTC will be transformative. That's because it will allow for real-time voice and video interactions from a web browser, and without requiring special client software.

"Imagine when communications become like the web," says Phil Edholm of PKE Consulting LLC and UCStrategies.com, who headed up last month's WebRTC Expo in San Francisco.

When that happens, things get particularly interesting for web entities like Amazon, eBay, Facebook and Google (one of the pioneers of WebRTC) that want to enable new communications options for existing online communications, he says. Edholm offers for consideration one possible scenario on this front: "So if you use Pinterest, for example, and tag something you like and there are five other Pinterest tags on that item, what can happen with WebRTC is it can allow the server to trigger real-time communications between those individuals. To do that in a server takes about 40 lines of Java script, which is really easy to write."

Of course, this is just one example, as the potential applications for WebRTC are limitless. WebRTC also could allow one person or organization to send a URL linking to an RTC server to another individual as a means to allow for real-time communications direct from one person or entity to another. There is also great opportunity for using WebRTC to enable communications in various business applications.

All of that probably sounds great if you're a web entity or an end user, but it might be a bit less appealing if you're a communications service provider. That's because WebRTC can take the middle man (read: telco or VoIP provider) out of real-time communications. Indeed, many of the sources INTERNET TELEPHONY interviewed for this story indicated that WebRTC could be a Skype killer.

"WebRTC is a technology that lets developers build real-time communication into web pages," writes Tsahi Levent-Levi, direct of business solutions at Amdocs and BlogGeek.me blogger, in a Sept. 10 posting. "While it's going to affect the telcos, it's actually the VoIP vendors who now face the real danger, because it brings down the VoIP players' protective subscription walls."

Yet, interestingly, Skype and its new owner, Microsoft, have been among the key participants in work around WebRTC. Matthew Kaufman, principal architect for Microsoft-Skype, tells INTERNET TELEPHONY that WebRTC provides yet another platform through which the company can deliver its services.

"Skype is available in mobile devices, tablets, desktop machines and every operating system," Kaufman says. "Cross-platform interoperability is very important to Skype as we want all of our customers to be able to access and use Skype across platforms. As our customers are in situations where they only have the browser to rely on for communications, we want to enable them to use Skype in that situation. WebRTC enables this real-time communications in the browser without a plug-in. Skype is currently available in the browser through Facebook video calling using a plug-in."

The WebRTC standard, on which work is still being done, consists of a combination of APIs and a protocol. The protocol part, an effort out of the Internet Engineering Task Force, comes into play to enable one person's web browser to communicate with the web browser of another individual. The APIs, which allow a server to tell the browser what to do – like send or receive an audio or video media stream, are the fruits of the W3C's labors.

"Microsoft is involved with the standardization of WebRTC," Kaufman explains. "On Aug. 6, Microsoft contributed the CU-RTC-Web proposal to the W3C WebRTC working group. This proposal adds a real-time, peer-to-peer transport layer that empowers web developers by having greater flexibility and transparency, putting developers directly in control over the experience they provide to their users. This proposal dispenses with the constraints imposed by unnecessary state machines and complex SDP and provides simple, transparent objects."

He adds that the proposal "elegantly builds on and integrates with the existing W3C getUserMedia API, making it possible for an application to connect a microphone or a camera in one browser to the speaker or screen of another browser. getUserMedia is an increasingly popular API that Microsoft has been prototyping and that is applicable to a broad set of applications with an HTML5 client, including video authoring and voice commands."

Joe Burton, CTO of Plantronics and a keynote speaker at last month's WebRTC Expo, tells INTERNET TELEPHONY that Microsoft and Skype have a different view on the API than do others involved in WebRTC.

In addition to Microsoft, companies that have been early participants in work around WebRTC include Cisco, Google, and
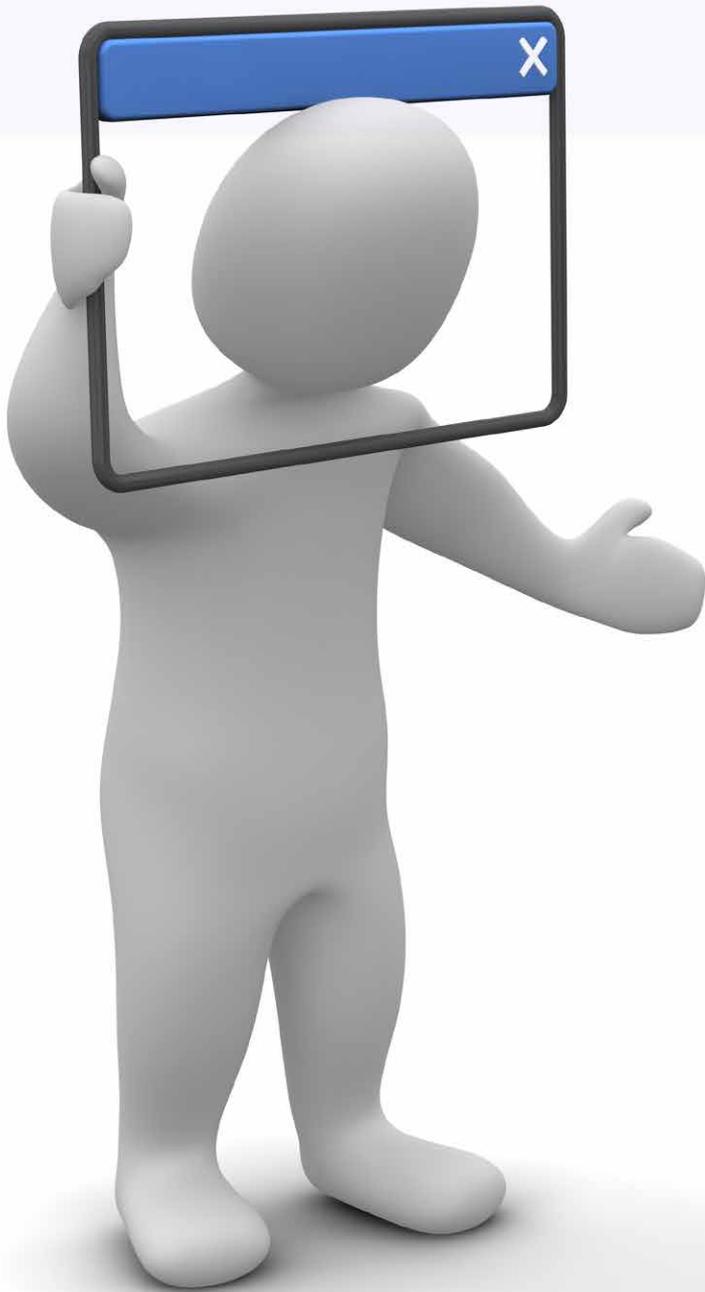
Mozilla, as well as smaller entities. Some traditional telcos are getting in on the act as well; Edholm says that German telco DT this fall did a WebRTC presentation at an event in Paris.

Google – which in 2010 bought Global IP Sound, or GIPS, and then outsourced the technology that it got via the deal – has implemented a key component of WebRTC in a beta version of Chrome that's out now. According to Google's Oct. 2 Chromium Blog: "Chrome now includes the PeerConnection API, which allows developers to create web apps with real-time audio and video calling without the need for a plug-in. Together, PeerConnection and thegetUserMedia API represent the next steps in WebRTC, a new standard which aims to allow high quality video, audio, and data communications on the web. "

WebRTC is expected to be included in Chrome and Mozilla Firefox browsers by the end of the first quarter of 2013. Ericsson is reportedly working on a WebRTC-enabled browser for iOS and Android-based mobile devices. And conventional wisdom is that other popular browsers will also include WebRTC in the not-too-distant future, likely by 2014.

"As we build basic voice and video capabilities into every web browser, it lowers the amount of investment required to create a communications application," says Burton of Plantronics, which sells audio devices like headsets and speaker phones, and some software applications, that can help enable the high-quality real-time communication experiences that WebRTC is expected to deliver.

He explains that will make it possible to build very specialized applications involving real-time communications. For example, he says, a bank or health care outfit (or a development company working for this type of organization) could easily create applications especially to serve its customers.

"[WebRTC] will trigger a whole next wave of communications innovation," he adds.

Sajeel Hussain, vice president of product management and marketing for WebRTC Expo sponsor Thrupoint, says his company over the last year has been developing a SIP-WebRTC gateway, RTP proxy, and WebRTC-based application mash ups of web-based applications.

"The SWIS extends WebRTC to SIP environments across UC vendors," Hussain explains. "The RTP proxy converts between WebRTC RTP streams and RTP flows of SIP entities. When coupled with our Thrupoint Service Broker (session management) technology, we are able to address a number of use cases around SIP and WebRTC interoperability."

Thrupoint has been working with customers, including several Fortune 100 firms (primarily in the financial services vertical), on a few uses cases involving WebRTC. One use case, for private banking, would give high-net-worth clients a unified UC experience on tablet devices with rich communication capabilities.

"Clients can see presence status of financial advisors and initiate IM chat, voice call, full screen H.264 video call or n-way conference," says Hussain. "File sharing, non-persistent data streaming and visual voicemail are also rendered through this single interface. Voice and video are provided by Thrupoint's SWIS and RTP proxy, and the tablet application leverages existing enterprise services for IM, presence, conferencing, etc. [This is] also relevant for [the] health care sector to do with physician-patient interactions."

Other use cases on which Thrupoint and clients have been focused include a virtual support portal, and using federation of WebRTC with existing video and contact center infrastructure to provide collaborative retail customer experiences involving video kiosks, mobile banking, and virtual tellers.

Given that worldwide spending on communications by IT departments top $2 trillion worldwide annually, according to Gartner, any technology that allows for an easier way to build such services is worthy of notice, says Burton. However, he adds, there's also great value in doing what Skype already has done – delivered a solution that works great, regardless of your type of Internet connection, and built a community around that.

Shubh Agarwal, vice president of marketing for OpenClove, a WebRTC proponent that is providing an open, cloud-based platform for anyone (consumer or enterprise service provider) to embed communication, offers this perspective: "Skype is a success story in transforming communications – the third or fourth generation (switching, digital, IP, OTT VoIP). But it is not capable of this next trend – of embedded or context-based communications.

"Proof point – the idea did exist when eBay bought Skype, but it failed, due the very nature of Skype as a closed communication system – making money the old-fashioned way – selling cheap long distance," says Agarwal. "Word on the street is that Microsoft is attempting to do the same – but it is anyone's guess if and when it will happen."

Alan Johnston, an Avaya distinguished engineer and SIP Forum director, says that prior to WebRTC, if you wanted to offer real-time communications you needed to license a signaling stack, license a media stack, and integrate those into various applications or plug-ins to run on various platforms. In addition, you needed technology to address security considerations like encryption and firewalls, adds Johnston, the author of a WebRTC book. Armed with its GIPS and SILK technology, Skype used to be the only one able to do that, Johnston explains. But now, he says, WebRTC provides all of that functionality for free and with the promise of cross-platform capability.

"WebRTC is really going to make changes in our industry," Johnston says, "and it's going to happen in Internet time instead of telephony time." **IT**

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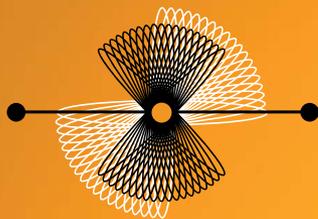
Sonus CEO Draws Parallels Between UC and Mobile

Unified communications is following a somewhat similar trajectory to mobile communications, Raymond P. Dolan, president and CEO at Sonus Networks, indicated during his keynote speech at the recent ITEXPO Austin event. That, of course, is somewhat encouraging, given that mobile has taken off like a rocket and is now a multibillion dollar industry, while many see UC as still sitting on the launch pad – or having taken off, but still feeling gravity's pull.

During his speech at the TMC event, Dolan – a former leader at mobile companies including Bell Atlantic/NYNEX Mobile, PacTel Cellular and QUALCOMM – laid out the 20-year journey of mobile data devices, discussing the evolution from pagers to the iPhone and other smartphone devices; mentioning it was once considered a bold prediction to suggest that there

would at some point be 10 million cellular users worldwide; and noting that not too many years ago the hottest topics in the mobile space had to do with which air interface protocol carriers should embrace, how they might work together, and whether a protocol called WAP was the key to supporting walled gardens for mobile Internet users.

Referencing the mobile industry's transition from figuring out how to address protocol-related issues to deciding how to allow for interoperability and simplicity, and just generally understanding industry barriers to widespread adoption, Dolan commented: "Does that sound familiar to us in the UC space? You bet."

Like those in the mobile space, he indicated, those in the UC arena need to understand what problems they are solving with their solutions, they need to drive simplicity, and they want to get to scale as soon and possible.

One key problem UC can help address, he added, is the ability to locate and connect with people to move forward workflow. Although we already live in a collaborative work environment, he said, studies indicate that 16 percent of work projects are delayed due to impeded access to decision makers.

"If we could track a package 20 years ago, why can't we track [a person] now?" asked Dolan, whose speech followed one by Robert B. Carter, executive vice president of information services, and CIO, at FedEx.

Session initiation protocol will be a catalyst to allow for flexibility, productivity, scale and simplicity around UC, Dolan added.

SIP was initially embraced by organizations as a way to significantly reduce their connectivity costs, he said, adding that SIP delivers ROI in six to nine months and savings of up to 70 percent as compared with TDM connectivity. But SIP-based UC infrastructure, he said, also has been shown to improve productivity more than 23 percent. And it is the session border controller, which can live within business or carrier networks, that is foundational to setting up, conducting and tearing down SIP sessions with security, interworking and QoS, he said. As people move to cloud-based UC, he said, SIP and SBCs will become the network layer to allow for scalability, flexibility, reliability and simplicity – including federation among different vendors' and business users' UC solutions.

"Federation of these UC environments is going to become essential," he said. **IT**

Siemens' Hummel Says Making Mobility the Default Could Help Drive UC Forward

By Paula Bernier

The term unified communications has become tainted in the past decade as the industry has grappled to address a rapidly changing communications environment and appeal to businesses with integrated solutions that are at the same time fun and productive to use, Chris Hummel, chief commercial officer with Siemens Enterprise Communications, noted during his ITEXPO Austin address in October.

"For whatever reason, it's really hard," said Hummel. "It's really hard."

But despite all the challenges of UC, he said, Siemens continues its work to crack that nut, and provide businesses with seamless and joyous integrated communications experiences.

The promise of UC today is to unify and harmonize communication channels, business processes, the mobile workforce, and the user experience, he said, to enable efficiency, savings, agility, mobility, productivity, collaboration, a great customer experience, and competitive advantage.

Part of the problem with getting UC off the ground, however, is that the different pieces of UC have been built as separate stovepipes, and that much of the money in the industry comes from selling all the separate stovepipes and then tying them all together into what are often incomplete offerings that have significant integration and interoperability challenges, he said.

Hummel went on to say that there are four compounding factors in the world that are creating unmet demand for UC. That includes the fact that work is mobile and distributed; consumer devices lead; joy of use is expected; and conversations are multi-modal and global. He added that, historically, everybody in the industry has been chasing the idea of ports – or, how many enterprise phone lines they can capture. But the Ethernet port has triumphed over the phone port, he said, so IT won the IT/telco war. That said, the success of companies like Siemens will not be about an individual connection; instead, it will be about delivering

"information-based value" that offers more context and supports the "anywhere worker."

"Where we are today is we are focused on unifying the platform, unifying the customer experience" among devices and OS platforms, he said.

"We have to provide mobility as the norm, not a mobility adjunct," he added, noting that Siemens is swapping out the chips in its desktop devices to be mobile chips. Making mobility the default, he said, will address the new work environment and allow for a user experience that is consistent across the desktop phone, the smartphone and the tablet.

Siemens also is focused on allowing people and businesses to use tools any way they want and to embed those tools in existing work processes, activities and applications, said Hummel.

"Watch this space, because I feel like this is where the industry has to go," he concluded.

What We Did at StartUpCamp6 this Fall

Among the most popular events at TMC's ITEXPO is StartUpCamp, which is hosted by Embrase Business Consulting. StartupCamp is promoted as an evening to celebrate entrepreneurship in telecom and an opportunity to learn, network and have fun. And StartUpCamp at TMC's most recent ITEXPO in Austin, Texas, once again delivered on that promise.

StartUpCamp, now in its sixth iteration, begins with a featured guest, in this case BroadSoft co-founder and CEO Michael. That is followed by brief presentations by a handful of entrepreneurs who explain why their startups are worthy of funding and deserve the StartUpCamp audience's vote at the end of the evening.

October's stable of startups included RingDNA, which was deemed the best of the group by the audience and on-stage judges; Phonism; Vsnap; and Zello.

Howard Brown, CEO and founder, spoke on behalf of RingDNA. As reported by TMCnet web editor Rich Steeves, this is a company that says it powers intelligent conversation.

During his ITEXPO Austin presentation, Brown said web marketing is a $40 billion business, and added that sales reps spend 24 percent of their time generating leads. He also mentioned that support agents toggle through many different systems over the course of one call. At the same time, customers just want good customer service from the right agent.

Using the Twilio API, RingDNA can build call tracking information into CRM systems, such as Salesforce.com. The RingDNA platform, when built into CRM technology, gives the customer the correct phone number for the right rep, when customers are searching on a company website. When a customer or potential customer calls, the data for that customer is presented to an agent on a mobile device or browser. The formerly siloed data is brought together at the time of the call, which is also available at the time of an outbound call.

The company received over one million dollars of angel investment and rolled out its Apple app this year. More than100 companies use RingDNA, according to the company, which says that many of them are quite large and all are Salesforce customers. The RingDNA development team has a great deal of experience in the field, and Brown hopes to expand the busi-ness in the near future. The company plans to generate revenue through a premium model.

Steve Lazaridis presented for Phonism, a company that delivers a solution to address what he identified as the pain point of IP phone provisioning and management. The idea for the solution came from Steve's brother, who recognized this personal need as a potential market opportunity.

Phonism consists of two components, the Cloud Service and the Agent. The Cloud Service was designed for multi-tenant deployments. The Agent is an embeddable application that sits in the service provider's network to give it access to SIP endpoints via a web interface. Not only does this enable easier configuration of the multitude of different VoIP phones on the market, said Lazaridis, but if one of the endpoints goes down, it enables the service provider to see that information before the customer calls.

There are more than 1,000 service providers in the U.S. alone, and many of them are small and based on open source, said Lazaridis, adding this is the target group for Phonism.

The company was in private beta with customers earlier this year. The next beta will be released later this year.

Dave McLaughlin, CEO of video messaging business Vsnap, pitched his company's business model to the StartUpCamp panel and audience, and said that businesses are lacking more meaningful ways to connect with customers, according to a TMCnet story by Erin Harrison, executive editor of TMC's Cloud Computing magazine. Since e-mail and text are usually impersonal, Vsnap has developed a way for businesses to send short video messages as a more personal alternative to email or text.

According to McLaughlin, customers are 33 to 41 percent more likely to take action when you reach them via Vsnap compared to e-mail or text.

The central theme of McLaughlin's pitch was personalization. He said a Vsnap feels more personal and more special than a text communication, and captures tone and emotion and enthusiasm and authenticity (and lots of other non-verbal communications) in a way that actually translates – which text and e-mail can't do.

"We think that businesses are trapped in text. In all those little interactions in the sales process and post purchase,

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businesses seem to be stuck in e-mail," McLaughlin said. "Text doesn't capture emotion and how we build trust and form feelings and shape our buying decisions. If you are not creating an emotional connection with the customer, you will experience churn."

A Vsnap video is 60 seconds long and there's nothing to download so businesses just need an Internet connection and a camera on their computer, smartphone or tablet.

"We give you an easy little system to record share and measure video messages as a more personal; more rich alternative to e-mail or text," McLaughlin said.

Bill Moore, CEO of Zello, described his company's solution as being "like a CB radio for your phone," reported TMCnet contributor Robbie Pleasant. The "social radio" app Zello essentially turns the phone into a walkie-talkie, with hundreds of thousands of live channels based on various topics. This presentation was particularly colorful, as during the demonstration of the solution, someone called out a profanity from over the social radio airwaves.

Zello is different to Skype or WhatsApp in that while they are private communication tools, Zello is made for public communication, Moore explained. It's similar to social media, but uses the power of the human voice rather than text; while it's focused on live communication, it is possible to record or re-listen to messages. However, it is for the most part made for live conversations.

With 6 million active members, it already has a significant audience, particularly among the young. Forty-eight percent of those who try it remain active after 30 days, so it's not a "use it once and get over it" thing, said Moore, who added that the company seeks investments and people to work on programming and design.

For those hoping to make a profit from their investment, it may prove tricky in the near term, as there are no plans for monetizing it yet. The plan is to add advertisements later in the game. There is also an idea being batted around that companies such as cab dispatchers could purchase a channel so that customers can reach them instantly. **IT**

Erin Harrison, Robbie Pleasant and Rich Steeves contributed to this story.

Phone.com to Use VoodooVox Analytics Platform to Help Small Businesses Drive Sales

It is no secret that one of the attractions of cloud-based telephony for small to medium-sized businesses, particularly the exploding small office/home office sector – a.k.a. micro businesses/entrepreneurs – is the ability to use features and functionality that larger enterprises enjoy without the need to support an IT staff. This is particularly true for entities desirous of having sophisticated customer interaction analytics, but that have been hesitant to invest in them for a variety of cost-related reasons.

Indeed, the cloud offers small business people, through subscription-based pay-as-you-go and pay-as-you-grow capabilities, unprecedented and cost-effective ways to appear like the big guys, as well as the tools to mine the data generated for competitive advantage.

That is precisely why it is noteworthy that Livingstone, N.J.-based Phone.com has entered into an agreement to make the VoodooVox Analytics platform available to its customers – to help advertisers and marketers better target their audiences while safeguarding consumers' personal information.

Actionable insights

The Internet age has allowed anyone, regardless of size, to present their business globally with the look and feel of a large organization. What Phone.com is offering through its agreement with VoodooVox is access to improved business intelligence about calling volumes, which can be quickly translated into actionable insights.

Phone.com CEO and co-founder Ari Rabban draws a good analogy in noting that, "This service will allow our customers to glean new insight from their call volume the same way that Google Analytics provides valuable insight into web visitors."

The deliverable is consequential.

In addition to multiple activity reports on call traffic, all of Phone.com's customers can access VoodooVox's demographic database on 250 million phone numbers. And insights can be gained without disrupting a company's trust with existing or potential customers.

As Rabban emphasizes, "By combining a few national databases, such as U.S. census data, and applying statistical methods, we can relatively accurately derive conclusions about the aggregate of a region's callers without the need to collect, store or know any specific personal information."

What it means for small businesses is better knowledge about what is working and what is not, and the ability to make smarter decisions about where, how and with whom (based on enhanced profiles) to target with precious marketing resources.

Mike Durance, CEO at VoodooVox, echoes the value being offered through the agreement: "Phone.com is a leader in SOHO telephony, and we are pleased to bring the power of VoodooVox Analytics to this new customer base. Phone calls are more than just talk, and VoodooVox Analytics enables businesses of all sizes to learn more about their customers without compromising consumer privacy."

A few pictures demonstrate the value of the analytics.

The first shows the dashboard that enables users to understand how their callers are reaching them, e.g., via landline or cell phone and includes the name of the cellular provider.

The second is a nice way for campaign managers to connect callers to their social media (Facebook, Twitter, etc.) and provides the ability to break down the information between new and returning callers to a company's virtual office number.

> What Phone.com is offering through its agreement with VoodooVox is access to improved business intelligence about calling volumes, which can be quickly translated into actionable insights.

Additional insights include:
Overview: A Virtual Office wide snapshot of caller data with new and returning call break downs.
Demographics: Caller data is analyzed by caller demographics in a variety of ways, including census population data.
Activity: Breaks calls down by inbound or outbound call, duration, length of time on hold as well as the time of the call.

Getting Simple and SaaSy

VoodooVox's Analytics is a SaaS solution priced on a per seat basis. The service will be deployed to the entire Phone.com customer base, and will be available in two plans accessible from Phone.com's current management platform. A basic plan with access to a variety of analytics will be roughly $2 per month, while a richer set of capabilities will be available for just under $5 per month using an opt-in model that will include several months of free trial service.

Rabban notes, "We wanted to make this simple as well as affordable and give people the chance to take us out for a test drive to understand the value." He has a point. For less than the cost of a good meal including an alcoholic beverage for two at a decent restaurant, customers can have tools
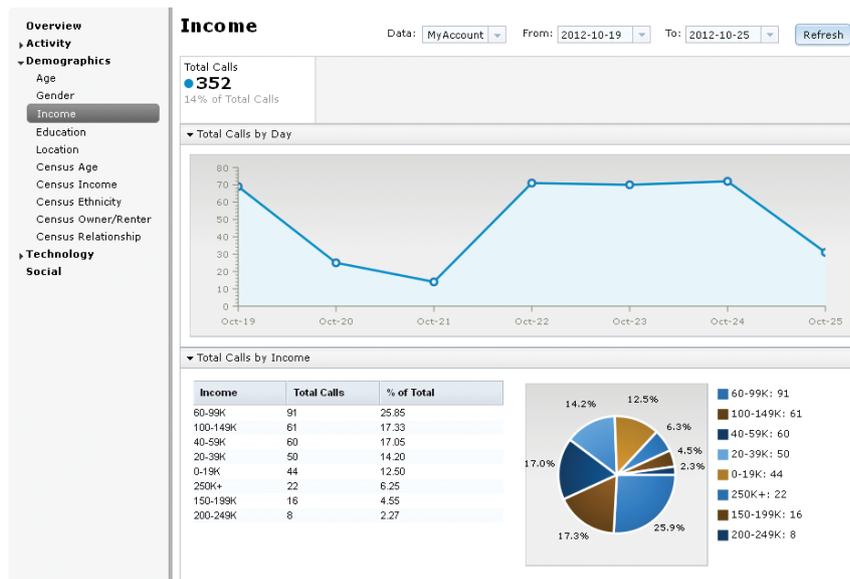
that literally could pay for themselves with one or two new sales.

Phone.com is no stranger to offering economical innovations to small businesses. The list includes: First to market: Voicemail Transcription, Voice Synthesis, Physical IP Phones, HD Voice, iNum & Global Numbers, Mobile Office Apps, Channel Partner Program, Virtual SMS / chat, Group chat (patent pending), APIs.

As Rabban notes, "The cloud and broadband are making all of this possible, and

giving small business the right tools for sales and marketing to make effective decisions.

As noted at the top, even the smallest business entities, those with fewer than 10 employees, have an incentive to want to have better business intelligence in order to compete. They need to have it quickly and at a level of granularity that enables them to spend scarce marketing dollars more efficiently and effectively. Such tools have been out of the reach. Phone.com in collaboration with VoodooVox, by making this a cloud-based service, is giving SMBs the ability to play like the big guys in a very large sandbox.

Rabban believes there is a lot of education that is still needed for small businesses to get their hands around the power of improved business intelligence. Leveraging one of the great domain names, which creates a great online presence for a company whose sales channel is primarily the web, is not a bad way to get people educated on capabilities that can help them succeed. **IT**

Peter Bernstein is a senior editor at Technology Marketing Corp. (www.tmcnet. com), the parent company of INTERNET TELEPHONY magazine.

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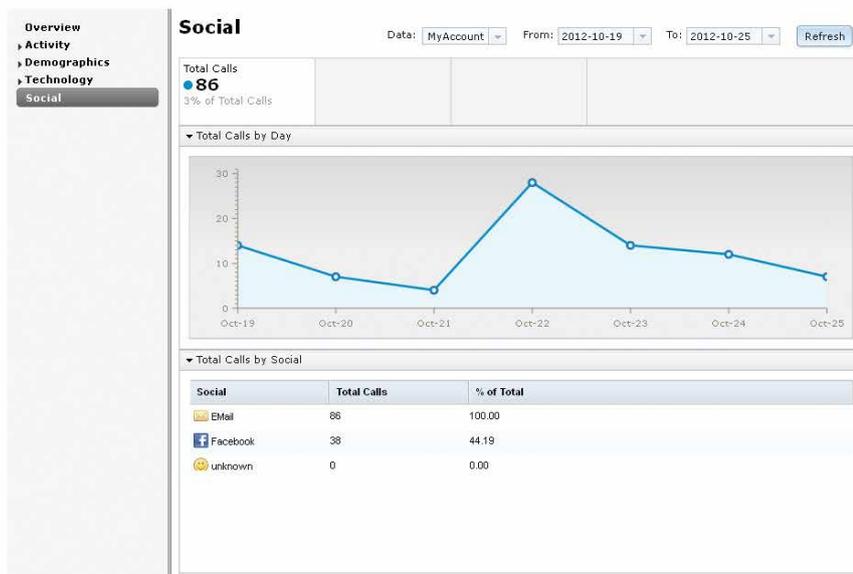
VDSL2 Vectoring
The Next Thing in Copper Access

Just when you think the telcos have squeezed all the bandwidth they can out of existing copper, along comes the next big thing in DSL to push the capacity of twisted pair to the next level. Such is the case with a relatively new technology known as VDSL2 vectoring.

One of the biggest impediments to good VDSL performance is noise from other VDSL lines, explains ADTRAN product manager Ryan McCowan. Vectoring addresses that by coordinating all VDSL pairs in the cable in an effort to cancel noise. As a result, data rates can be improved by up to 50 percent. And that, of course, enables operators to get more value out of the copper they already have installed and depreciated.

That may seem unimportant in light of all the focus on fiber access these days, but copper remains an important and prominent part of our communications infrastructure – and DSL enables broadband access for 42 percent of the nation's broadband lines. (Cable modems account for 50 percent of broadband lines in the U.S.; fiber 8 percent.)

VDSL2 vectoring promises to deliver 100mbps and more downstream, and 40mbps upstream. (Without vectoring, VDSL2 can deliver 100mbps speeds, but not at any practical distance, says McCowan.)

In a recent blog headlined "VDSL2 Vectoring Delivers on Its Promise," Dr. Stefaan Vanhastel, marketing director for wireline fixed access at Alcatel-Lucent, and Jan Verlinden, senior DSL expert for the fixed access domain competence center at Alcatel-Lucent, reveal the results of VDSL2 vectoring in communication service provider trials.

"Seventeen very high speed digital subscriber line 2 vectoring trials, conducted by Alcatel-Lucent with various CSPs around the world, have demonstrated that 100mbps is achievable over copper at 400 m – and even up to 500 m," Vanhastel and Verlinden write. "These trials focused mostly on 300 m to 600 m loop lengths, reflecting the typical fiber-to-the-node topologies that CSPs are considering for vectoring."

They add that while early trials, beginning in July 2010, were capped at 100mbps, trials conducted in April 2012 achieved rates of as high as 130mbps.

And, by adding copper bonding into the mix, service providers can realize even higher data rates. For example, one CSP
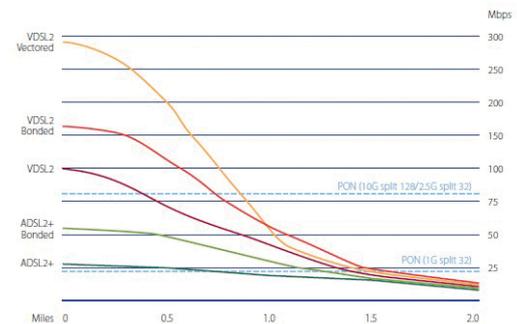
(using normal UPBO settings) worked with Alcatel-Lucent to get "an astonishing 200mbps downstream and 50mbps upstream at 400 m."

Heidi Adams, director of product marketing at Alcatel-Lucent's networks business unit, tells INTERNET TELEPHONY that DSL to date has not been widely used for wireless backhaul given it's been seen as too slow to do the job. But, she adds, new advances like pair bonding and vectoring that now enable 100-250mbps rates over legacy connections are making copper a good candidate for small cell backhaul.

So why is VDSL2 vectoring garnering attention now, and when can we expect more widespread use of this promising technology?

The techniques involved in vectoring are very computationally involved and only recently have chip vendors figured out a way to implement them in a way that's practical and affordable, says McCowan.

ADTRAN in mid October announced the addition of system-level vectoring to its broadband portfolio. Alcatel-Lucent also offers products featuring VDSL2 vectoring. Calix had its E7-2 and E3-48 products, both of which are vectoring-capable, in trials as of late October. Zhone Technologies expects to come out with its first onboard vectoring gear in the first quarter of 2013, Brian Caskey, chief marketing offer at broadband access gear supplier, tells INTERNET TELEPHONY. And ZyXEL has two VDSL2 gateways with vectoring features that are currently shipping; they are the VSG1435 and VSG1432.

Expect service provider trials of VDSL2 vectoring to continue this year and into next year. By 2013, McCowan indicates, we should see small deployments of this technology, with wider deployments expected in 2014. **IT**

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Cisco Now Leads E-SBC Market

Acme Packet is no longer the leader in the enterprise-session border controller space, according to a new study from Infonetics Research. The firm indicates Cisco Systems is now ranked No. 1 in terms of revenues from E-SBC sales. "For the first time ever, Cisco captured the lead in the enterprise session border controller market, taking 26 percent revenue market share in the first half of 2012," notes Diane Myers, principal analyst for VoIP, UC, and IMS at Infonetics Research. "Cisco's been able to turn its market-leading position in IP PBXs, VoIP gateways, and data networking equipment into an advantage, upselling its enterprise SBCs to this customer base as they transition to services such as SIP trunking." Worldwide revenue for E-SBCs, an area in which Cisco and Acme Packet are the leaders, was $82.5 million in the first half of 2012, according to Infonetics.

Infonetics Reveals Optical Vendor Rankings

Alcatel-Lucent has been identified as the top optical vendor by carriers in a new Infonetics Research survey. ALU got this distinction because it received the best overall marks from service providers, particularly for its technology, management, product reliability, and service and support, according to Infonetics. Ciena is a close second in this category. Meanwhile, Huawei, which was in third place last year, is now the No. 1 vendor being evaluated for future optical purchases, Infonetics reveals. Smaller player Infinera also ranks high.

Wireline Loses Out to Wireless

The transition to next-generation fixed access technologies like 10G EPON, XGPON1, and variants of WDM-PON will take longer than many in the industry had hoped. That's the word from Jeff Heynen of Infonetics Research, which just came out with a new study on broadband access technologies. Heynen says that "while the fundamental drivers are there, they aren't pressing enough to force a wholesale shift in deployment timelines, and they don't outweigh the higher costs of next generation equipment." As a result, he says, most of the operators Infonetics spoke to for the study are waiting for pricing of next-generation gear to be on par with the cost of current generation technology before they plow big bucks into newer solutions. "It's become a challenge for operators to know how much to eventually invest in fixed broadband networks and services," notes Heynen, directing analyst for broadband access and pay TV at Infonetics Research. "On one hand, fixed broadband is among the most profitable services a provider can offer. On the other hand, the investment required to roll out or upgrade mobile networks is eating into their available capital."

Actelis Leader Resigns

Vivek Ragavan this fall resigned as president and CEO at Actelis. The broadband gear provider's board of directors appointed co-founder and former CEO Tuvia Barlev as executive chairman. He will run the company until a replacement for Ragavan is found. Ragavan joined Actelis in 2010. Prior to joining Actelis, Ragavan had been CEO at Atrica Inc., Redback Networks (a position from which he resigned after less than a year) and Siara Systems. He's also been president of the residential broadband group at ADC Telecommunications, and vice president of engineering at General Instrument. Actelis is known as a leader in the Ethernet over bonded copper equipment space. Infonetics earlier this year named Actelis the No. 1 Ethernet over bonded-copper product provider globally and said that the worldwide Ethernet access device market grew 17 percent in 2011, and is forecast to grow 81 percent between 2012 and 2016.

Zhone Expands VDSL2 Portfolio

Zhone Technologies Inc. this fall introduced a new line of multi-port VDSL2 bonded and 30A profile modems. "Connected devices are permeating our lives – most recently in the workplace – and service provider networks are feeling the strain," says Brian Caskey, chief marketing officer of Zhone. "In order to keep up with bandwidth demands and maintain productivity in the workplace, service providers and enterprise customers are turning to VDSL2 and fiber technology for speed, reliability and efficiency. In fact, companies can see cost savings of up to 92 percent annually with our FiberLAN solutions." FiberLAN is a GPON-based OLS delivering high speed data, voice and video. As for the new line of multi-port VDSL2 Bonded and 30A Profile Modems, those can be used in FTTN, FTTB and FTTC deployments.

Overture Tapped by Spanish Internet Provider

SARENET has selected Overture Network's 4000 and 400 platforms to power its Ethernet-over-copper-based 20mbps services (with capabilities up to 60mbps). The Overture 400 demarcation device enables business broadband services to the last-mile. The 4000 is a pay-as-you-grow aggregation platform that delivers centralized management and switching for up to 120 of the Overture 400s.

Overcoming the Challenges of Fiber Deployment in Multi-Dwelling Units

The worldwide market for fiber-to-the-premises is estimated at more than 600 million living units. Given population density and economies of scale, the MDU category of housing has long been identified as an important growth opportunity for communication service providers. So, much attention has been given to this market by service providers and their suppliers in recent years.

Yet, a large portion of subscribers who reside in brownfield MDUs remain unconnected. Service providers face numerous challenges when designing and installing fiber networks within MDUs. Increased engineering, long installation times, and higher costs associated with fiber deployment have hindered the ability of service providers to fully realize the financial promise of the MDU category. No two MDUs are alike, and no single solution fits all. These basic truths can immediately create physical and financial impediments for service providers.

Engineering challenges arise when attempting to retro-fit existing structures for fiber, and these can slow the installation process and add to its cost. But new – and decidedly smaller and more flexible – products are enabling service providers to meet pent up customer demand to deliver access to bandwidth-hungry multimedia services. The evolution of key network components has led to game-changing solutions that make FTTP deployment in brownfield MDUs fast, easy, and low cost.

Drop Cable Evolution
In MDUs, installing standard fiber cable within the acceptable bend radius limitations often proves difficult. The architecture of such buildings requires cable placement to accommodate more, tighter bends than other housing categories. Standard single-mode fiber, due to its 30 mm minimum bend radius limitation, cannot be installed flush to the wall or baseboard or tightly around corners, and that produces unsightly gaps that are usually not acceptable to aesthetics-conscious building owners and residents.

In 2002, the first bend-insensitive fiber cable was launched in the U.S. It was capable of a 10 mm bend radius without affecting signal performance. Since then, manufacturers have improved upon first-generation bend insensitive fiber, developing fiber with an allowable bend radius of 7.5 mm and even as little as 5 mm, which can easily achieve a tight, 90 degree bend. The 5 mm ultra bend-insensitive fiber drop cable is rugged and easily stapled to walls, facilitating quick apartment installations. But there are problems. The stapling of cables is impractical in settings where plaster or concrete walls exist.

And even though the cables can maintain an even tighter bend radius than their bend-sensitive brethren, UBIF cable drops are more bulky and difficult to conceal.

Cable Pathway Alternatives
Unlike new construction where cables are hidden behind walls at the time of construction, older buildings require cable pathway creation techniques that are aesthetically pleasing to owners and tenants. Durable, long lasting installations and high quality service are paramount. From a service provider perspective, these cable pathways must also be cost effective.

Rigid crown moldings are offset about one to two inches from the ceiling, which allows jacketed drop cables to be tucked behind the molding and concealed from view. But this method is one of the most costly and disruptive to install.

Two-piece plastic square latch moldings consist of a base and a cover, which are somewhat lower cost. But this method requires significant custom fitting during installation because the molding is sold in standard lengths. Removal and replacement of the covers is required to place cables inside the molding, which adds to labor costs and deployment time.

Micro ducts placed behind walls and above ceilings is also a common two-step deployment method that almost completely conceals communication cables. The ducts first must be installed, and cables are later fished or routed through them. Often, this deployment method requires core drilling, a process of boring holes through one or multiple floors of a building that is expensive and time consuming. Core drilling through stacked closets in multiple apartments on multiple floors requires inconveniencing tenants, who must be at home so contractors can access the apartments during the installation process.

Stapling cables to the wall is one of the most frequently used horizontal cabling solutions. Particularly in apartments with more complex layouts consisting of a greater number of bends and turns, ultra bend-insensitive cables that are capable of maintaining a bend radius as small as 5 mm (ITU G.657.B3) are often simply stapled to walls. From a visual perspective, most high-end building owners and tenants are unlikely to accept such a solution because it is noisy and can be dusty during installation. The end result gives a very industrial look.

The Fiber Pathway Option
A new solution has been developed to respond to several of the deficiencies of traditional FTTP deployment methods: the fiber pathway. This solution simplifies the process of drop cable routing through MDU hallways and interior spaces.

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The fiber pathway is a contiguous, flexible, adhesive-backed, surface-mount indoor drop cable and cable pathway system that can be bonded to almost any wall surface, including concrete. Because the fibers are factory installed, the solution is installed simultaneously in just one pass around the perimeter of an MDU hallway or interior living unit. By eliminating the two-step process of building a cable pathway and pulling cable, service providers save up to 35 percent per floor when compared with traditional raceway or crown molding methods. The pathway is also paintable, blending easily into existing décor.

Two-person crews easily install the system using a handheld, pole-mounted tool that removes the liner from the adhesive backing on the duct and places the pathway and fibers, all in one quick and easy motion. Because adhesive is used to mount the pathway to the wall, installation is less disruptive than traditional methods. No stapling, hammering, sawing, or carpentry work is needed.

The pathway solution uses bend-insensitive 900 μm fiber as the medium to distribute fiber optic services, making the pathway smaller than traditional optical cable pathway solutions designed to contain multiple 2, 3, and 5 mm jacketed cables. This makes the system more discreet and less noticeable to tenants and homeowners.

The Big Push
The multi-fiber push-on connector was invented and introduced in the early 1990s to provide highly reliable connections in high density fiber applications, primarily in interoffice data network environments.

Today's MT ferrules deliver much lower insertion loss capability with the advent of single-mode, premium performance ferrule technology, with typical attenuation values of <0.15 dB, and 0.35 dB Max/channel. Features vary by manufacturer, but many of today's premium MT/MPO connectors offer improved mating durability via housing redesign, improved strain relief, and novel guide pin chamfer/radius designs that prevent guide hole damage in the opposing MPO connector. SM MPO connectors now are factory terminated with proprietary polishing processes that ensure precise fiber geometry and premium contact throughout the service temperature range.

With improvements made by suppliers to increase MPO performance, many service providers around the globe are re-discovering the MPO connector, and are finding huge benefits to its use as an enabler in a cost-effective connectorization strategy in the MDU category of residential housing.

Cables with factory-terminated MPO connectors provide top quality terminations and quick network installation at reduced labor costs. MPO connectors eliminate discrete fiber terminations so multiple customers can be turned on to services in a single step. They also allow for more connections in a smaller footprint, important in locations like stairwells and riser closets where space is at a premium.

When used with fiber pathways, an MPO terminated product can reduce equipment costs by eliminating the need for fiber distribution terminals on every floor. That speeds deployment time and reduces associated splicing, labor and material costs.

As service providers increased their emphasis on passing MDUs with fiber optic services, suppliers responded with the evolution of key network components. This evolution has, in turn, influenced a progression of advancements in FTTH and FTTH deployment methods, especially those specifically addressing fiber deployment in brownfield MDUs. The trend toward smaller, flexible components that are aesthetically pleasing to homeowners bring big benefits to service providers and a game changing strategy for future growth. **IT**

Linnea M. Wilkes is global MDU business development manager at 3M Communication Markets Division (www.mmm.com).

Upcoming TMCnet Webinar Schedule

Wed., December 05, 2012 12:00 PM ET 9:00 AM PT

What to Consider When Selecting a Cloud-based Contact Center Software Provider

Sponsored by:

http://www.tmcnet.com/webinar/five9/
selecting_cloud_contact_center_five9.htm

Thurs., December 06, 2012 2:00 PM ET 11:00 AM PT

How to Integrate Lync-based UC into Your Business

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grate-lync-uc.htm

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Network Infrastructure

M&A Continues in Network Performance Space

The network performance space has seen a fair amount of M&A action recently, with NetScout Systems Inc. being the latest to make a move on this front.

NetScout in late October announced it had purchased ONPATH Technologies. The value of the deal, which was completed Oct. 1, was not disclosed.

According to a press release issued by the company: "NetScout will leverage ONPATH'S advanced technology to accelerate the development of an extensible, modular, chassis-based switching product portfolio to support high-density 10, 40 and 100 Gigabit Ethernet connectivity. In addition, NetScout will integrate this technology into its packet flow switch solution to deliver a switch portfolio that will be easier to integrate and simpler to manage, enabling organizations to address deployment requirements to improve the efficiency, control and distribution of network traffic flows and reduce the overall total cost of ownership for network-based monitoring deployments."

The company expects to deliver integrated products by the end of this year or early next year.

Twenty-eight-year-old NetScout sells packet-flow solutions that help companies monitor and ensure the quality of networks and applications. Its offerings include nGenius and Sniffer, which are used by more than 20,000 of the world's largest enterprises, government agencies, and more than 148 service providers.

Through the deal, NetScout got ON-PATH's test automation business, which had sold large switching/ layer 1 connectivity to leading network equipment manufacturers, and ONPATH's network monitoring switch business. ON-PATH also has an extremely large scale solution to manage all of these switches, Steve Shalita, vice president of marketing for NetScout, told INTERNET TELEPHONY. Hundreds of thousands of ports can be managed in a single environment using the ONPATH technology, he said, adding "We see that also as being very synergistic."

While the NetScout and ONPATH switching solutions address some of the same requirements, Shalita explained that the deal fills what had been a gap in NetScout's product line.

NetScout's product portfolio to date had included a fixed box that was not field changeable, meaning it had a lifecycle in the two- to three-year range, he said. The ONPATH product on this front, meanwhile, is built based on a modular chassis architecture, which means new capacity and technologies can be added in the field as needed with the insertion of new blades. That, Shalita said, lengthens the product life-cycle to five to seven years and provides customers with a great deal more flexibility.

NetScout is tripling its investment in the network switch monitoring space, Shalita added.

This product category, which Gartner refers to as the packet broker market, addresses performance management, monitoring, security, and, basically, how to get packet-flow information to a wide range of solutions in the network.

That arena has seen a lot of interest and acquisitions recently. Ixia in May announced the acquisition of Anue Systems. In June VSS Monitoring was acquired by Danaher Corp., having joined Danaher as a standalone business within the Communications Group. Around that same time, Gigamon was preparing for an IPO.

> **NetScout is tripling its investment in the network switch monitoring space.**

The ONPATH acquisition comes a year after NetScout revealed it had acquired Simena LLC. Simena had been known for its low-latency IP packet flow-based network monitoring switching technology. That enables enterprises and services providers to manage and analyze network traffic for data, voice, video, and cybersecurity deployments.

This earlier deal allowed NetScout to help its customers simplify, consolidate and improve scale for their network monitoring architectures, Shalita told INTERNET TELEPHONY at the time. "These companies can now look to a single vendor to provide them a complete monitoring solution from the physical network link aggregation, to the highly scalable and comprehensive visualization and reporting for managing application and network performance and the user experience for business services and unified communications environments." IT

Apple Purchases Particle

Apple recently bought a San Francisco-based creative consulting company that specializes in web applications and marketing projects using HTML5, and in which performer Justin Timberlake was an early investor. The purchase price was not disclosed. The acquired is named Particle, and the company has worked in the past with Apple as well as with Disney, Ericsson, Google, Motorola, Sony, and others. Particle launched a short social video service called Robo.to and has created Intervue.me, an asynchronous video interviewing project. Several of Particle's existing employees previously worked with Yahoo as part of its user experience design group. HTML5 may be the key to this deal, given Apple is using HTML5 increasingly on its product pages, iAd advertising, and on iCloud.com, according to a TMCnet story.

PlayStation Store Gets HTML5 Revamp

Recently, Sony revealed that it's got a major overhaul in the works for the PlayStation Store, featuring the newest in mobile gaming, according to TMCnet. The redesign is based on HTML5 technology was set to launch in Europe Oct. 17 and in the U.S. on Oct. 23. The revamped PlayStation Store features new search ca-

pability, which allows users to find the content they're after with just a few letters, according to the TMCnet piece. Visitors also can sort by price, user ratings, online features and more. Some reports indicate the while the use of HTML5 won't immediately translate in much in the way of new stuff for end users, it will allow Sony to more quickly deliver new features and capabilities.

AppDirect Acquires jBilling

Cloud service marketplace company AppDirect has acquired jBilling, which offers open source billing solutions. The value of the deal was not disclosed. Founded in 2002, Ottawa-based jBilling offers the most downloaded open source billing solution, with more than 120,000 downloads in more 150 countries. "Billing and payments are central not only to the AppDirect platform, but to the online distribution of software and services as a whole," says Daniel Saks, president and co-CEO of AppDirect. "We see a lot of opportunity to change the way cloud service distribution works, and with jBilling's flexible, open source platform, we've found the ideal solution to do just that. The technology makes billing better for providers, developers, and customers alike."

By Paula Bernier

A New Aspect

Aspect is a global provider of customer contact and workforce optimization solutions, and many of its customers have been with the company for decades. Over time, the company has grown a fair amount and also has moved from a hardware-focused to a software-centric posture. And now, under new management, Aspect plans to make more investments, and significantly increase its research and development spending, in an effort to accelerate its next-generation product releases and innovation.

That's the word from Aspect Software's new CEO, Stewart Bloom.

"There's a new Aspect that's in the market," Bloom told INTERNET TELEPHONY in a late September interview. "It's Aspect 2.0 that's very forward leading, and it is accelerating the business."

New Leadership
Bloom in the past has served as CEO for GERS Retail Systems; a vice president at Capgemini; a senior vice president for strategy consultancy at Mainspring, which is now part of IBM; and a partner with Ernst & Young Management Consulting. Just before joining Aspect, Bloom ran former Aspect sister company Escalate Retail, which provides multichannel software for retail and direct sales. Escalate was bought by RedPrairie Corp. in February 2011. Aspect, meanwhile, remains part of the Golden Gate Capital portfolio.

In addition to Bloom, Aspect in the past few months has hired on several new executives. That includes Jim Freeze, Aspect's new chief marketing officer; Chris Koziol, president and general manager of the interaction management division; Bob Krakaur, chief financial officer; Spence Mallder, senior vice president, general manager of the workforce optimization division, and chief technology officer; and Mihir Shah, vice president of corporate development.

Aspect announced the addition of Freeze, Koziol, Mallder and Shah in September. Freeze is both senior vice president and CMO at Aspect, which says this is a newly-created role. He previously served as CMO and vice president of corporate development at Crossbeam Systems. Freeze has also headed up marketing initiatives at 3Com, CompuServe and Genuity. As for Shah, he previously was responsible for mergers and acquisitions, and business development for IBM's information management software division. Koziol has been chief operating officer

for enterprise business software provider JDA Software, and was president and COO at systems integrator and distributor MicroAge. Mallder was previously CTO for an Internet startup in social commerce and online gifting. Like Bloom, he also worked at Escalate Retail, where he was the senior vice president of product development.

And Krakauer has been around since late July. He came to Aspect from Permira Capital, where he had been interim CFO at Alcatel-Lucent spinoff Genesys.

Product Focus
Aspect is consolidating some of its product development teams to focus more on interaction management and workforce optimization, as well as another effort that remains under wraps.

As workforce optimization moves into a closer integration with interaction management and unified communications, Aspect lead-

Aspect CEO Stewart Bloom

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ership explained, greater organizational alignment was needed with the product teams to provide solutions that uniquely address this trend. Koziol and Mallder will be pivotal in that effort, said Bloom, noting Koziol's experience operating a large call center, with core interaction management, and with customer-centric sales and services, and Mallder's knowledge of multichannel communications.

The company already dominates in workforce management, Bloom said, but that will be an even larger part of its business in the future. Today, 75 percent of Aspect's business comes from interaction management, while workforce management is the rest, but in the future workforce management will be one of the company's highest gross areas, Bloom said. In fact, Aspect recently created a group specifically to focus on the workforce management aspect of Microsoft Lync, noted Bloom, adding that Microsoft is a key partner of Aspect.

Multichannel is another area in which Aspect is keenly interested and is an area in which Bloom expects the company to continue to invest. Tiger Shark already addresses a lot of that today, he said, and Aspect expects to expand on that through potential acquisitions.

Tiger Shark is the codename for Aspect's Unified IP 7.1 platform extension, which became generally availability in August. The Unified IP 7 family, as Aspect explains it, "helps effectively manage and deliver a differentiated customer experience in the light of consumer demand for expanded choices in communication channels such as social."

New with Aspect Unified IP 7.1 are expanded compliance capabilities; "aggressive" quality and performance improvements; and enhanced inbound capabilities.

"We were very excited about the features contained in the release and what they could bring to the market and our customer base," said Aspect spokesman Tim Dreyer. "Preparing for this was a very

large focus for our organization, with an emphasis on building enhancements and quality assurance measures into the many capabilities of the platform. This release really marks in some respects a new beginning for Aspect into a more growth-focus, market-aggressive company."

Investment & Expansion

That growth will be driven by a heightened focus on research and development and new product releases, as well as investment in outside companies, Bloom said.

Bloom in late September told INTERNET TELEPHONY that Aspect expected to hire around 50 to 75 new engineers within the next 14 months. Aspect in the past few years has dedicated 8.5 to 9.5 percent of its revenues to R&D, he added, but the company plans to up that to 15 percent in 2013 and to 20 percent in 2014.

As for potential investments, Blooms said Aspect is interested in strengthening its arsenal in the areas of advanced analytics, live chat, and contact center quality management companies and product lines.

"I wouldn't be surprised to see one or two acquisitions in the next 12 months," he added.

Deals might be in the form of equity or partnership as opposed to full purchases, Bloom said. Whatever the case, Aspect is extremely well capitalized to make such deals considering it has more than $100 million ($148.6 million according to the most recent reports) cash on hand and the ability to tap additional capital through Golden Gate Capital, he continued.

Bloom expects that all of the above will put Aspect on a path to double-digit growth over the ensuing years.

Looking Up

That will be an uphill climb.

Aspect's third quarter financials were slated to come out the second week of November, which was after this issue went to print. However, the company put

Chris Koziol

Jim Freeze

Spence Mallder

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out an Oct. 22 press release indicating it expects revenue for the three months ended Sept. 30, 2012, to be approximately $111.5 million, compared to $133.2 million in the third quarter of 2011. This is an increase of approximately 4 percent sequentially from $106.9 million for the three months ended June 30, 2012.

The statement indicated that, "as expected, year over year, third quarter total revenue was down, driven heavily by unfavorable license revenue which was down 42 percent year over year, substantially due to extraordinarily large one time dialer migration deals in the prior year. Subscription maintenance revenues were down 8 percent for the third quarter over the prior year." It went on to say that Aspect expects net income for the three months ended Sept. 30, 2012 to be $7.8 million, compared to net income of $10.3 million in the prior year's third quarter and a net loss of $10.5 million for the three months ended June 30, 2012. And it added that pro forma EBITDA for the three months ended Sept. 30, 2012, will be $33.6 million, compared to $48.3 million in the prior year's third quarter and $24.8 million for the three months ended June 30, 2012.

"We are encouraged about sequential quarter improvements in key performance measures for the third quarter of 2012," Bloom was quoted as saying in the release. "We returned to revenue growth and improved our margins and pro forma EBITDA for the third quarter of 2012 on a sequential basis. During the third quarter of 2012, we continued a trend of what is now 97 new logo customers captured over the trailing four quarters. In the third quarter alone we signed 19 new logo customers, with more than half of these accounts generated through our effective indirect channel strategy. For the first nine months of 2012 overall, we have now closed a total of 71 new logo customers, a 16 percent increase over 2011, and a slightly favorable increase in average contract value for those transactions. Our 'Tiger Shark' Unified IP 7.1 release is getting good traction in the market with over 20 deployments in process since its launch in late August."

Customer Target & Go To Market
Aspect has 7,000 customers worldwide and is adding 100 new customers a year on average, Bloom said. He added that the company attracted 250 new customers over the past 10 quarters.

Most of Aspect's revenue comes from tier 2 call center operations with hundreds of seats serving multinational enterprises. Seventy percent of Aspect's business is from Canada and the U.S.; the rest comes from elsewhere in the world. And about 15 percent of its revenue comes via channel partners including independent software vendors, resellers, and systems integrators. Bloom in late September said Aspect has a "stake in the ground" to double its revenue through the channel over the next 24 months.

"Part of Aspect's channel growth strategy is to attract and engage new partners that have a robust Microsoft practice," said Debbie Moon, Aspect's channel development director, in a late September press release announcing new North American channel partners

ExtraTeam and Qoncert. "ExtraTeam's strong capabilities installing and servicing SharePoint and Lync deployments offer Aspect a great opportunity to jointly partner with customers looking to add or expand a Lync-based Aspect contact center."

She added: "The second part of Aspect's channel strategy is to expand our workforce optimization footprint by partnering with solution providers like Qoncert. Qoncert has a strong unified communications practice and wanted to supplement that service offering with Aspect's industry leading workforce management and optimization solutions."

Special Sauce
Bloom told INTERNET TELEPHONY that the strategy laid out above; Aspect's expertise in such verticals financial services, health care, insurance, and telecom; the flexibility it offers customers by allowing them to either license its software, buy it based on subscription, or opt for a hybrid model; and the company's strong existing customer base, product set and years of experience make it a standout in the industry.

"Aspect is an asset-rich organization at a time when enterprise businesses are rethinking how they compete through differentiated customer experiences," said Bloom at the time of his appointment in early August. "This is a pivotal time for the company to capitalize on its technologies, strategic investments and industry relationships in order to successfully prepare and position ourselves for sustained market growth and investor returns in the years ahead." IT

> "There's a new Aspect that's in the market. It's Aspect 2.0 that's very forward leading, and it is accelerating the business."
> – Bloom

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By Paula Bernier

Social Enterprise Intelligence
VoloMetrix Aims to Drive Productivity by Mining Interaction Data

A startup called VoloMetrix wants to make your business smarter in how it uses communications and collaboration. It offers what it calls a social enterprise intelligence tool, which is aimed at enabling businesses to leverage data inside existing communications and collaboration tools like calendars, e-mail, IM and social platforms to address top priorities more quickly and to understand how employees and teams work and interact.

"People are many organization's biggest investments and most powerful assets, yet companies today can't determine whether their people are positioned to achieve the greatest business results," said Ryan Fuller, CEO of VoloMetrix.

Shasta Ventures-backed VoloMetrix has just under 10 customers, some in pilot phase and some in commercial deployment. He declined to provide customer names, but said most of them are large technology companies that are interested in the VoloMetrix solutions to help them understand whether recent reorganizations are working and how to make things more efficient, and/or simply to get more insight into how staff members are spending their time.

Among the VoloMetrix solutions is its recently unveiled VoloMetrix Sales Module, which was designed to assess the productivity of sales staff.

The company points to a Gartner estimate indicating that salespeople spend as little as 10 percent of their time interacting with customers because most their time is spent on other work-related tasks. The new module can help a business assess exactly how much time is spent on what so, for example, they can consider doing things like making adjustments to workloads and responsibilities to get higher yields from sales staff.

Specifically, the VoloMetrix Sales Module highlights sales pipeline opportunities

and customer account escalation trends as they occur, so the sales team can mobilize resources to close a deal or expedite work to resolve a customer issue; provides what the company says are deep insights into a sales team's time and resource allocation against specific customers, internal stakeholders, and key topics; and does alignment indexing to allow sales organizations to understand and manage team resources to better achieve top priorities. It also includes what VoloMetrix calls an enterprise sociograph, which shows connections among teams and partner organizations in an effort to identify under-served resources.

"Our new sales module builds upon our initial vision of increasing productivity through actionable insights," says Fuller. "Now sales teams are empowered with never-before seen insights that improves focus and responsiveness to their highest priority sales opportunities." **IT**

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Unified Communications

Google Search Conjures Siri

Siri is one of the coolest and most sought after features of Apple's iPhone 4S. Since the launch of the voice-activated digital assistant, several companies have been trying to deliver similar capabilities. Now Google has come onto Apple's turf in this realm with a voice search upgrade on iOS devices. When you open the Google Search app on your iOS device, you are be greeted with a message asking you to try the new voice search. You can then touch the microphone and speak into your iPad, iPod touch or iPhone. As you speak, words appear on the screen and the answer to your query quickly appears. A Google blog post says that if the answer to your question is relatively simple and short it will actually answer you out loud.

CloudAXIS Opens Up Videoconferencing

Polycom RealPresence CloudAXIS Suite is a new software suite that lets Polycom customers add anyone on Facebook, Google Talk, Skype, or other video applications to their own video conference from a web browser, connecting users across software lines. "Today Polycom is transforming the industry with a solution that equips our customers to extend enterprise-grade video collaboration to everyone. We're removing the impediments that have hampered video collaboration from becoming ubiquitous by allowing our customers to easily add anyone with a browser to their video and content collaboration sessions with the highest quality, reliability and security," says Andy Miller, Polycom CEO. "Polycom RealPresence CloudAXIS solutions and our rich suite of open APIs give businesses and service providers the extended interoperability on which to build scalable cloud-based video collaboration services that we believe will deliver new value to customers and create significant new growth opportunities."

Avaya Ranked Tops in Mobile UC&C

IDC MarketScape has named Avaya a global leader in mobile unified communications and collaboration. Avaya's mobile collaboration solution for enterprises includes the Avaya Aura collaboration suite, along with the Avaya Flare Experience and Avaya one-X Mobility products. The company recently released Avaya Aura Conferencing 7.0, which can be accessed on any device through a dedicated client or Internet browser, and Avaya Flare Experience for Apple iPad tablets and Windows PC/laptops. For small and mid size businesses, Avaya provides robust, enterprise-class mobile collaboration capabilities through Avaya IPOffice, which offers clients for smart phones and tablets. "Mobility is not in just a few products in the Avaya portfolio – it pervades everything we do, from the infrastructure to how we deliver an extraordinary user experience on any device," Avaya's Senior Vice President of Corporate Strategy and Development Pierre-Paul Allard says. "It's what we think about when we design customer contact center solutions, or enable crisis management communication and collaboration and integrate video as part of a communications-enabled business process. As long as people need to connect and collaborate to get a job done, we'll make sure that they can do it with ease any time of day, any place in the world."

Vidyo Hawks Its Solutions

Vidyo Inc. says it has achieved a price/performance breakthrough with its new Executive Desktop system, a solution that's available starting this month that delivers up to 1080p30 encode and 1440p60 decode – nearly twice the resolution of traditional 1080p desktop appliances that cost 10 X more than Vidyo's solution. The company also offers an HEVC codec design that requires just half the bit rate of H.264 SVC to achieve the same or better quality at 1080p60; a browser-based 1440 system that allows customers to easily connect to a video conference with a single click to anyone on Skype, Facebook, Google Talk and other business video applications; and a multi-protocol media server that supports H.264 AVC, H.264 SVC, H.263, H.323 and SIP. "Vidyo is the only company in the market today shipping 3rd generation SVC-based products that already incorporate years of field experience, customer feedback and robust intellectual property," says Ofer Shapiro, Vidyo's co-founder and CEO. "Our latest innovations continue to demonstrate our technology lead and our commitment to make hardware oriented business models obsolete. Vidyo was the first company to identify and prove that a new software-based architecture was needed to deliver the scale required to support hundreds of millions of personal endpoints."

AAT Delivers AT&T System

Advanced American Telephones has announced an easy-to-use, four-line AT&T Small Business System. The console station, deskset and handset can deliver a five-station phone system for under $600, less than most competitive offerings. This offer includes a 60-minute digital answering system with auto attendant on the console and dedicated mailboxes for each deskset; full duplex speakerphone on corded sets for hands-free calling and up to five-party conference calls; and large display screens to view contact lists, missed call logs and other information. Available at major office supply stores, the system's foundation is the MS2085 console, which can be expanded to its maximum capacity of 4 lines by 16 stations by adding up to 15 MS2015 desksets through the existing office Ethernet. No additional wiring is needed beyond the standard phone lines that plug into the console.

Verizon, Google Apps Partner on Call Center Services

Two of the biggest names in communications have joined forced to deliver a VoIP call center service called Virtual Communications Express. This targets businesses with 20 to 70 employees that want the benefits of private branch exchange and UC systems without the high costs or hassles. The service will reportedly sell for $20 to $35 per employee.

Momentum Launches UC Messenger

A new unified communications service called Momentum Messenger delivers videoconferencing, instant messaging, voicemail, softphone, and click-to-dial from a single interface. "Unified communications brings freedom and flexibility to the way people work. Adopting an activity-based solution that allows employees to receive calls and messages from anywhere, and on a multitude of platforms, results in quicker response times and ultimately helps improve customer satisfaction," notes Brandon Hagood, Momentum's director of product development.

A NID is a NID is a NID. Right?

Not exactly.
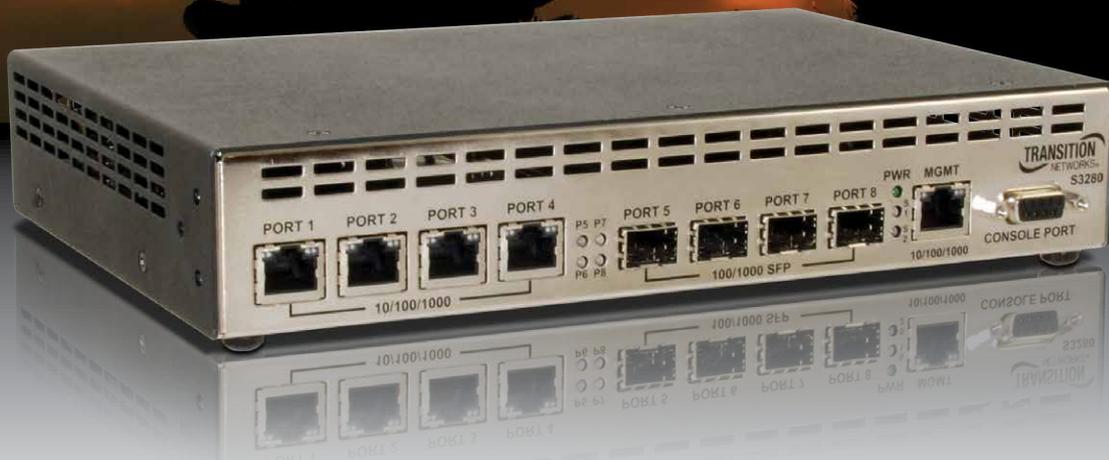
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Addressing Mobile Backhaul with Small Cells in Mind

Small cells are expected to multiply rapidly in the coming months and years as wireless service providers seek to strengthen mobile bandwidth capacity and fill in coverage gaps. Some wireless service providers may use as many as 10 new small cell sites for each macro cell site, according to Alcatel-Lucent, which has already deployed more than 200 mobile backhaul networks for operators around the world and holds the No. 1 in terms of market share in this space, per ABI Research.

The sheer number of small cells makes architecting and managing mobile backhaul for all these new elements a challenge in itself. The fact that small cells can be installed in a wide variety of locations – including at bus stops, on lamp posts, within or outside buildings, etc. – only adds to that challenge. Indeed, that means network operators will likely have to leverage a variety of technologies, possibly including copper, Ethernet, fiber and microwave, for mobile backhaul, given that fiber won't always be available at all these locations. And the more technologies involved, the greater the management challenge.

To address all that, Alcatel-Lucent is expanding its mobile backhaul portfolio on a number of fronts. That includes new additions to its 7705 Service Aggregation Router family; the introduction of new microwave backhaul options; broader copper- and fiber-based small cell backhaul access solutions; and expanded professional services.

The new SAR gear can support any mobile service, whether 3G, 4G LTE, or Wi-Fi, over any backhaul access and using any network topology. Also of note, according to Alcatel-Lucent, is that these offerings provide an end-to-end service layer for ease of management, advanced timing/synchronization, flexible powering options, and Auto-Discovery and Provisioning capabilities. The new MPLS routers are in trials now, with first commercial shipments slated for the first quarter of 2013.

New microwave backhaul solutions from Alcatel-Lucent include a 60gHz point-to-point line-of-sight solution, and a sub 6gHz point-to-point and point-to-multipoint non-line-of-sight option. The company also has increased capacity on its 9500 Microwave Packet Radio platform. These microwave products are available today.

Heidi Adams, director of product marketing at Alcatel-Lucent's networks business unit, tells INTERNET TELEPHONY that ABI Research forecasts that microwave backhaul will be used in more than 50 percent small cell deployments in the U.S. In fact, she adds, microwave is used in about half of macrocell backhaul applications worldwide today.

As for the wireline backhaul solutions, Alcatel-Lucent has introduced a new DSL solution and a GPON offer that enable service providers to leverage existing infrastructure for backhaul. Adams explains that DSL to date has not been widely used for backhaul given it's been seen as too slow to do the job, but new advances like pair bonding and vectoring now enable 100-250mbps rates over legacy connections, making copper a good candidate for small cell backhaul. As for GPON, that's also a viable option for backhaul, and Alcatel-Lucent aims to make it even more attractive through the introduction of a new pluggable component that connects with cell site radios or other network elements to enable backhaul functionality.   **IT**

SOFTBANK Invests in Sprint

Telecom industry watchers have long wondered how Sprint would fit into the trend of carrier consolidation. They recently got at least part of the answer, as Japanese tech titan SOFTBANK Corp. invested $20.1 billion for 70 percent in the U.S. telco. The deal, SOFTBANK notes, enables it "to establish an operating base as one of the largest mobile Internet companies in the world." Between the companies, they will have one of the largest combined subscriber bases between the U.S. and Japan, says SOFTBANK, and the combined mobile telecom service revenue will rank third in the world. As noted by The Wall Street Journal, the value of wireless spectrum also seems to be a driver of the deal. Shortly after the SOFTBANK-Sprint relationship came to light, Sprint announced plans to up its stake in spectrum-rich Clearwire Corp. from 48 to 50.4 percent.

DT Buys MetroPCS

Autumn apparently was picking season in the wireless service provider world, as it also saw Deutsche Telekom move to merge with MetroPCS Communications Inc. Industry watchers expect this deal to be much more palatable to regulators than AT&T's failed effort to buy T-Mobile for $39 billion. "We are extremely pleased to announce this transaction with MetroPCS, which enhances Deutsche Telekom's position in the expanding U.S. wireless market," said DT CEO René Obermann. "The T-Mobile and MetroPCS brands are a great strategic fit – both operationally and culturally. The new company will be the value leader in wireless with the scale, spectrum and financial and other resources to expand its geographic coverage, broaden choice among all types of customers and continue to innovate, especially around the next-generation LTE network.

We are committed to creating a sustainable and financially viable national challenger in the U.S., and we believe this combination helps us deliver on that commitment."

Cisco Makes Wireless More Manageable

It's estimated that by 2014, 90 percent of organizations will allow employees to leverage their personal devices for work use. And the number of wirelessly connected devices on the network used for a variety of business applications continues to mount. To address these trends and ensure a seamless and high-quality user experience, Cisco Systems has introduced over the past few months new solutions aimed at helping IT departments more easily manage the bring-your-own-device phenomenon, and wireless networks at large. New is Cisco Unified Access, which connects people with whatever devices they have to sources of data that have the ability to be more context-aware and deliver a more meaningful experience. Also under the Cisco Unified Access umbrella is Cisco Prime, a management platform that can manage wired and wireless networks via a single pane of glass. Cisco also recently unveiled new solutions in the access point and AP controller arenas.

Ericsson Scores with New Wi-Fi Solution

Ericsson has launched a stadium-optimized Wi-Fi access point solution that addresses user density and interference challenges to deliver high-performance coverage for mobile video and data apps at stadium events. The move follows Ericsson's acquisition of BelAir Networks in April. As a result of the product, people attending sports matches, concert or other events can more easily share their experiences via Facebook, Twitter or SMS.

The BYOD Network
Five Strategic Moves to Ready Your Business for Next-Generation Mobility

Today the bring your own device phenomenon is on the rise and quickly becoming a business standard. A recent study by the Aberdeen Group shows that more than seven out of 10 organizations are permitting the use of employee-owned devices for business purposes, and more are joining them every day.

There are several important factors driving BYOD in businesses. First, companies are responding to employee expectations for handling real-time collaboration in the workplace. More than 40 percent of all U.S. mobile subscribers have smartphones with advanced functionality, a figure that will only rise. Employees want the same powerful collaboration capabilities to be available at work – without the inconvenience of carrying one device for business communications and another for personal use.

There are also significant cost and productivity advantages to be gained by companies supporting the BYOD trend. Not since the early days of instant messaging – which revolutionized how co-workers engaged in quick collaboration – has consumer technology been so far ahead of business technology. The vast capabilities and apps now found in devices owned by employees can help companies catch up to the new norm in today's inter-connected, always-on world, and help pave new paths to productivity.

Reigning in Challenges
For all its benefits, however, the BYOD phenomenon has its challenges, ranging from bandwidth demands to security risks to quality issues. While IT and telecom supervisors don't want to stifle employees, they must retain a certain level of enterprise-class control. Without management and planning, BYOD can rapidly devolve into a wild west environment, with unsecured devices and bandwidth-sapping applications putting a business network at risk.

To avoid communications chaos, it pays to fortify a business communications network for the new generation of mobile workers, which includes those on the road, those based at home, and workers on-the-go – even as they travel within their workplace. More of these workers are communicating via their own mobile gadgets, which serves as both personal and business hubs. To address the challenges of a BYOD-ready network head on, put a management strategy in place now, which will help your business capture the full benefits of mobility, even as worker and consumer tastes evolve.

Here are five strategic tips you can use to ensure your company's network, communications applications and corporate policies are up to the BYOD challenge.

- **Gauge your network for scalability**

BYOD can lead to an explosion in bandwidth demands as companies support more endpoints to deliver video communications (both from the desktop and mobile) and other productivity-enhancing applications. In fact, industry analysts attribute a recent 40 percent growth spurt in wireless enterprise LANs to the BYOD trend and the skyrocketing popularity of the Apple iPad device. This means businesses moving to BYOD must have highly-scalable networks that can support multiple communications endpoints for each employee – which these days can include a desk phone, web-based portal, tablet, and personal mobile device that doubles as a business device.

With so many devices vying for network resources, it's important to determine whether your company's communications

infrastructure has the capacity, flexibility and scalability needed to accommodate current and anticipated needs, while ensuring accessibility and enterprise-class reliability.

• Tighten up network security
A recent study by the SANS Institute found that less than one in 10 organizations surveyed were "fully aware" of the devices accessing their networks, and only half were "vaguely or fairly" aware. The remainder had no clue.

Don't put your head in the sand. IT and telecom managers need to ensure their organization is prepared for the considerable security challenges of BYOD. New consumer devices can introduce unwanted viruses and apps into a business, so it's important to conduct a thorough assessment to see if sufficient security policies and procedures are in place. They also can compromise your compliance with HIPPA, SOX, PCI DSS and other important regulations.

When instant messaging began, workers gravitated to public IM systems that were unencrypted, and IT departments realized the need to button up this loose environment. The threats back then pale in comparison to today's viruses and malware that can wreak havoc on a network. All it takes is for one harmful app to be downloaded to a network-accessible mobile device.

Some essentials include mobile device management software to authenticate BYOD endpoints used on a network. Use SIP trunks for network and communications security, with session border controllers to encrypt call signaling and media. You'll be able to deliver real-time protection against denial-of-service attacks and toll fraud threats on the fly, without the need for VPNs and firewall tunnels.

Password protection is also a must when deploying mobile or BYOD devices. Consider wipe software so data on employee-owned devices can be remotely removed if a device is lost or stolen. Competitive information, personal employee data, corporate e-mails and all sorts of private information could be exposed if an unprotected device falls into the wrong hands.

• Make SIP a central ingredient
Many corporate networks are built around a proprietary framework. But to truly benefit from the innovative mobility capabilities employees crave, companies need to adopt an open, interoperable and standards-based infrastructure that can tap the full potential of a multi-vendor network, and make it easy to reach higher levels of collaboration.

Scalable, SIP-based unified communications solutions are the best way to place open interoperability at the core of your multivendor network and make a smooth transition to real-time collaboration in a cost-effective way. With SIP, companies are able to manage new endpoints more efficiently, better prioritize network traffic, and gain more control over voice, video and other collaboration sessions. This all adds up to a better user experience.

Among the advanced capabilities SIP can bring to BYOD users are secure instant messaging, presence, and integrated corporate directories, all beneficial to mobile workers using one device for both personal and business use. When BYOD endpoints are infused with applications that use presence, employees can showcase their availability status to colleagues and clients. They can also manage available times and levels of connectivity using a single BYOD device to make the distinction between home and work availability. For instance, Avaya's latest mobility app for small and medium-sized businesses lets users view the presence of conference call participants, helping to determine which colleagues are available to join in.

• Know what consumer devices do best – and what they don't
Though consumer devices can bring newfound flexibility to an organization, they are not a replacement for the specialized devices vital to most businesses. Think of BYOD endpoints as a complement to – not a replacement for – your core communications tools.

To maintain the superior communications experience employees and clients expect, companies still require office-based endpoints that deliver enterprise-class voice quality and features (voicemail, directories, touchscreen functionality) – from speakerphones and videoconferencing systems in conference rooms to full-featured phones on desks. But IT managers should also equip desktop devices with the ability to interconnect with workers' BYOD devices. Mobile capabilities such as extension-to-cellular – which extends calls made to a worker's deskphone to their mobile device – should be standard on deskphones, as office workers seek seamless communications between all of their devices.

Depending on your type of business, you may even need specialized wireless devices, coupled with the right applications and processes, to serve all or part of your organization. The staff worker in a hospital, for instance, will likely need a different approach to mobility than the warehouse supervisor, retail clerk or contact center agent. Obtaining the right partners and applications for your specific mobile device needs will help ensure your workforce is well-equipped for effective collaboration. For example, Parkview Health of Indiana enables staff to use iPhone devices containing an Avaya mobility application to give nurses a way to consolidate all of their alerts into one device – a leap ahead of the days when communications was handled via a nurse's station. This can help streamline administration, which reduces a patient's length-of-stay, making patients happier and saving the hospital money.

• Establish a comprehensive BYOD policy
Define what your BYOD policies will be before you dive in, but do so with an eye towards flexibility. It pays to capitalize on worker enthusiasm for new modes of collaboration that can promote and inspire productivity and employee satisfaction. Still, there are key questions to consider: Will employees be reimbursed when bringing their own devices to work? Will any restrictions be placed on what type of devices can be used? What will you do about unsecured consumer applications employees might want to use? Which support issues will your IT team handle and which ones will be referred to the device manufacturer? Establishing policies in advance and disseminating them widely can keep employees enthused about company innovation, while keeping an enterprise more secure. **IT**

Gary E. Barnett is senior vice president and general manager of collaboration platforms for Avaya (www.avaya.com).

Engage at Every Stage
This is the New Mobile Marketing Mandate

The mobile phone has come to represent the most pervasive channel of communications and targeted engagement on the planet with nearly 90 percent of the world's population reached. Portia Research projects over 6.5 billion mobile subscribers worldwide by the end of 2012; annual handset shipments of over 2.15 billion by 2016; and a global market projected to generate total service revenue of nearly $8 trillion over the next five years.

The immediacy, convenience, pervasiveness and personal attachment to mobile devices make this medium an ideal means of expanding marketing messages and enhancing engagement with a global customer base. Mobile social networking has not only become a better way to touch and understand customers, but it has also given consumers the ability to gain affirmation about brands, products, prices and merchant experiences from trusted friends, family and peers.

The mobile channel is an unprecedented opportunity to reach consumers in developed markets in new and intrusive ways, and to access the previously untapped, unreachable, and unbanked mass of humanity in emerging economies. An estimated 2.5 billion adults (more than half of the world's adult population) do not use any form of formal financial services, yet about 70 percent of all people on the planet use a cell phone.

Consumer Advising Eclipsing Advertising
Using traditional advertising to engage and activate an audience is rapidly being eclipsed by the pervasive nature of social media networks, massive mobile device dependency, as well as the awesome analytics capability of cloud-based, business intelligence providers, which are pioneering new relationship marketing practices.

More targeted, timely and helpful messaging and info sourcing through mobile communications channels are helping consumers get trusted advice, find the right products and source the best deals, any place, at any time. In addition, customers are now empowered to transact and interact on demand without any limitations or restrictions on where and how they buy.

Brands are digging into online customer conversations, content postings and social media data in a big way to assume a new role as consumer concierge" or personal lifestyle assistant. They are gaining greater marketing efficiency, effectiveness and campaign response by using personal insights gleaned from public domain information in social media networks, blogs, tweets,

websites, online communities, chat rooms, bulletin boards, contact centers, help desks and affinity groups to provide more relevant information, education, guidance, assistance, and individualized recommendations.

Customer insight, intimacy and engagement are essential to sustaining successful brands. Yet for many companies, especially those who sell through indirect channels or to cash-only customers, connecting with and influencing the customer is a serious struggle. Consumer marketers around the world are now trying to overcome these traditional obstacles by leveraging the power of the web and mobile social networking to create more direct relationships with customers.

The Move to Mobile Relationship Marketing
The Chief Marketing Officer Council predicts Mobile Relationship Marketing will transform the marketing mix and enable brands to engage at every stage of the consumer lifecycle. An effective MRM strategy will integrate social interaction; customer insight gathering and analytics; consumer engagement and loyalty; market listening; purchase incentive or inducement; as well as lifetime revenue optimization, all through optimized use of the mobile channel.

Marketers will employ new mobile apps, location-based messaging, proximity marketing, and smart merchandising systems in store to attract and engage consumers in any place e they are willing to interact, transact or stay in contact with brands. This includes retail, sports, entertainment, destination, education, mass transit, and travel environments.

Operationalizing MRM will help companies across multiple industries maintain continuous customer touch and interaction, sustained support and service, closer and more dependent connectivity, as well as greater insight and intimacy. MRM has vast potential to create business value, improve process efficiency, trigger product consumption and use, further loyalty and repeat purchase, as well as increase customer feedback, assistance, affinity and advocacy.

The CMO Council envisages a new PROMPT Model of Mobile Relationship Marketing. This framework will include key drivers of revenue, response and retention:

PERSONALIZATION
More intimate, individualized messaging, handling and engagement

RELEVANCE
Insight-driven contact and offer delivery based on behavior, preference and circumstance

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OPPORTUNITY

Making contact, conversion, closure and commerce easier, quicker and more satisfying

MOTIVATION

Reward, inducement, benefit or perk that prompts action, induces trial or encourages repeat purchase

PROXIMITY

Geo-targeting and location-based messaging to attract customers, maximize traffic and trigger impulse buying

TIMING

Customer life stage tracking, social media monitoring, and wireless user analytics to time contact and deal delivery based on highest levels of predisposition

Unfortunately, just 16 percent of 250 plus global marketers surveyed by the CMO Council in mid-2012 said they have a formal strategy for using mobile as a significant channel of customer engagement, convenience and gratification. But participants in the recent Engage at Every Stage study have no hesitation in identifying the most important ways they can use mobile channel, namely to:

- provide more personalized and relevant messaging (49 percent);
- deliver value-added services not offered by competitors (35 percent); and
- multiply the quality and frequency of communication (34 percent).

There's no doubt brands see mobile relationship marketing as a critical area to gain competency and competitive advantage. Big drivers include the high level of lifestyle and business dependence on mobile devices, the proliferation of mobile apps, growing mobile social media engagement, and ever-faster wireless networks that can deliver rich media content.

While interest is high, skepticism exists as many marketers feel that today's mobile channel is filled with false claims, unmet expectations, lack of visibility, and few best practice leaders. Not surprisingly, 77 percent of marketers surveyed by the CMO Council would like to see more case studies of best practices or success stories. Organizations like the CMO Council are advancing new models for MRM and showcasing innovations from both developed and emerging growth countries where mobile subscribers far outnumber online Internet users.

Bear in mind the comments of Lucas Herscovici, head of digital marketing at Anheuser-Busch InBev: "The advantage of mobile is that it's always on, and you can reach more people in an extremely local and relevant way. The biggest challenge, on the other hand, is that there are so many different platforms and no standard. All devices have different capabilities, so you can't engage with all consumers in the same way." **IT**

Donovan Neale-May is executive director of the Chief Marketing Officer Council (www.cmocouncil.org).

By Paula Bernier

INTERNET TELEPHONY Announces TEM Award Winners

The INTERNET TELEPHONY TEM Excellence Awards honor those businesses that exhibit excellence in supporting their customers' initiatives to optimize costs through telecom expense management products and solutions.

WINNERS

Company	Product
Amtel Inc.	Amtel Telecom Expense Management
Etelesolv	Telemanager by Etelesolv
MTS	TEM Suite
vCom Solutions	vManager

BSS/OSS Award Winners Selected by TMC

The editors of INTERNET TELEPHONY have selected the companies whose business support systems and operations support systems have contributed to the success of their clients' businesses. The companies that have created exceptional systems for supporting internal network operations or customer support solutions have also been awarded.

"The BSS/OSS Excellence Awards provide recognition for contribution to the growth of and innovation displayed in an increasingly complex and vital market," says Erik Linask, editorial director of INTERNET TELEPHONY. "Only the companies who presented the best and most compelling solutions were deemed worthy of our 2012 BSS/OSS Excellence Awards. Congratulations to our winners and I look forward to future excellence from all."

WINNERS

Company	Product
Aria Systems Inc.	Aria Subscription Billing Platform
Comverse	Comverse ONE Online & Converged Charging
CSG International	CSG's Enhanced Sales Edition (often called Product Catalog)
Ericsson	Plan-to-Provision for Fixed Broadband Solution
Telesphere	Zeus
ZOHO Corp. WebNMS	WebNMS

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By Erik Linask

The Foolishness of Poor Contingency Planning

With the restoration and reconstruction efforts under way after Hurricane Sandy left a path of destruction across the coastlines of New Jersey, New York, and Connecticut, the volunteers, businesses, and agencies that have tirelessly provided their support deserve our unconditional gratitude and respect. No words can truly console those who have suffered losses, and we can only hope the efforts to restore them to some level of normalcy will be swift.

Unfortunately, there is little that can be done to minimize the impact of such an event. For businesses, however, it serves as yet another reminder that contingency planning and BC/DR strategies can significantly limit their operational impact in many situations. Indeed, they have a number of options available to help ensure operational continuity in extreme circumstances, for both normal operations as well as pure backup scenarios.

which businesses have no control, from services to physical infrastructure and power.

The other factor is likely that a proper plan takes time to implement; it's not as easy as most other IT-related tasks. Begin with a proper risk assessment and business impact analysis – including determining which resources are most critical for guaranteed uptime, then determining what options are available and which are most suitable, to implementing the technology and processes, and finally testing and making any necessary adjustments, BC/DR planning take time.

Often, because there isn't a crisis at hand, executives put these plans on the back burner, only to realize too late they hadn't formalized their plans for operational consistency. When an outage hits – whether due to natural disaster, technological failure,

According to Gartner's research, more than two-thirds of SMBs do not have appropriate disaster recovery plans in place (enterprise implementation is expectedly higher).

From hosted communications providers to virtualized applications and resources, one of the realities proven out by the current mobility trend is that employees need to be able to function normally from anywhere under nearly any circumstance – and the technology to enable that is within reach of every business. There are, of course, situations where complete loss of connectivity precludes any BC/DR strategy, but barring that, there isn't a good reason for a lack of contingency planning.

That begs the question: Why are there still so many businesses that haven't learned from past experiences and put plans in place to ensure operational continuity?

Countless executives have witnessed the business impact of an outage and have taken the appropriate measures to ensure their data centers and servers are backed up in redundant facilities, have deployed cloud-based e-mail and communications solutions, and have implemented remote and mobile access options for employees.

According to Gartner's research, however, more than two-thirds of SMBs do not have appropriate disaster recovery plans in place (enterprise implementation is expectedly higher), likely because they don't see a potential risk or they feel it's too costly – or a combination. Even in a limited risk scenario, it's prudent for every business to have some level of continuity plan in place, as there are too many variables in play over

or other factors – it's far too late. Even when one is predicted, as was the case with Sandy – the strength and scope of Mother Nature's wrath was well known well in advance – there isn't enough time to scramble to piece together the necessary technology, and businesses suffer massive revenue losses. Many have even found themselves having to shutter their operations as a result of lengthy outages.

There is no hidden secret here. It's simple – take the time and spend the resources to properly research and implement a BC/DR strategy. If you do, you'll level the playing field against natural and man-made disasters. Failure can only result in businesses' disaster, compounding any other unfortunate event.

As the old adage goes, a smart man learns from his mistakes, but a truly wise man learns from the mistakes of others – and only a fool doesn't learn at all. Don't be a fool, plan for worst-case scenarios now.

If you need to find out more about BD/DR strategies, hosted communications, cloud computing and virtualization, mobility options, or other technologies that can help your business survive the next outage, join us Jan. 30-Feb.1, 2013, for ITEXPO Miami at the Miami Beach Convention Center, where the conference program and exhibit hall will be full of vendors and experts ready to share their expertise to ensure your business is prepared. I hope to see you there.

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