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A Report on Two Reports

Two communications leaders, Metaswitch and Verizon, around press time released reports that I think are worthy of note.

The Metaswitch report covers the company's view of its customers' challenges, key industry trends, and how Metaswitch is addressing them. It also talks a lot about the company's high expectations for network functions virtualization.

The Verizon report discusses law enforcement requests for customer information. This is an effort by the company to demonstrate transparency after the company and other prominent communications providers were part of the high-profile Edward Snowden/PRISM story that shined a light on the fact that they were sharing with the National Security Agency metadata about people's phone calls.

Let's review in more detail the Metaswitch report first. In it, the company mentions the competitive marketplace in which its service provider customers now exist and says that those companies risk being reduced to dumb pipe (my words) providers if they can't innovate quickly enough. Right now they cannot innovate quickly enough, says Metaswitch, but network functions virtualization — "a movement towards consolidating many network equipment types onto industry standard high-volume servers, significantly reducing network costs and improving flexibility" — can enable them to do so.

"The importance of NFV cannot be overstated, as service providers are looking at ways to replace dedicated, proprietary network appliances with software applications that run on commercial-off-the-shelf server and switching hardware to create more flexible and cost-efficient networks," writes Metaswitch.

"NFV has far-reaching effects in communications networks because it is applicable to any data plane processing and control plane function in all mobile and fixed networks," Metaswitch explains. "While justifiable in its own right, NFV will likely be complemented by, and in some cases de-

pend on, changes in network architectures that follow the software defined network model, in turn leading to a more agile programmable, 'network as a service.'"

To move on that opportunity, Metaswitch says, it will leverage its strength on the software front; provide its existing customers a migration path to these new solutions; broaden its focus to address both voice and other applications — and package those solutions to help customers generate revenue; embrace the cloud, open source, and DevOps methodologies so Metaswitch and its customers can work with and benefit from the third-party software developer community; and make sure its cloud platforms are mobile-friendly.

OK, now let's take a look at Verizon and its so-called Transparency Report, which is available online and will be updated twice a year.

In Verizon's public policy blog, Randal Milch, executive vice president of public policy and general counsel at the service provider, wrote that the company last year saw more law enforcement requests for information — especially related to its wireless customers — than it did the previous year. The report provides the total number of law enforcement demands (320,000 in the U.S. in 2013), and breaks out and discusses the nature of the different types of demands. For example, 70,665 were court orders, 161,184 were subpoenas, and 36,696 were warrants. It also identifies the number of requests (85,116) for which law enforcement had certified that there is an emergency involving the danger of death or serious physical injury.

"To date, the United States government has limited what we can report regarding requests in national security matters: thus, like all other companies to issue transparency reports, at this point, we are not permitted at this time to report information about FISA orders," writes Milch. "We have obtained permission, however, to report — within a range — the number of National Security Letters we received in 2013."

New Huawei Ascend Mate 2 is a Big Deal



Do you remember when the best phone was the smallest and slimmest? It's funny that at one time car keys were small and cell phones were big, and then around 10 years ago German car companies in particular started to make keys a bit shy of the size of some flip-phones. Then the market shifted directions when smartphones finally allowed decent web browsing.

It's gotten to the point where many say when it comes to smartphones, bigger is better. I agree – you should get the largest phone you can stand. Some will say they don't want a phone that is a tablet, and while I understand the sentiment, there are many times when the small screen of a typical phone is far too limiting and a large comfortable screen overflowing with pixels is a better place to view your HTML e-mail and play your games.

Right now the war between the smartphone companies is being fought only seriously between Samsung and Apple, and I dare say that if Apple made larger phones, Samsung would be in a far weaker position. But for the many years I have suggested Apple design a much larger phone, the company has decided the time wasn't right. This means the companies making the large phones have the market to themselves – for now.

The Samsung Galaxy S4 and Note 3 are some of the nicest devices on the market in my opinion, but after spending time with the Huawei Ascend Mate 2, I have to admit the 6.1-inch screen and 1.6GHz quad-core CPU made quite an impression on me. The device is thinner than the previous model and boasts a best-in-class 79 percent screen-to-body ratio. Moreover, the company claims more than two days of use from the phone on a single charge, and if you're feeling generous you can even use it as a bat-

tery to charge your friends' devices. One of the neat features on this phablet is a front camera, which can produce panoramic selfies. The 13Mp rear camera, being produced by Sony, doesn't skimp on quality either.

I spent some time using the phone while talking with William Plummer, vice president of external affairs for the company, at CES 2014. This is an important device for Huawei because the company is looking to expand its business to retail smartphones. That's why this phone needs to stand out to be taken seriously, and it should be taken seriously given its 4050 mAh battery and capability to download at 150mbps. The company's Emotion UI is very simple to understand, and there is a setting that allows one-handed operation. It is worth mentioning that I don't find one-handed operation too useful on this phone or the Galaxy Note 2.

I asked Plummer about competition from Samsung and Xaomi, the Chinese company providing inexpensive devices which are backed by services. He said there is lots of room in the market for competition. I don't disagree. Frankly I believe the world is very ready for ever-larger phablets, and I can even fit an eight-inch tablet fairly comfortably in my suit jacket and a bit awkwardly in my back pocket.

I really like Ascend Mate 2, which will be available in the U.S. this year. It has enough unique features like glove mode for winter that consumers should want to purchase it in substantial numbers. If there is a downside, it is the 1280x720 resolution, which yields about 241 PPI versus the 5.7-inch Note 3, which gives you a much clearer 386 PPI. At about \$445 you can make a strong argument for this phablet, which will function as a tablet, smartphone, and battery back-up device for your other gadgets.



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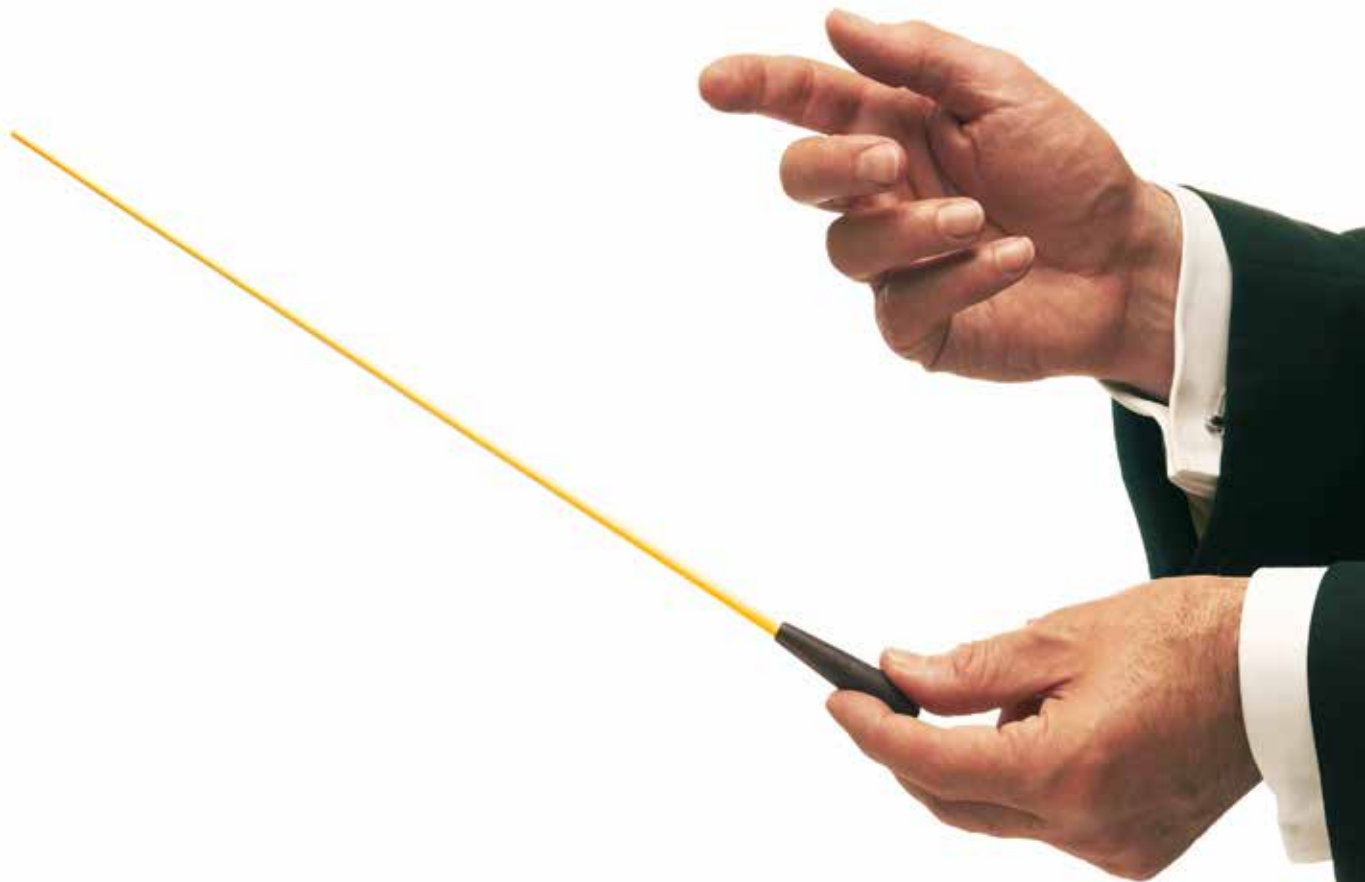
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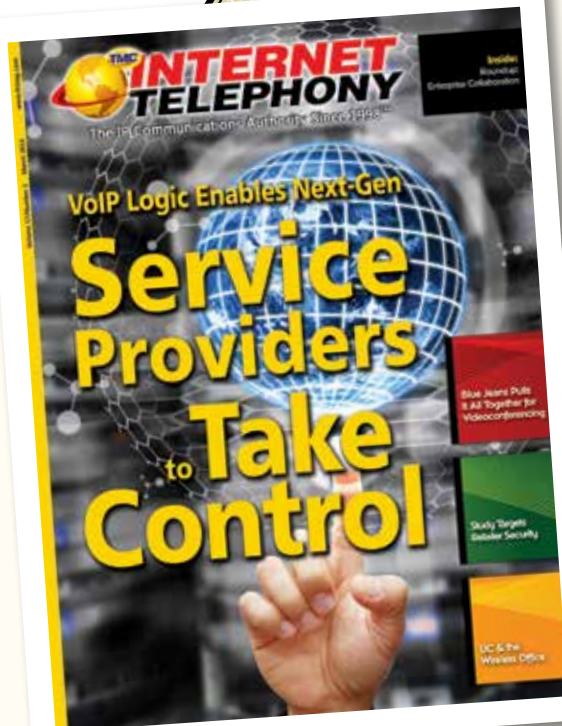
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YOUR CONFERENCING SOLUTION



It's no secret that conferencing has forever altered the way we communicate. It has changed the way we interact, collaborate, and perform tasks at work. It has helped friends and families separated by distance reconnect, regardless of time and place. The Projectphone series of conferencing units are now found in business environments in which conference calls and face-to-face interactions via video conferencing are the norm. With implementation, conferencing has changed greatly, companies now rely on the ability to see the faces of the other conferencing parties and in addition these participants can share various materials which encourage strong, sound, two way talks.

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By Chip Pickering



Fundamentals of Competition Must Be Preserved as Policy Debates Heat Up in 2014

Washington, D.C., is a hotbed of activity this year, as Congress and the Federal Communications Commission focus on a number of issues impacting the communications industry. New FCC Chairman Tom Wheeler has set an aggressive schedule to deal with issues such as the technology transition of the public switched telephone network and last mile access issues, including special access. At the same time a series of hearings has begun in the House of Representatives on Capitol Hill to examine the possibility of updating our nation's communications law, including a rewrite of the 1996 Telecommunications Act.

As lawmakers and policymakers debate these issues, it is imperative that the fundamental principles that ensure competition, functioning markets, and reliable networks remain the primary goals of any potential changes to our communications laws. The network must work for everyone, whether it is a residential consumer, a business, or a wholesale customer.

During the past three decades, actions taken by the government have resulted in:

- the break-up of the AT&T monopoly, which spurred deployment of fiber networks that are the backbone of the Internet and brought us into the Information Age;
- competitive auctions of spectrum that ended duopoly in the wireless market; and
- the 1996 Telecommunications Act, which broke the bottleneck in the last mile and ushered in competition in the local market.

Together these pro-competitive actions have driven more than an estimated \$1 trillion investment in cutting-edge infrastructure, job creation, economic growth, and innovation – more than any other government initiatives in the last generation. These are the policies that brought us into the Information Age, led the digital revolution, and changed the way we live, work, communicate and care for each other.

As policymakers debate communications-related issues, any future action must continue to promote competition so that the gains for consumers and in the economy, including innovations in products, services and applications, cannot and will not be lost. Competition is the gateway to foster start-ups and entrepreneurs, and we need to foster a market structure that encourages this creativity, rather than caving to those seeking protectionist rules designed to preserve their market advantage.

As a fierce advocate for competitive principles during the past three decades, COMPTTEL believes there are fundamental actions that Congress and the FCC must take to ensure that the communications market can continue delivering benefits to consumers and the economy, including:

- making certain that large incumbents, such as AT&T and Verizon, provide reasonable wholesale access and interconnection; and
- reaffirming that the '96 Act's market-opening provisions apply on a technologically neutral basis.

These actions are vital to ensuring a competitive, free market, where consumers and businesses have a choice of providers. When policymakers support a healthy wholesale communications marketplace, the retail market will be more competitive, encouraging more investment and innovation. More importantly, there is widespread support for these competitive policies, as consumer groups, industry associations, public safety and tech organizations see that their constituencies too can benefit greatly from a competitive marketplace.

Concentration of power in the hands of a few companies, and lack of competition, leads to a stagnant market and slower economic growth. Lawmakers and policymakers need to only look back about 18 years to see how much innovation has taken place as a result of the competitive markets spurred by the '96 Act and spectrum auctions. Over a trillion dollars have been invested to deploy fiber; bring broadband to homes, offices and even mobile phones; deliver new cutting-edge products and services; and improve the way all Americans can communicate.

The country cannot afford to have Washington do an about-face on policies and laws that have made such a positive impact on our economy, our businesses, and our personal lives. Thwarting pro-competitive policies will have a chilling effect on our nation.

As they address communications issues, the ultimate goal for Congress and the FCC must be to continue fostering development of a competitive marketplace for all users – consumers, businesses and wholesale customers – and ensure that the network functions for all who use it.

Chip Pickering is the CEO of COMPTTEL (www.comptel.org) and a former six-term Congressman from Mississippi. During his time in Congress, he was vice chair of the House Energy & Commerce Committee and served as the founding chair of the bi-partisan Wireless and Internet Caucus. Prior to his election, Pickering worked for Sen. Trent Lott (R-Miss.) and served as a staff member on the Senate Commerce Committee, where he helped shape the Telecommunications Act of 1996. Because of his role in drafting the 1996 Act, he became well known as a Congressional leader on telecommunications issues.



TLPS: Newly Minted FCC Licensed Mobile Satellite Wi-Fi Spectrum

TLPS stands for terrestrial low power service. TLPS is not a regulatory term but is used by Globalstar to describe the FCC's proposed new change to Rule 25 for mobile-satellite service providers' use of low power ATC. Rule 25 defines the requirements for ATC equipment. ATC includes terrestrial wireless base stations and mobile devices licensed to a MSS provider that offers radio communication services together with MSS, allowing re-use of spectrum assigned for the satellite licensee's MSS operations.

The Nov. 1, 2013, FCC order proposed revisions to Rule 25 for ATC equipment. The order described "terrestrial low power system" ATC equipment. The FCC proposes aligning Rule 25 covering licensed mobile ATC satellite spectrum with uses that are compatible with Part 15 unlicensed 2.4GHz Wi-Fi spectrum. Globalstar and the FCC hope that the new revisions to Part 25 will enable Globalstar to use licensed mobile satellite spectrum to deliver broadband to millions of new Globalstar-enabled Wi-Fi devices at any location, rural or urban, in the U.S.

Over the past 20 years, the FCC assigned spectrum licenses to satellite providers like Globalstar, Iridium, Lightsquared, and Dish. Globalstar was founded in 1991 by Qualcomm and Loral. It is on its second life and now has 24 new communications satellites, 560,000 current MSS users, a \$2.2 billion enterprise value, and \$76 million in 2012 revenues. Iridium, founded in 1998, owns 66 satellites. Re-created in 2009, Iridium has \$383 million in 2012 revenue and 611,000 users. Lightsquared, now in Chapter 11, has three satellites including the largest communications satellite and plans to use MSS and ATC to provide national cellphone service. Dish Networks acquired TerreStar in 2008 and DBSD in 2009 to provide mobile satellite service.

Everyone has heard about the future of satellite mobile service, but only a fraction of U.S. consumers use or know of the service. Satellite firms have tried and failed many times to get off the ground. However, this year, it seems that the satellite mobile providers including Globalstar are on the verge of success.

What makes the Globalstar FCC order interesting is that if the FCC allows existing Wi-Fi devices to be changed with a software upgrade to operate in Globalstar's spectrum, Globalstar can use the 22mHz

of Wi-Fi Channel 14 in every Wi-Fi access router to deliver MSS ATC service. There are an estimated 80 million Wi-Fi access points. There are 100 million Wi-Fi enabled tablets in the U.S., and 250 million smartphones in the U.S. are Wi-Fi enabled. With the new FCC order, consumers will not need to purchase new mobile smartphone devices to use the Globalstar spectrum. They will only need to sign up as subscribers similar to subscribing to Wi-Fi service at airports.

Satellites transmit the radio signals down to consumers' mobile devices on Earth. No cell towers are needed. Using ATC, the same licensed spectrum can be used to deliver the satellite voice broadband on the Earth by using cell towers, and now by using Globalstar-enabled Wi-Fi access points. Globalstar satellites, using MSS, could deliver broadband to a mobile base station on the Earth, like an ATC Wi-Fi access point router, which then could re-transmit the satellite-delivered broadband to any smartphone using Wi-Fi.

The FCC's Globalstar order will give Globalstar the right to use 11.5mHz of licensed MSS spectrum in the upper 2.4GHz range (2.4835-2.495GHz) conjunction with adjacent unlicensed 2.4GHz spectrum (2.473-2.4835 GHz) to provide TLPS. Globalstar's 2.4835-2.495GHz spectrum is also part of the highest Wi-Fi Channel 14 but subject to Part 25 licensed FCC rules. Thus, because 11.5mHz of the 22mHz Channel 14 is licensed spectrum, Wi-Fi devices using unlicensed spectrum have not turned on Channel 14. Unlicensed Bluetooth, on the other hand, needs only 1mHz or 2mHz, enabling it to use the 2.473-2.4835GHz part of Wi-Fi fractions of Channels 12, 13, and 14 that are below 2.4835GHz and subject to Part 15 FCC unlicensed rules.

The difference with Globalstar is that such Wi-Fi service could be delivered everywhere that Globalstar can place a Wi-Fi Globalstar-enabled Wi-Fi router. No wired backhaul is needed from cable or DSL. Globalstar has committed to deploying 20,000 free access Wi-Fi points for satellite-enabled broadband at schools and hospitals across the U.S. For public safety, a future Hurricane Sandy-level impact on 911 and on mobile phone communications could be minimized.

Barlow Keener is the principal with Keener Law Group (www.keenerlawgroup.com) out of Boston.

This year, it seems
that the satellite mobile
providers including
Globalstar are on the
verge of success.

By Hunter Newby



WSJ Cites New Dark Fiber Investment

In December 2013 The Wall Street Journal published an article by Drew Fitzgerald and Spencer Ante titled "Tech Firms Push to Control Web's Pipes" which dispelled many rumors about the state and availability of dark fiber in the U.S. and world. Are the authors contrarians, or are they simply stating the truth about reality? The facts make it clear that the latter is accurate, but to some that are either intentionally, or blissfully, ignorant both may be true.

The WSJ article says: "Technology giants like Google Inc. and Facebook Inc. are expanding efforts to control more of the world's Internet backbone, raising tensions with telecom companies over who runs the Web.

"In the past year, these companies that supply much of the world's online content have ramped up their investment in Internet infrastructure. The moves include bringing online new submarine and

underground cables they have funded, striking long-term agreements to lease so-called dark fiber, and building their own networking hardware.

"In the process, they are beginning to rival some of the telecom companies that count them as clients. Google has spent years piecing together a network of private fiber-optic cables and now controls more than 100,000 miles of routes around the world, said one person familiar with its assets. That is bigger than the size of the continental U.S. network run by Sprint Corp., which covers less than 40,000 miles.

"Executives at the tech companies say they are aiming to reduce costs, improve the performance of their Internet services, and guarantee they have enough capacity to support the growing traffic in online video, photos, games and other services generated by their businesses....

"The development is troubling for many telecom companies, however, which say they are reluctant to relinquish control of those lines to their biggest customers."

Basically, the tech giants like the telecom companies want control over as much of their networks as they can get. To gain control they are building, buying and leasing as much dark fiber as they can where they need it as soon as they can get it and put it to use.

There is clearly a fiber gap in the U.S. and borne out of the necessities outlined above we are entering a decade of investment and growth in the physical layer that will bring new dark fiber routes to all points of the country. This in turn will drive everything in networking above it, including the country's GDP.

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

Tech Score

By Jeff Hudgins



Top 3 Considerations when Transitioning to Haswell Servers in 2014

The Intel tick-tock model is upon us once again. The server industry will undergo another major shift in 2014. This year represents the tock cycle and the next big innovation in processor microarchitecture. The new Haswell microarchitecture featured in the 22 nm 4th generation Core Processor family will have multiple die flavors to address low core count and high mHz as well as high core count and lower mHz for servers. Here are three important factors when considering the Haswell server transition.

First, the new microarchitecture will require a move from DDR3 memory to DDR4. The newer DRAM will reduce memory power demand and support higher data rates. The price for this new memory is typically

higher at initial release and then falls as demand increases. But the current DRAM market conditions are not conducive to the typical price curves. If the pricing of the DDR4 does not drop back to DDR3 levels, then we will see higher overall server prices well into the full production phase.

Secondly, the new processor family implements several new instructions designed to improve performance in cryptographic processing and enhanced encryption. Software developers will need to update or recompile their code to take advantage of these new instructions.

Finally, the new architecture will provide native support for non-volatile dual in-line memory modules. This support will im-

prove data retention and security as well as overall application performance. Designers, however, will need to be sure to allocate enough channels since the NVDIMM slot can only be used as an NVDIMM.

So what's the final score? Software developers and OEMs can gain a competitive advantage by transitioning to Haswell Servers in 2014, but timing is critical to maximize the return while keeping the risk and cost parameters low. If the new instruction sets and increased memory performance gives your application a competitive advantage, then move quickly and seize the day.

Jeff Hudgins is vice president of marketing at Unicom Engineering (www.unicomengineering.com).

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By Michael Stanford

Mobile Trust

ARM processors have TrustZone; Samsung has Knox; Apple has Enclave; smart cards (credit cards with embedded chips) and UICC (SIM) cards have GlobalPlatform. So, how do they all relate to each other?

First, they are all aimed at providing trust. The user must be able to trust the device, the device must be able to trust its software and the user, remote services must be able to trust the client systems. The entire edifice of trust must be built on a reliable root. Since software is so slippery, that root must be hardware.

ARM processors have a hardware-supported operating mode called TrustZone that only allows known trusted code to perform system functions. In a TrustZone-enabled system, the user can trust the device not to run malware.

Apple's Enclave is reportedly built on TrustZone. Currently, Enclave's main use

is in the iPhone 5's fingerprint authentication feature. So it's an example of getting the device to trust the user.

TrustZone also provides an underpinning for a security framework called Trusted Execution Environment, promulgated by an organization called GlobalPlatform. GlobalPlatform was founded by credit card manufacturers to standardize smart cards; its specifications are also used in mobile phone SIM cards (now called UICCs).

The Trusted Execution Environment is behind Samsung's Knox smartphone security framework, which is giving Samsung a competitive advantage in enterprise environments.

GlobalPlatform's step up in security from the Trusted Execution Environment is the Secure Element. This is the chip on smart cards and phone SIMs. Google Wallet relies on a Secure Element when you use

your phone as a credit card in a near field communications contactless payment transaction. Before Android KitKat, Google Wallet required the phone to have a smart card chip on the motherboard or plugged into the SD Card slot. From KitKat on, the LTE UICC can act as the Secure Element. This is an example of the remote service (the bank or credit card company) being able to trust the client system.

GlobalPlatform's membership includes credit card companies, mobile network operators, chip companies, and software companies. It is an encouraging example of corporations in widely separated industries working together to grow their pie and to make life easier for regular people.

Michael Stanford has been an entrepreneur and strategist in VoIP for more than a decade. (Visit his blog at www.wirevolution.com.)

Enterprise View



By Max Schroeder

Consultants and Resellers – It's Vital to BC Plan Audits

Most organizations have migrated all or some of their operations to the cloud to increase efficiencies, lower costs, and get a better business continuity architecture in the bargain. However, getting complacent and feeling safe can lead to disaster. A full BC plan audit is still necessary to guarantee that your organization's BC plan components are synchronized and in full compliance with the latest technologies available.

The first question is whether the audit should be conducted solely by in-house personnel or to bring in an outside specialist. Why not use both? A physician threatened with a serious personal medical situation would not hesitate to seek the opinion of a specialist.

Professional consulting organizations will tell you that the most cost-effective use of their services is with individuals or organizations that are knowledgeable with the area under discussion. Knowledgeable clients are much easier to work with because they initiate the process with a clear idea of what they require. The initial exploratory Q&A is dramatically shortened or eliminated if the audit directive is detailed. Organizations without BC staff will have a slightly longer path to follow but even that can be shortened with a little research to familiarize themselves with the subject matter.

The best place to start your research is tmcnet.com. The site has a plethora of information covering a wide range of topics, and you can also sign up for magazine subscriptions, eNewsletters, news alerts and

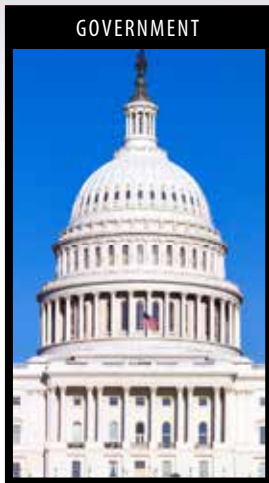
custom RSS feeds. The eNewsletters cover more than 100 topics so you can select just the ones that fit your requirements and modify the list as necessary. This may sound like the authors of this column are being self-serving but, frankly, TMC is one of the world's primary educational resources in the communications and technology field and a valuable research tool.

You only have one chance to survive your first disaster – don't blow it.

Max Schroeder is vice president emeritus of FaxCore Inc. (www.faxcore.com). Rich Tehrani is the president and group editor-in-chief at TMC (www.tmcnet.com) and conference chairman of ITEXPO.

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How Amazon Mayday Could Have Helped Weather the Toronto Ice Storm

Given the title of my column – Rethinking Communications – sometimes the best ideas come from either outside the communications space or from unexpected events. This time around, I'm drawing from both, out of which I think you'll come away thinking differently about your relationship with customers.

Part of this story has to do with Amazon Mayday, which was a very big story last November. The second half of the story is an unexpected event, namely the Toronto ice storm, which pretty much paralyzed the city for over a week around Christmas, as heavy ice knocked out power for more than 300,000 households. My home was one of them, and it was nine days before we got power back.

Like Amazon Mayday, this story didn't happen yesterday, but both have crossed my path, and stepping back, there are some noteworthy takeaways from this unlikely mashup for both the contact center and business-level decision makers.

Takeaway No. 1 - Agility is King

Agility is easier said than done, but it's one the best differentiators a business can have these days. Taken at face value, Mayday's 15-second response promise epitomizes agility, and while the outcome is all customers care about, you have to focus on the process. Delivering this level of service requires tremendous operational agility, and in the world of Internet commerce, Amazon wrote the book. Communications technologies have a role to play, but so do data analytics and ability to translate CRM data into rapid responses that solve problems on the spot. If you can find a better way to build customer loyalty, I'd like to hear about it.

Now, apply that thinking to the Toronto ice storm. While Toronto Hydro did a great job coping with the scale of havoc, customers were literally in the dark and in the cold. Its contact center was quickly overwhelmed, and deemed largely ineffective at helping customers when they really needed attention.

While Amazon has a strong motivation for offering Mayday service – namely, keeping its tablet buyers happy – Toronto

Hydro isn't faced with the risk of customer defection. Maybe so, but its lack of responsiveness or accessibility didn't earn the organization any loyalty points either. Nobody can predict the fallout of events like this, but there is a core set of touch points and experiences that are well enough understood and could have been better addressed with a more agile operation.

Takeaway No. 2 – Take a Holistic View of the Customer

I'm sure Toronto Hydro has a pretty good idea of what customers were going through, but it is really just one part of the solution. All forms of emergency service needed to be involved, along with hospitals, pharmacies, electricians, arborists, telcos, cablecos, the hospitality sector, grocery stores and a host of municipal relief services. This really speaks to the need for a military-style effort coordinated and managed by a centralized authority, but there was little evidence of this during the crisis.

In time, everything got done, and to my knowledge there were no fatalities. However, the city is still tallying up the enormous financial cost, and along the way, hopefully seeing how processes could have been better handled via a more integrated response plan. This may be more about fine-tuning than an overhaul, but in terms of the customer experience, a holistic view could tell them a lot about how to set and manage expectations. We all knew the power would come back at some point, but there was very little sense of when, what we needed to do, or how best to stay informed.

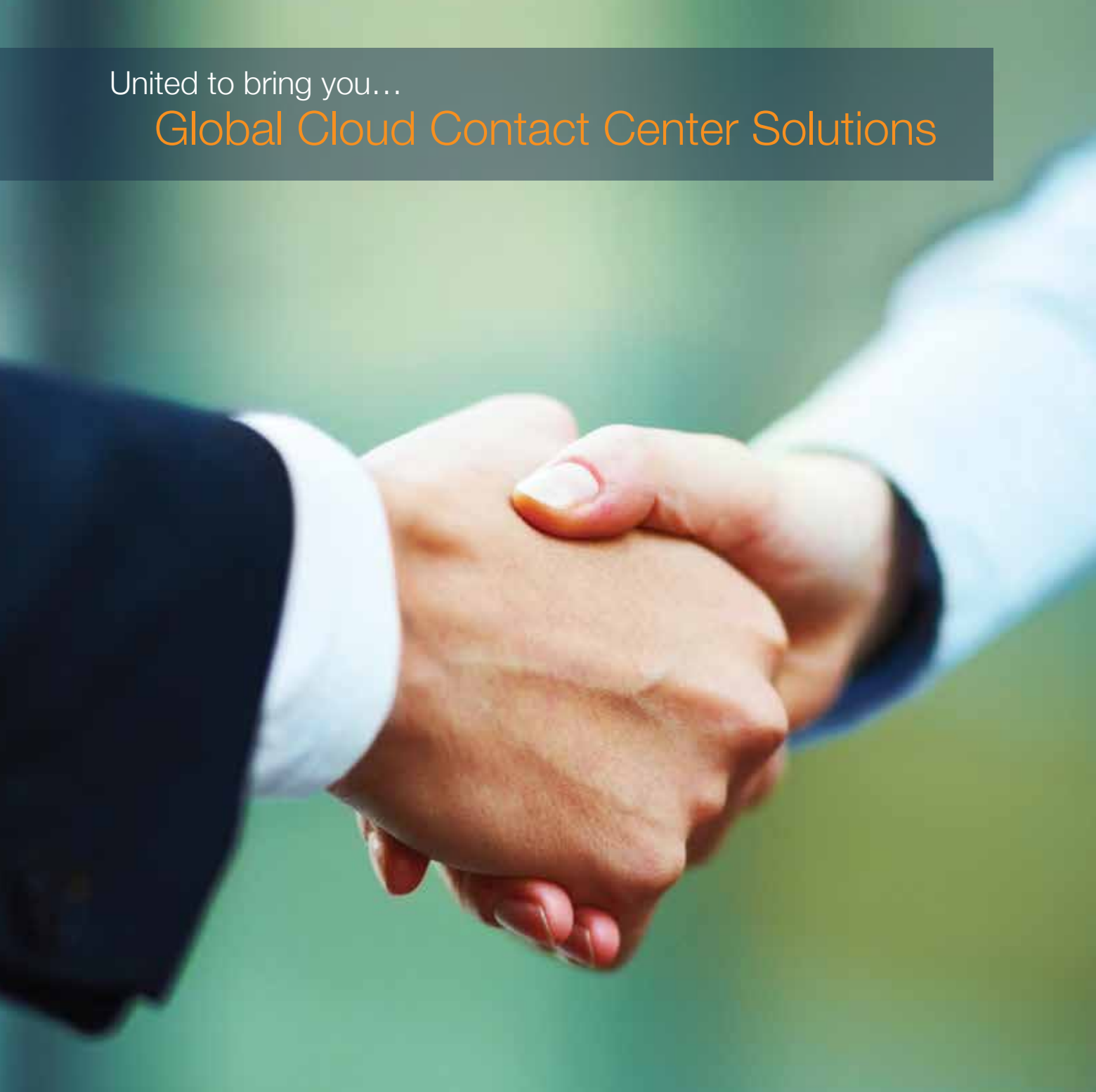
In times of crisis, you need to be accessible and responsive, and that's where thinking like Amazon comes into play. With today's communications tools, much more could have been done – such as smartphone apps to provide real-time updates – to ensure that customers knew that Toronto Hydro was seeing what they were seeing.

Jon Arnold is principal of J Arnold & Associates, an independent telecom analyst and marketing consultancy.

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By Steven Johnson



Technical Considerations for SIP Trunking

Before implementing SIP trunking, it is critical to evaluate your local area network to determine what may be needed ahead of time to ensure a successful VoIP deployment. Ask yourself the following questions to ensure that the deployment goes smoothly, takes minimal time and, of utmost importance, maintains the security of your network.

How good is your Internet connectivity? Voice over IP requires a steady, high-bandwidth connection. Evaluate service provider delivery to the edge. Will there be a separate MPLS network? If so, consider what that may mean for quality and cost.

Are the routers, switches and other components of your network up to the task? Throughputs and congestion points in the network can cause jitter and delay, which result in poor call quality. Before embarking on your SIP trunking installation, be sure that all routers and switches are up to date and provide adequate throughput for the number of sessions that they will need to support.

How mission-critical is voice to your organization? A failover solution may be important

to ensure ongoing communications in the case of a networking failure or malfunction.

To host or not to host, that is the question. Hosted SIP trunking services are ideal for organizations that do not have the technical resources to maintain a VoIP solution, and/or those that may grow and need bigger, better solutions that evolve with their success. Several SIP trunking service providers offer hosted solutions, with the key advantage of ongoing upgrades as new technologies are available.

There's also the question of where to put the PBX (with a public or private IP address). Here there is only one right answer: on the inside of the firewall with a private IP address. I know of no business that will put its critical network servers on a private IP address. SIP PBXs deliver mission-critical services and deserve to be protected by the firewall and on a private, non-routable IP address.

Will your firewall support SIP? Firewalls are designed to block unrecognized traffic. Unfortunately, traditional network

firewalls often do not understand or accept SIP, the standard protocol for SIP trunking and enterprise voice applications. If they do, they may attempt to support the protocol with a rudimentary application layer gateway, which often causes problems with SIP traffic and doesn't have the capabilities of a proxy solution nor the ability to normalize SIP signaling with a back-to-back user agent. The end result is that the firewall, designed to protect against the unknown, will simply block your voice, or VoIP, traffic or support only one-way media. Make sure you are using either a SIP-capable firewall or an enterprise session border controller that is specifically designed to handle the SIP protocol properly.

With proper planning and up-front action, SIP trunking is a better alternative than traditional telephony offering you lower recurring costs and the opportunity to expand to support unified communications for productivity gains.

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

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DC Circuit Overturns FCC Network Neutrality Rules



By William B. Wilhelm and Jeffrey R. Strenkowski

On January 14, 2014, the D.C. Circuit issued its opinion in *Verizon v. FCC*, finding that the FCC's Open Internet (i.e., network neutrality) rules prohibiting broadband providers from discriminating against third-party content and prohibiting the blocking of third-party content, exceed the FCC's authority under the Communications Act because it aimed to impose typical common carriage requirements on broadband providers.

While largely taking the teeth out of the FCC's Open Internet rules, the court also found that the FCC has authority over broadband Internet services under Section 706 of the Telecommunications Act, which directs the FCC to encourage broadband deployment on a reasonable and timely basis and take steps to accelerate broadband deployment when such deployment is lagging. This conclusion might prove useful if the FCC attempts to revise its Open Internet rules or decides to take other measures to foster broadband deployment.

The court also upheld the FCC's "Disclosure Rule," and hinted at the possibility that the FCC, on remand, might be able to adopt an anti-blocking rule that survives judicial review.

The court's decision was largely a victory for Verizon and other broadband providers that want more flexibility in the way they manage their networks and relationships with online services and content providers, end user customers, and other network operators. In a press release, Verizon stated that the decision will not change consumers' ability to access and use the Internet as they do now, but will allow more room for innovation, and consumers will have more choices to determine for themselves how they access and experience the Internet. The FCC's chairman released a statement that the FCC is considering all options, including an appeal.

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



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RCS or WebRTC? Maybe Both?

Mobile data services are becoming robust and fast enough to reliably support real-time multimedia streaming due to the introduction of 4G LTE networks. VoIP through OTT providers and VoLTE are starting to become ubiquitous. Vendors such as Skype are delivering services with a high consistent quality and the communications service providers are delivering VoLTE voice services at an increasing rate of adoption.

The next stage in this evolution of real-time services in the mobile environment is the delivery of multimedia services such as images, video, and other content through different technologies in the wireless network. There are two primary competing technologies vying to provide the vehicle for these services.

Data Services in an All-IP and LTE World

The first is the Rich Communications Suite, created in 2007 and managed by the GSMA. RCS was designed to deliver voice and multimedia services such as chat, file sharing, and video calling in a 4G LTE environment. RCS leverages the same IP multimedia subsystem infrastructure that is required for VoLTE communications.

The IMS architecture relies on SIP communications to manage the connection for RCS services. By utilizing the same architecture and infrastructure as the VoLTE services that are being delivered, CSPs are able to realize a significant savings in infrastructure costs and operational support.

HTTP Delivers Ubiquitous Transport

The primary competing technology is web real-time communication. WebRTC was released as open source in 2011 by Google and is backed by the World Wide Web Consortium. WebRTC, as the name implies, is an API that allows people to use the HTTP protocol through web browsers to connect with real-time communications such as voice, chat, video, and file sharing. WebRTC takes advantage of the ubiquitous nature of web browsers and the dominance of the HTTP protocol as an application transport method.

It is important to note that both RCS and WebRTC technologies require some directory services technology to find and connect

users and devices to each other. In RCS, the directory services lookup is performed through the IMS infrastructure and SIP addresses are located through a directory service to determine the IP address where the user resides. If this IP address is at a phone number, there is a process to map an E.164 number to an IP address through the ENUM DNS extension.

There is no one standard for the lookup of users through WebRTC and mapping them to an IP address for connection purposes. WebRTC is designed to be inherently agnostic to the signaling method to identify and connect users to each other. Some implementations leverage the existing SIP protocol and can leverage the IMS infrastructure already in place. Other models use identity information found in other applications such as DNS or even web identities found in social media applications like Facebook.

There may not be the technology standards fight between RCS and WebRTC that many people have been predicting.

Competing or Complimentary?

These technologies are not necessarily exclusive and competitive in all scenarios. As mentioned, WebRTC could utilize SIP as the signaling method to identify and connect users through the same IMS infrastructure that supports RCS. WebRTC is also designed to be used in any environment where there is access to an HTTP browser or user agent. This includes smartphones, PCs, laptops, tablets, and other devices that have HTTP agents available.

RCS is designed to be utilized through wireless networks that implement an IMS architecture. This means devices that have 4G LTE connections, for the most part. This is limited primarily to smartphones and tablets that have applications to take advantage of the RCS architecture. As such, RCS must be implemented and supported by the mobile CSP.

This means that there may not be the technology standards fight between RCS and WebRTC that many people have been predicting. It is probable that both real-time communications architectures will exist and even pleasantly co-exist for the foreseeable future.

Frank Yue is the technical marketing manager at F5 Networks (www.f5.com).



The Planet of the Small Apps

Home automation has been around for a while, but has been primarily pursued as an expensive hobby by well-heeled consumers supported by small home automation companies that provided the expertise to implement the technology integration and customization required for every installation. For early adopters of home automation solutions, the benefits were tangible, but so were the high costs needed to make it all work.

The home automation market is now undergoing revolutionary changes driven by new direct-to-consumer business models adopted by innovative start-ups that are enabled by new technology ecosystems. Leading the advances in new technology are common household appliances and devices such as TVs, home audio components, refrigerators, thermostats, security systems, and light bulbs and switches becoming smart devices. The second technology wave has been the emergence of control protocols that can operate these devices using wireless or wired connectivity inside the home.

These include a broad range of proprietary and open home automation-specific wireless protocols including Zigbee, Z-Wave, and Insteon, to name a few. Wireless connectivity protocols we are more familiar with such as Wi-Fi and Bluetooth are also being used. All of these control protocols allow smart device functions to be controlled locally by the user.

We will see the emergence of small apps that are configured by users to manage their smart devices, not just vendor-supplied programs tied to one device that perform a limited set of functions.

Home automation technology often gets lumped into a discussion of M2M and the Internet of Things with the assumption that smart devices require Internet access – which is not necessarily the case. We all seem to cope with not having electricity for short periods of time, but we would have a hard time dealing with not being able to turn on the lights or unlock the front door if our Internet connection went down. At minimum, some basic class of smart device functions needs to be

controlled locally without Internet access. For example, the Nest thermostat can be used to turn the temperature up and down as with a conventional thermostat. In fact the Nest thermostat is designed more like a conventional round Honeywell thermostat than current square LCD electronic thermostats to facilitate this mode of manual operation. Nest provides cloud access to advanced programming features and remote control through both a web portal and mobile device applications. Sonos, the wireless speaker manufacturer, allows the user to control speaker volume connected to a local audio source if all else fails.

But the control of smart devices is quickly moving toward requiring an Internet connection. New devices sometimes called hubs are being offered to consumers that act as a single point of access and operate over the Internet to control various smart devices from different manufacturers through one application interface to simplify device usage. For example, the Revolv automation hub implements various wireless protocols (currently Wi-Fi, Z-Wave, and Insteon) in one device to centralize all key smart device control functions through its own application. In this scenario, Sonos speakers, Phillips lighting, and Yale door locks are all controlled through the same application. By having one program control all the devices, users can create event or location-specific automation logic (referred to as geo-fencing) that opens the front door, turns on the lights, and adjusts the temperature as you drive into your neighborhood. Or the user can program activities that configure the audio and lighting in the house for entertaining or program time-of-day conditions that require a series of smart device functions to be performed in the morning including brewing the coffee. This is the next phase of home automation solutions that will put automation programming in the hands of the user. In this phase we will see the emergence of small apps that are configured by users to manage their smart devices, not just vendor-supplied programs tied to one device that perform a limited set of functions.

These capabilities will put a significant data session signaling load on current broadband networks. And the profile of this Internet traffic will be different in the sense that the data sessions will be short, but plentiful. Current DPI platforms that analyze and classify high traffic volumes will also need to scale to identify many more small app device sessions that home automation solutions will bring. This can present scaling challenges to DPI systems in fundamental architectural ways that they have not yet encountered.

Ken Osowski is senior director of solutions marketing at Procera Networks (www.proceranetworks.com).



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VoIP Logic Enables Next-Gen Service Providers to Take Control

What it means to be a telecommunications service provider has been undergoing a significant shift during the past several years. Market pressure on pricing and bundling is forcing service providers to more aggressively aggregate a range of services from various specialist wholesale providers, network operators and software developers to meet customer needs. At the same time, requirements for integrated service delivery make it harder to use a traditional reseller model – which bundles billing but not functionality – to compete. In essence, most of the communications, data and IT services that were previously sold separately have been mashed together and are, more often than not, sold together.

The as-a-service model has allowed service providers to move considerably closer to achieving the desired costs, control and broad range of service bundling than they could previously. This model

is beneficial because relying on the underlying platforms, infrastructure and software solutions of technology specialists enables service providers to focus more of their efforts on sales, marketing, support, and integrated delivery. However, historically, this model also typically required operators to lose considerable control and flexibility around their services to wholesale partners that deliver packaged white-label offerings. But it doesn't have to be that way, explained VoIP Logic CEO Micah Singer.

Telecommunications platform-as-a-service enables service providers to deliver new offerings while still playing an active role in creating customer solutions they believe will be most compelling in the marketplace. Rather than relying on one technology manufacturer or one service provider that runs a reseller program, there is an emerging option that has taken root that allows service providers to keep focus on the customer – selling and supporting – without giving up control and self-care. VoIP Logic has seen this model take root notably among smaller ser-

The VoIP Logic team, with CEO Micah Singer in the center



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vice providers that want cost and service control but that do not want to lose focus running infrastructure operations when their business success is determined by the customer relationship.

"We offer flexibility to service providers to make all of the important technical decisions that let them define their services and control their costs without taking on the burden of a lot of operational and capital overhead. This, in turn, allows them to step up from being white-label providers and offer their unique integrated offerings," said Singer.

Given the highly competitive marketplace and rising customer expectations, service providers need to be able to turn on a dime to keep up with market demand, Singer noted, and VoIP Logic can enable them to do that. In fact, it already does.

VoIP Logic today already offers PaaS capabilities to more than 30 service providers. These service providers, in aggregate work with over 3,000 enterprises comprised of more than 40,000 business end users. It's a field-proven and customer-tested solution.

The typical service provider that benefits the most from the VoIP Logic PaaS model has been in the business of selling to business users for a while, wants to use leading technology for telephony, and is interested to choose the customer-facing technology – phones, customer premise data routers, applications, etc. – and the network operators – origination and termination carriers, data network and DID providers but does not want to get lost in the myriad complexities of maintaining the behind-the-scenes components. It can be a challenge to transition from the mentality of a switchless reseller to a full-fledged service provider – as-a-service seems like the natural intersection to provide the desired control without the onerous ongoing fixed costs. VoIP Logic packages in an experienced engineering team, test and training resources and proprietary operations, administration, management and provisioning software to streamline the use of well-regarded best-of-breed software from leading manufacturers.

Specifically, the VoIP Logic platform is comprised of technology from BroadSoft – application server and associated components, Oracle Communications/Acme Packet – access session border controller for phone registration and VoIP firewall, Genband – VoIP peering session control for carrier network interconnection, Cisco – data networking, and IBM – hardware for robust commodity server resources. In a market of rapidly expanding and integrating services there is a growing list of add-on technology both provided by VoIP Logic and proposed by VoIP Logic's service provider partners that, taking advantage of the PaaS model, have the flexibility to add and integrate services based on outside technology at their own pace.

The VoIP Logic platform has a geographic component as well. The company uses data center collocation space in eight facilities – one in Los Angeles, two in New York City, two in Florida (in Miami and Tampa), two in London and one in Hong Kong. The facilities are in tier 1 hosting centers at TELEHOUSE, Tata Communications, Telx, NAP of the Americas, etc.

"Our role is to provide our service provider partners the best technologies – like BroadWorks, Acme and Genband, housed in

the most stable, resilient locations – like TELEHOUSE, and with an experienced team of engineers assuring maximal uptime," said Singer. "We provide this foundational infrastructure while ensuring that our partners have the control and flexibility to make operational decisions that are best for their businesses."

"VoIP Logic has seen tremendous growth over the past 7 years at our data center facilities in New York and London. I believe the success we have seen together can be attributed to their service focus and our responsiveness and disaster preparedness," said Fred Cannone, director of sales and marketing at TELEHOUSE. "Cheers to VoIP Logic for focusing on platform and doing it right."

Service provider's that work with VoIP Logic tend to focus on the basic and more advanced hosted PBX services sold to small and medium sized enterprises. As communications services have become more complex and demands have increased on service providers, VoIP Logic has been called upon to expand its platform to offer more end user focused technology – like call recording, call center features, more service provider controls – like advanced routing for quality and cost control, and more professional services expertise to deploy systems, and train service provider personnel to counter increased security threats.

There are a number of strong arguments to be made in favor of as-a-service outsourcing – perhaps none more significant than those expectations for operational outcome (uptime) and the economic argument. These two together form the basis for making a compelling business efficiency argument as VoIP Logic's Singer recently noted in his blog: "It is much more efficient for a PaaS provider to manage the shared technology and the shared operation team than for a service provider to invest in these capital and ongoing manpower costs," wrote Singer. "In addition, and perhaps even more relevant than cost, is experience. Through a greater volume of technical engineering work across many service providers, a PaaS organization develops significantly more knowledge about specific systems and manufacturers."

Operational outcome is a category of measurement that is difficult to quantify but can be the linchpin in deciding to opt for VoIP Logic. Because the technology used to deliver communications services is becoming more complex and specialized and there is a growing number of manufacturers found in integrated services, the bar on precision in technology support and experience is always rising. Opting for an experienced provider can make exponentially significant differences in service interruption time and resolving other dangerous – customer-affecting – incidents.

Service providers, resellers, agents and others interested in realizing the benefits of a PaaS solution will need some in-house engineering capabilities, said Singer. But once they commit to taking a more active role in the design of their services and the selection of their network partners, he added, they'll have the wherewithal to do more for their business customers and will be more flexible as market needs evolve – and that will better position new service providers to grow their businesses now and well into the future.

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Enterprise Collaboration Roundup

Collaboration means different things to different people, but increasingly enterprise collaboration involves video, document sharing, integration with back office systems, and mobile capabilities as well as stuff like voice, IM, and e-mail.

These capabilities are sometimes delivered as more siloed solutions, but some vendors try to bring many of the features together to deliver enterprise users with a seamless experience across various communications devices and modes. And many enterprise collaboration solutions are now offered in both on-premises and cloud-based options.

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8x8 Inc.'s Virtual Contact Center is a cloud-based single point solution or an integrated component of the company's Virtual Office telephony solution. Mid-size and distributed enterprises worldwide are increasingly adopting cloud-based alternatives to traditional PBX and call center systems and many, such as Merchant Warehouse and Replicon, are choosing to outsource both from a single vendor, deploying business VoIP phone service throughout the organization and call center services with local CRM integration in one or more departments. VCC 8.0 is now compatible with the latest versions of Chrome, Mozilla Firefox, and IE with no plugins or codes to download. New iPad, iPhone or Android mobile system status and administration enables off-site call center administration. Virtual queuing allows customers to request callbacks, eliminating sit on hold time while assisting management of call load peaks and valleys. Tenant's outbound e-mail communications are routed via the pre-configured internal SMTP servers. 8x8 customers can use their own SMTP server for security and regulatory compliance. The Historical Report Wizard offers more than 40 pre-defined report templates, and enables customized report parameters for reuse or duplication.

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companies develop unified communications and contact center applications based on communication flows and employee needs, unrestricted by technology silos. People don't need a technical background to create and enable speedy delivery of communication applications. The Avaya Aura Collaboration Environment brings rich communication capabilities into social, mobile, and cloud applications, and no detailed or specialized knowledge of communications or protocols is required.

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BroadSoft

www.broadsoft.com

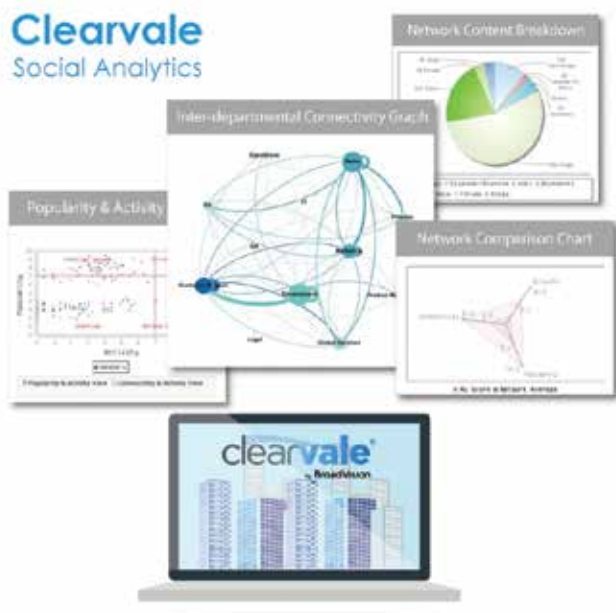


BroadSoft enables enterprise collaboration through a complete set of unified communications capabilities for service providers to deliver to their enterprise customers, including mobility, audio/videoconferencing, unified messaging, instant messaging and presence, web collabora-

tion, applications, call control, call center and unified messaging. These capabilities are enabled through the BroadWorks Telephony Application Server; BroadCloud, a hosted, cloud-based service delivery platform; and BroadTouch, which provides end users with intuitive user interfaces to access UC services across their preferred devices, including desktop computers, laptops, smartphones or tablets. BroadSoft accelerates and simplifies the delivery of UC solutions through UC-One – a comprehensive, open UC platform that combines all of the critical elements a service provider requires for rapid delivery of its UC solutions, including a single end user interface, full mobility, open APIs and defined market offerings. A key differentiator of UC-One is My Room – a virtual and customizable, always-available personal meeting room that can be accessed by users with an UC-One account. Service providers also have the flexibility to utilize BroadSoft's UC capabilities via BroadWorks server software that resides within the service provider's network, or through the BroadCloud hosted cloud platform.

BroadVision Inc.
www.broadvision.com

Clearvale enables businesses to connect and engage with



employees, partners, and customers; share anytime, anywhere, and on any device; and track business processes, sources of knowledge, and network adoption. Clearvale social ecosystems and hybrid networks allow organizations to create several social networks for their employees, customers, suppliers, and partners but manage these together as a coherent whole, rather than a series of disjointed projects. Clearvale hybrid networks allow for private, semi-private, and public collaboration in the same network. Organizations gain the ability to invite participants from different companies to collaborate seamlessly and securely within a Clearvale network. Clearvale's mobile applications (i.e. iPhone, iPad, Android) connect users across geographic regions, time zones, and work shifts. Additionally, Clearvale has an API to allow

social functionality to be embedded in other systems of record (i.e. finance, HR, CRM), and an external widget architecture for content display in a Clearvale page. Clearvale social analytics go beyond simple leaderboards, and provide network administrators with detailed data to not just identify key participants, but also formulate engagement strategies for further network adoption.

Breakthrough Technology Group
www.btrgroupinc.com

BTG Private Cloud Solutions combine its Private Cloud services, AppsAnyplace VDI platform, and SaaSAnyplace services to create a single, customized deployment that brings the benefits of the cloud to small, medium and large companies without sacrificing privacy, security, or choice. As BTG solutions are built with privacy in mind, customers receive their own private virtual environment or have it built on their own private blade environment. BTG Private Cloud marries portability, mobility and efficiency across all devices in a dynamic, scalable, private, and secure architecture. BTG's DataAnyplace, powered by Citrix ShareFile, is an enterprise-class, file-sharing and storage service that provides a secure and robust follow-me data solution that syncs across Windows, Mac, and virtual desktops. DataAnyplace seamlessly integrates with the IT environment to meet mobility requirements for a rich experience on any device. DataAnyplace allows IT to easily retain control and security of all users, and provide users instant access to their files, in sync across all of their devices. Users can sync files on all of their devices, including PC, Mac, tablets, and mobile phones. Also, DataAnyplace allows users to access data whenever and wherever, and works with popular tools such as MS Outlook. Changes are synced across all devices so users always know they're working with the most updated version.

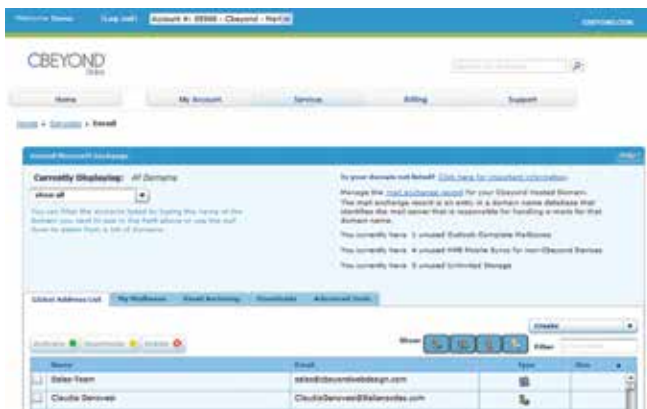
BurstPoint Networks
www.burstpoint.com



BurstPoint Networks provides a scalable and flexible video content creation and delivery platform, offering everything needed to take full advantage of high-definition live or recorded video. From video creation and capture, to editing and publishing, to distribution and delivery, users can drive all video communications activities from a single browser-based platform. VCP I-STREAM, the latest generation of BurstPoint's Video Communications Platform architecture, offers a single-box solution for delivering live video streaming, recording, publishing and content management. Through BurstPoint's patented technology

gy, I-STREAM supports more than 1,000 high-definition unicast/multicast video streams and 8HD or 24SD simultaneous ones all from a single, 1U box. The VCP I-GLOBAL product provides a video management and distribution solution that allows companies to capture video and centrally authorize, manage and deliver content to be consumed anywhere, anytime. Users can choose how they want to communicate and connect with others – video on-demand, digital signage, live streaming, or all three. Whether the video content resides on premises or in the cloud, is delivered to five people or five million, or is displayed on tablets, smartphones, or digital signs, the results are always the same: high quality, high-definition video accessed by key audiences when and where needed.

Cbeyond Inc. **www.cbeyond.com**



Cbeyond's Hosted Microsoft Exchange service provides a hosted e-mail solution that enables customers to conduct business effectively and successfully, independent of the employee's location. With Cbeyond's Hosted Microsoft Exchange, employees retain full access to e-mail from any web-enabled desktop, laptop, or mobile device. Cbeyond's Hosted Microsoft Exchange service provides businesses with business e-mail functionality including features that help employees collaborate and communicate more efficiently. The management of e-mail is convenient and feasible – adding, upgrading, and changing account mailboxes through one easy-to-use web portal, for instance – without the traditional hardware, license, time, and support costs associated with e-mail systems. With Cbeyond's Hosted Microsoft Exchange, business e-mail is hosted in Cbeyond's data center, which eliminates the costs associated with the administration, maintenance, and support of an on-premises e-mail system.

Cisco Systems **www.cisco.com**

Cisco's Collaboration portfolio of hardware and software endpoints and infrastructure solutions simplify the user experience, and enable users to work efficiently from virtually anywhere. Cisco offers video collaboration with new options from dedicated video endpoints to software applications through the browser. Cisco Jabber and Cisco Jabber Guest provide users with tools such as IM, voice, video and conferencing, and integrating TelePresence with Cisco Jabber and Cisco WebEx Meetings extends video collaboration even further.

The next generation MX300 endpoint, added to the TelePresence portfolio, offers 15-minute installation and H.264 SVC for third-party interoperability. Integrated voice, video, desktop sharing and chat are also offered through the cloud with Cisco's Hosted Collaboration Solution. The recently announced Cisco DX650 Smart Desk Phone combines the security of a deskphone with an Android-based smartphone interface for mobile-minded users and will utilize Cisco's new Intelligent Proximity capability to integrate mobile devices with the DX650 desktop phone. To provide collaboration across organizations of any size, Cisco is also delivering a packaged collaboration solution built for the midmarket. Cisco's Business Edition 6000 provides a full range of collaboration capabilities to scale from 25 to 1,000 users, from a single platform.

Deltek **www.deltek.com**

Kona Business is the premium version of Deltek's cloud-based social collaboration and productivity platform. It addresses project/task management and internal social communication in one easy-to-implement solution, offering both internal and external collaborators an environment to securely work together. This solution organizes everything in the context of the projects and groups they are connected to – spurring more effective collaboration. It offers an easy place to capture group discussions around specific topics of interest, shared task lists and calendars, templates for guiding teams on delivering repeatable projects within the company, has APIs and Deltek product integrations, polling, file-sharing integrations with Box, Dropbox, Google Drive, and Google Docs, and mobile access for Android and iOS devices.

InterCall **www.intercall.com**

InterCall, a subsidiary of West Corp., offers a collaboration product called Unified Meeting 5. It's an all-in-one solution for audio, video and web conferencing for meetings with up to 125 connections. With its simplified scheduling, streamlined management and seamless integration into common business tools, there is little room for user error. Meeting attendees don't even have to download a separate application, like with many other conferencing tools. Instead, users just go online and join with one click. Unified Meeting 5 also lets users enter a meeting without fumbling for a conference bridge or passcode from computers, mobile devices or tablets – making the process of joining a meeting much easier no matter where a person is located.



LifeSize, a division of Logitech **www.lifesize.com**

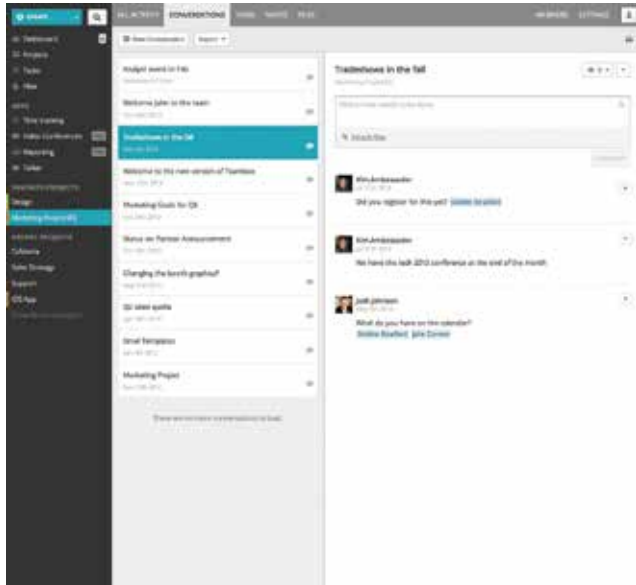
Suited for any meeting room environment, the LifeSize Icon system can be used to launch in seconds a videoconference with the single push of a button. Features such as consolidated meeting schedules and pop-up reminders ensure users won't miss a meeting. Integrated meeting listings let users quickly search for and

join meetings on demand. And name-based directories and enhanced search functionality provide quick and easy access to the person you want to connect with. The LifeSize Icon videoconferencing system is simple, intuitive and easy-to-use. Access robust LifeSize UVC core applications to stream and record video calls and presentations or host multiparty video calls with multiple locations on any device. The most powerful feature of the LifeSize Icon videoconferencing system is that all of these applications can be accessed with a simple click of a button, so less time is spent worrying about the technology behind how the conference works and more time is focused on the bigger picture.

Mitel Networks Corp. **www.mitel.com**

Mitel is a global provider of unified communications and collaboration software, contact center solutions and services that enable organizations to connect employees, partners and customers to streamline business anywhere, over any medium with the device of their choice. This includes MiVoice business phones and unified communications platforms; MiCollab solutions that combine collaboration, mobility and messaging; and MiContact Center solutions to empower immersive customer service. Mitel offers both on-premises and cloud solutions with an easy path to private, public and hybrid cloud. Through a single cloud-ready software stream, Mitel's Freedom architecture provides customers the flexibility and simplicity needed to support today's dynamic work environment. The solutions fit companies across the spectrum – from single-location businesses to multinationals.

Redbooth **www.redbooth.com**



Redbooth is a collaboration and communication platform that provides a single place for teams to collaborate and get work done. The solution eliminates the need for e-mail by creating tasks within the platform, offers chat and HD video capabilities, as well as a variety of other project management tools to keep teams focused and organized. The latest version of the product has the ability to add subtasks

and detailed descriptions to better manage complex projects. Projects often have multiple facets and activities, so the addition of subtasks allows for multiple task owners within each master task. Redbooth has capacity for 100 HD videoconference participants, iPhone and iPad support for screen sharing with annotation, and real-time whiteboard collaboration on iPad. The solution also includes executive dashboard and reporting capabilities and integration with additional external storage and workflow tools, including Box, Dropbox, and Google Drive.


snom **www.snom.com**



snom develops and manufactures SIP desktop phones and related equipment for enterprise and small business voice communications. snom features three families of IP phones: snom 8xx, 7xx and 3xx series that are fully interoperable with leading IP PBX and hosted VoIP platforms and services and deliver seamless integration and compatibility for fast and simplified deployment and management. Featuring a simple and intuitive user interface, rich features and a highly functional, utilitarian design, snom's IP desktop phones deliver crystal clear voice quality and powerful calling capabilities with the highest reliability and performance. snom also offers a complete line of IP business phones qualified and compatible with Microsoft Lync – the snom UC Edition. These standards-based phones have been tested and certified by Microsoft to work with its unified communications and collaboration platform Lync. snom also offers two Lync Optimized phones, HP 4110 and 4120, which are pre-installed with Microsoft's Lync software.

Sprint **www.sprint.com/convergence**

Sprint Complete Collaboration is a fully managed and hosted unified communications solution. Businesses can not only be more agile and enjoy a lower total cost of ownership but also improve collaboration among employees, no matter where they are located or what device they are using, thus boosting productivity and decision-making. Sprint's approach is comprehensive with SIP trunking and enhanced mobility included in the core product offering. SIP trunking provides more efficient trunking options through aggregation and bursting, as well as an end-to-end UC platform with a consistent experi-



ence across all collaboration tools, operating systems and endpoints. Extending cloud-based collaboration tools into the mobile environment allows users to get access from anywhere, join meetings, check presence and availability, and use instant messaging all while away from the office. Finally, Sprint Complete Collaboration is delivered over an all-IP network, helping to ensure the reliability and security demanded by real-time UC and collaboration applications, with class of service at no additional charge.

Yorktel

www.yorktel.com

An enterprise-class, cloud-based service portfolio for video conferencing, Yorktel VideoCloud enables customers

to leverage Yorktel's hosted video infrastructure in lieu of purchasing costly systems or to augment existing internal capabilities. VideoCloud is carrier network- and device-agnostic, and allows for multiple levels of connectivity ranging from standard H.323/SIP videoconferencing rooms, desktop and mobile conferencing clients to Lync Federation and telepresence systems interoperability. Yorktel VideoCloud supports full integration with Microsoft Lync and Office 365. Users on any Microsoft Lync clients, including enterprise on-premises Lync server or Microsoft Office 365, can use VideoCloud to connect to videoconferencing systems from Cisco, Polycom, Avaya (Radvision), LifeSize, Vidyo, and other vendors. VideoCloud

Virtual Meeting Room is a reservation-less, on-demand videoconferencing service interoperable with any H.323 or SIP compliant desktop, room or mobile videoconferencing client. VideoCloud Managed Conferencing Service is a fully managed conferencing service that provides cloud-based videoconferencing bridging, call control, and management to support multipoint room videoconferencing. VideoCloud B2B Service serves as an extension of the managed corporate videoconferencing environment and enables a company to schedule and host external, intercompany videoconference meetings. The VideoCloud B2B Service is secure for all participants because it is an outbound call for each company.



Cloud & Data Center

Big Blue Commits Big Dollars

IBM says it will commit more than \$1.2 billion to significantly expand its global cloud footprint. The company in 2014 expects to deliver cloud services from 40 data centers worldwide in 15 countries and five continents. It will open 15 new centers worldwide adding to the existing 13 global data centers from SoftLayer and 12 from IBM. Among the newest data centers to launch are China, Washington, D.C., Hong Kong, London, Japan, India, Canada, Mexico City and Dallas.

ADVA Powers Data Center Backbone

A company called dm Drugstore Corp. with approximately 50,000 employees and more than 7.6 billion euros annual revenue is using the ADVA FSP 3000 to transport mission-critical information between its data centers. The company's IT subsidiary, FILIADATA, operates several business continuity and high-availability solutions, including a high-end IBM Parallel Sysplex environment, which run on an ADVA-based backbone network

operated by TelemaxX. Stephan Sluzewski, technical manager at TelemaxX, said: "When FILIADATA discussed the need to connect IBM mainframes in a Parallel Sysplex over more than 10 kilometers, there was only one clear option. The ADVA FSP 3000 is the perfect fit for the data center environment."

Cloud Caucus Endorses Congressional Efforts

The Congressional Cloud Caucus got support from another cloud caucus recently when the non-profit, non-partisan Cloud Computing Caucus Advisory Group endorsed the Congressional group and its efforts. The Cloud Computing Caucus Advisory Group includes both government and private industry, and was formed to inform constituents and others of the key cloud issues. The federal government three years ago came out with a Cloud First mandate. The idea says that anything that can be done on the cloud should be, and that the cloud should be considered

first. Research house MeriTalk says federal agencies are saving \$5.5 billion by using the cloud, but if more aggressive steps are taken that could rise to \$12 billion a year.

AVG Expands Offering

In October of 2012, AVG Technologies made a major push into the MSP space by releasing CloudCare. CloudCare is the main tool AVG pitches to MSPs and even has a special portal to serve that channel. CloudCare helps MSP partners by providing administration of customer sites through the cloud. Like some of its consumer software, MSPs can use CloudCare for free, at least for now. The tool includes custom reports, alerts, single click product deactivation or installation, and automatic upgrades. And recently AVG revamped the tool by adding a module that integrates CloudCare Online Backup with the AVG Managed Workplace remote monitoring & management system. Now MSPs can manage client backups from a single Managed Workplace dashboard.

Lync Your Enterprise Network

More Lync Qualified SBCs Than Any Other Provider

Whether inside or outside the four walls of the enterprise, Microsoft Lync enables users to communicate securely and stay connected with colleagues and customers, from virtually wherever they choose.

Integrating Sonus SBCs into your Lync deployments helps your Unified Communications vision become a reality. These powerful network devices protect, secure, simplify and standardize real-time, SIP-based multimedia communications, including voice over IP (VoIP) and video.



A recent study from Forrester indicated an average of nearly \$3 million first year savings across 12 companies that implemented Lync .

Learn how Lync and Sonus can help you increase your profitability. Call 1-855-GO-SONUS today.

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Cloud Communications & The Survival of the Fittest

What to Expect in the Year Ahead

You don't have to be a psychic to see what's coming for the telecom industry. A glut of providers is fighting it out on a fiercely competitive battlefield, and only the most creative and innovative among them are likely to survive. Increased consolidation and the deployment of more cloud-based offerings will be two visible investments that will differentiate the winners from the losers.

The Stage Is Set for Consolidation

The Wall Street Journal reports that global telecom mergers and acquisitions gained significant momentum throughout 2013. In Europe, where most of the action has taken place, the value of telecom M&A activity nearly doubled in the first six months of 2013 to almost \$60 billion – more than any other sector, and nearly

a fifth of all European M&A. Experts expect telecom consolidation to accelerate globally heading into 2014 in response to intense competitive pressures and increasing regulatory challenges.

Only a handful of operators dominate the Chinese and American markets, compared to some 10 in India and hundreds

– yes, hundreds – across the European Union. Recent infrastructure-sharing partnerships between major Indian operators signal an about-face in that country's hypercompetitive telecom business environment. In fact, the Telecom Regulatory Authority of India expects struggling operators to merge or be acquired by market leaders in 2014 in an attempt to improve the operators' balance sheets and services.

Meanwhile, the EU's Commission for the Digital Agenda is pushing disruptive legislation to create a single transnational mobile phone and Internet services market. Operators have been vocal in their opposition, but Commission Vice



Cloud and SaaS provide the repeatable processes and application-agnostic solutions that allow providers to boost long-term return on investment as they make their way into new markets.

President Neelie Kroes lays it on the line, saying: "Revenues are down, investments are weak, expansion is unattractive. [Telecom providers] can't reach the scale to compete globally, while ordinary users just see poor connectivity, a narrow range of choices, and continued reminders of national borders.... The telecoms sector will ultimately benefit from this [legislation]."

There's no doubt that consumers stand to benefit from these changes. Across Europe and other parts of the world, bill shock from unexpected usage fees – in part the result of unpredictable roaming charges – draws widespread consumer ire, to say nothing of connectivity issues that prevent consumers from accessing the massive amounts they continue to expect. But providers have plenty to gain, too. The Commission believes that access to new markets will more than make up for any loss in individual operator revenue.

EU regulators have a history of obstructing telecom consolidation, but Kroes believes that a loosening of strict M&A regulations can stimulate job growth and promote a more robust European economy. If that happens, and it looks like it will to some degree, European telecom consolidation will take off. And regulatory efforts will take off right along with it.

Already we see momentum: Vodafone, the second-largest mobile network operator in the world, just purchased Germany's largest cable company, Kabel Deutschland. U.S.-based international cable giant Liberty Global, which recently purchased Virgin Media, also expressed interest in the German company. Hong Kong's Hutchison Whampoa purchased Telefonica's Irish subsidiary in 2013 after acquiring Orange Austria in 2012. AT&T has made no secret of its interest in acquiring a European asset, and redoubtable brands Telefonica and EE were recently floated as possible targets.

While consolidation grabs headlines and shifts the balance of power in the industry, consolidation alone can't possibly meet growing global demand for more data and increased service offerings at lower prices. If anything, massive consolidation can compound some of the very issues the commission hopes to curtail with its proposed regulations. On the other hand, the benefits of consolidation can be greatly enhanced with organizational agility, operational efficiency, innovative offerings, and faster time to market. And that's where the cloud comes in.

Agility, Flexibility, and Innovation in the Cloud

Despite the attractive growth potential in market consolidation scenarios, global voice revenues are expected to fall below the 60 percent threshold this year, and many operators fear margins could shrink from the current 30 percent range to low double-digits over the next five years. The paradox of increased market opportunity and sharply declining margins combined with data-hungry, price-sensitive consumers forces operators of all stripes to reevaluate traditional telecom business models.

To extend and defend their value propositions, operators need flexible cost structures and dynamic new revenue streams; to break away from the pack and forge a path to future success, they must adapt to changing consumer requirements at both the operational and systems levels. Cloud-based delivery and software-as-a-service models can help. Cloud and SaaS provide the repeatable processes and application-agnostic solutions that allow providers to boost long-term return on investment as they make their way into new markets.

Moving business and operations systems to the cloud offers the agility and efficiency telecom operators must embrace to develop and support next-generation products and services, particularly given the ongoing margin pressure and consumer demand for new offerings. Earlier inflection points in the market have largely been driven by one technology or one business change, but today's context is driven by a confluence of disruptive new technologies that dramatically affect how, when, and where business gets done. The cloud supports innovation by reducing the time to profit for new offerings because the underlying infrastructure can more easily adapt to meet market change in near-real time.

It's also important to keep in mind that moving to cloud-based models or over-the-top offerings doesn't mean operators have to rip and replace existing B/OSS systems. Cloud-based service delivery supports flexible, enabling technologies that eliminate product and process density from the start. It also engenders entirely new business models, including all kinds of pay-as-you-go services. Providers can build new revenue streams, increase profit, offset revenue decline, and decrease margin pressure on traditional businesses – all of which are critical to the long-term growth and success of today's operators, and all of which can be deployed without forcing operators to build new systems from scratch.

Once developed, services must be supported through flexible and efficient revenue-management capabilities with a mix of manual and automated standards, which are also supported by cloud-based delivery. Critical processes that include charging and billing, network mediation, and partner settlement can all be supported seamlessly and efficiently in the cloud. If done correctly, cloud-enabled services can deliver a sophisticated, comprehensive B/OSS engine – all from a secure, enterprise-grade cloud platform.

There's no denying that the telecom industry has enjoyed a significant increase in demand for mobile devices this year, but 2014 is shaping up to be a year of change. Widespread consolidation and an accelerated shift to cloud services are two of the biggest change agents on the horizon – and agility, flexibility, and innovation are their watchwords.

Alam Gill is senior vice president of CSG Managed Services at CSG International (www.csgi.com).

By Peter Radizeski

Why the Channel Will Matter in 2014

The channel is seeing resurgence since the fourth quarter of last year. Service providers are looking to the channel for a number of things that the direct sales force can't provide.

One thing is a complete solution. Sane service providers know that they can't be all things to all customers. Also, customers may not want to rip-and-replace pieces of their infrastructure; they may want components added to enhance what they have. Partners are best suited for that.

Migration to the cloud is a many step process. No two projects are the same. Partners can be integral in managing the project of cloud migration to ensure client satisfaction, especially when privacy, security or compliance issues may be involved.

Mobility, cloud and security require flexibility, which direct sales reps may not be able to provide. In most cases, these silos will have hybrid solutions – some in-house, some in cloud, some in public, some in private. That requires selling across product lines and across vendor lines, in a way with which partners are already comfortable.

Sane service providers are realizing that investing in the channel allows the customer base to get the best solution delivered. Not only has the buyer changed in the organization, but so has how and why technology is being purchased. Customers want solutions – really, they want outcomes. Partners are best able to interface with customers to deliver on that.

When the market moves from a commodity product to a complex solution, like it has with telecom becoming a foundation for applications and business needs as never before, partners have a view of the customer that goes beyond the service provider's product line. Service providers are looking at a piece of the puzzle; partners usually have a view of many more puzzle pieces.

The buying process is changing. The products being sold are if not more complex, then at least require more labor for deployment. For these reasons and others, the channel is back in the good graces with the service provider world.

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

Interlink Adds Spirent Tools

IT product and services distributor Interlink Communications now offers its partners network testing tools from Spirent Communications. The Spirent tools are being made available to Interlink's U.S.-based VARs, systems integrators and solution providers. The Spirent test gear can be used by the IT customers themselves, or service providers can use it, to monitor, troubleshoot and optimize the networks they manage. The gear can be used to test all network layers, tracking Wi-Fi offload, access, mobile packet core performance, and cloud infrastructure.

Level 3 Normalizes Contracts

Level 3 Communications recently announced it has successfully normalized contracts with a majority of its indirect sales partners. The development is a major milestone achievement for Level 3, given the hard push-back from most of the channel partners, according to a TMCnet story on the matter. The announcement to normalize the contracts was made in 2011 following the merger of Level 3 Communications with Global Crossing, and the plan was rolled out in January 2013. However, Level 3 Communications was unable to garner support

from all the channel partners for the move, a problem which was further aggravated by the resignation of Michael Jerich, the then chief of channel program at Level 3. "We have successfully signed all of the agents that had indicated they were going to sign with Level 3. That's not counting about 20 percent of the agents with direct agreements who have opted to roll their bases under a master agency," said Garrett Gee, the current chief of channel program at Level 3 Communications. "What we did was eliminate those parties from the negotiation process because they were essentially sitting on the bench, waiting for us to come to terms with the rest of the partners, i.e. master agents, so they could move their bases. There was a variance between Global Crossing and Level 3 in the way that we paid. Based on the tiers that were developed, there may be some partners that have more favorable terms with regard to percentages and there may be some partners that had less favorable terms."

Checkpoint Signs with Halo Metrics

Retailer loss prevention solutions provider Checkpoint Systems has signed a master distributor agreement with Halo Metrics to support Canadian retailers.

Halo Metrics is a top source for Canadian retailers seeking merchandising and loss prevention solutions. Under the terms of the agreement, Halo Metrics will actively market, sell, install and service Checkpoint's electronic article surveillance product portfolio for all retailers in the Canadian market that are not currently part of Checkpoint's national account program. Checkpoint will continue to directly support its Canadian national accounts on a direct basis through its sales and customer Merchandise Availability team offices in Markham and Winnipeg.

Swisscom selects cVidya

Swisscom has deployed cVidya's Prospero system to manage the performance of 13,000 internal sales executives and external channel distributors. Using the sales and service performance management solution, Swisscom can set business rules, adapt incentives to sales strategy and manage large volumes of commission payments. Prospero also provides individual members of the sales force with a web portal where they can track their commission on a daily basis and analyze how they can optimize their performance within the incentive framework.



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By Paula Bernier

The Latest in UC & IP PBX

Big Vendors Amass More Power; Mobility, Video Become Table Stakes

The business communications landscape continues to shift, and among the forces driving the change are new ways of thinking about communications, and greater market power by just a couple of the strongest UC vendors.

Businesses no longer view communications as telephony alone, rather they now think about it in terms of unified communications, notes Diane Myers, principal analyst for VoIP, UC and IMS at Infonetics Research. Clearly, solutions providers from both the PBX and service provider camps have been listening – and have responded by offering up UC tools and services that integrate a variety of communications options, and also bring mobile users into the mix. Most UC solutions now offer a downloadable client for mobile users, says Myers, who adds that she can't think of a major UC system that doesn't also include video capabilities.

For example, RingCentral in January introduced a new cloud-based solution called RingCentral Office Enterprise Edition that delivers an integrated conferencing, fax, text and voice experience across all endpoints, including desktop phones, PCs and Macs and mobile devices. The premium version of the offering adds to that call recording and cloud integrations. And the enterprise version ups the ante further, with multipoint mobile and desktop high-definition video, and mobile and desktop web conferencing.

RingCentral says one of its differentiators in the marketplace is its price and packaging. The standard offering sells for \$24.99 per user per month. The premium option is provided for \$34.99 per user per month. And the enterprise version is priced at \$44.99 per user per month. Praful Shah, RingCentral's senior vice president of strategy, says that's a very good deal considering GoToMeeting and WebEx each sell for \$49.99 per user per month, and that's only for the conferencing piece.

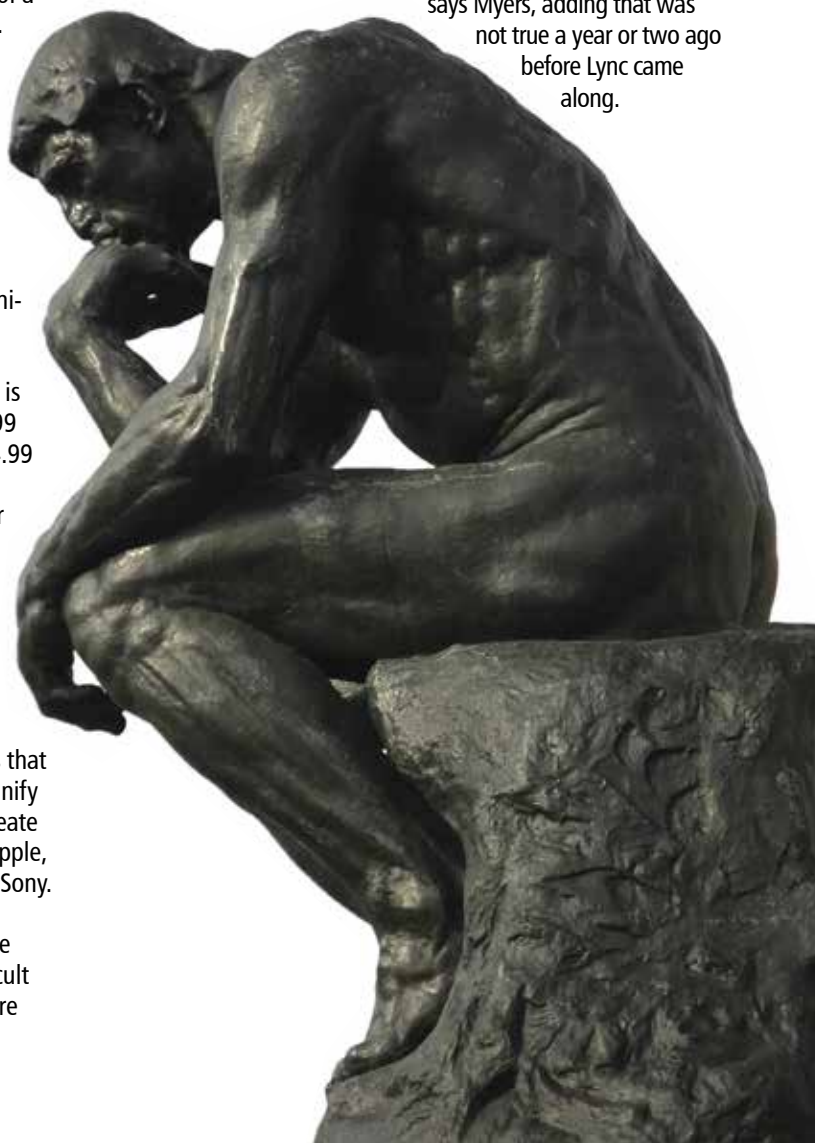
The simple user interface should be a differentiator for Project Ansible, a UC solution expected to be generally available this spring from Unify (the company formerly known as Siemens Enterprise Communications), says Myers, who adds that this offering delivers a "really truly integrated experience". Unify partnered with groovy German design firm frog design to create the interface. Frog has created award-winning designs for Apple, and worked with other top-shelf companies like Disney and Sony.

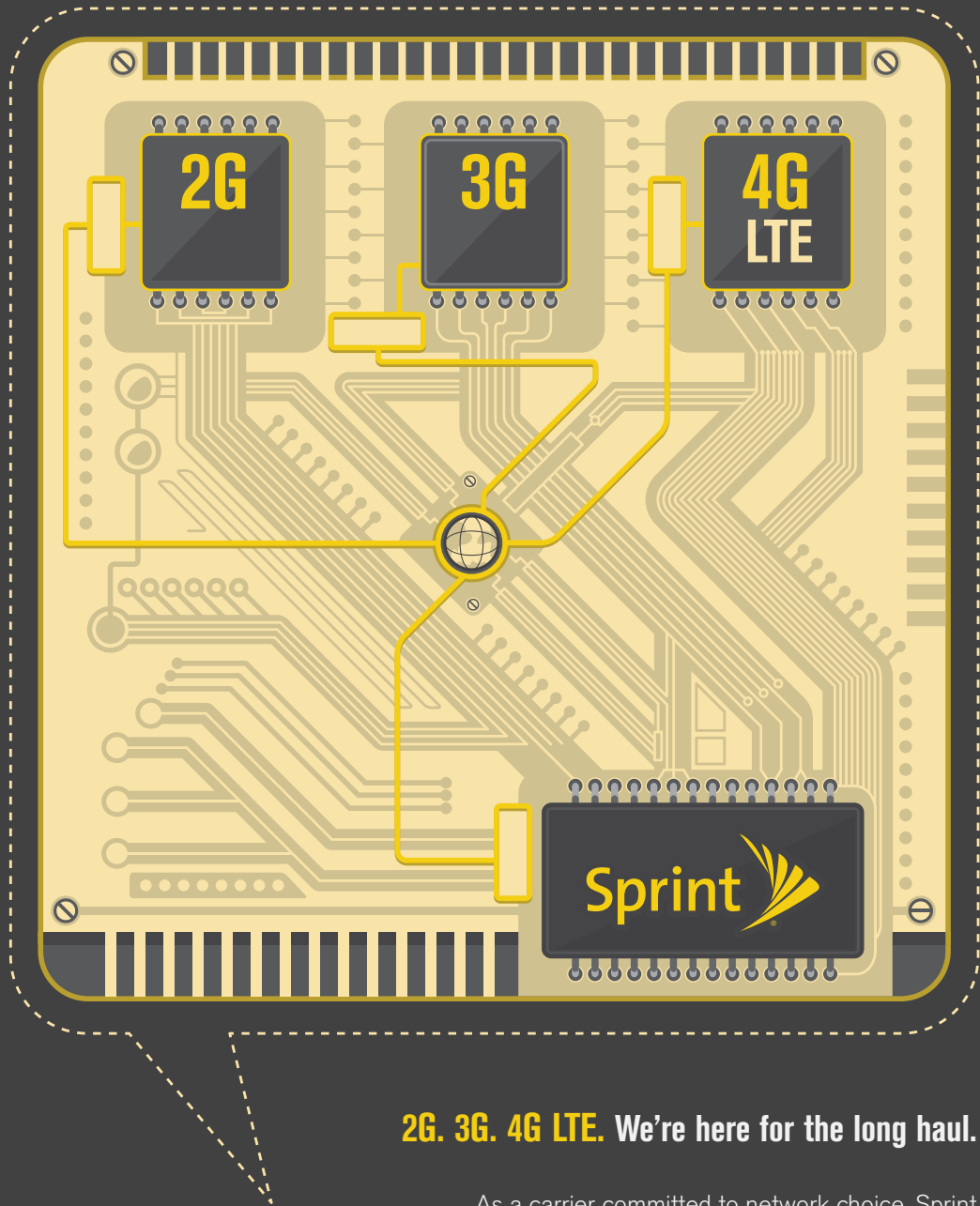
Whatever differentiators UC solutions providers bring to the table, however, Myers says it's becoming increasingly difficult for UC service providers and UC/PBX hardware and software

outfits to compete with the very largest players. That's because UC gives the big suppliers an even stronger lock on their customers, who no longer have to call on other vendors for one or more pieces of the communication puzzle.

It's also due in part to the introduction of Microsoft Lync, which Myers says is the most disruptive force in UC today. Lync is not disruptive because it's particularly innovative, she explains. It is shaking things up because it allows Microsoft to address a wide range of UC requirements – including IM, collaboration, and (more recently) PBX functionality – and to leverage its ubiquitous presence on business computers and relationships with business customers to win and keep users.

Many companies in the high-end mid market and large enterprise space are now saying they will either go with Cisco or Microsoft, says Myers, adding that was not true a year or two ago before Lync came along.





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Visit m2m.sprint.com/sprint2g to learn more about Sprint's network commitment to 2G or to attend a seminar near you.



By Paula Bernier

VoIP Dialing Emphasizes Benefits of SIP, Talks About What's Next

A company called VoIP Dialing Corp., which sells SIP trunks, bulk SMS marketing, and VoIP systems nationwide, will soon expand its portfolio with the introduction of a softphone.

That's the word from VoIP Dialing CEO Ben Nabon, who spoke with INTERNET TELEPHONY in mid January. Nabon said that the softphone, which VoIP Dialing will trademark, "will change the way people work with it." He adds that the VoIP Dialing softphone will be "good for calls centers and intranets, and definitely a product that at some point will go to the consumer."

VoIP Dialing expects to unveil the softphone officially in the March to April timeframe.

The company on a separate front also plans to advance its SMS platform. Nabon did not provide further detail on the company's SMS platform expansion efforts.

In any case, Nabon emphasized that VoIP Dialing's core offering is its SIP trunk solutions. And business for SIP trunks is booming, he said. That's because SIP trunks give businesses the flexibility to add lines dynamically and without

extra costs. That results in huge benefits to businesses as far as budgeting, he says. And he adds that the quality of calls running over such services are far better than those running on regular phone lines.

Because VoIP turns calls into data, Nabon added, it also enables businesses to leverage that data to better understand and improve processes related to those calls, the behavior of customers, and activities of customer service employees. To help assist businesses in putting this data to use, VoIP Dialing can integrate calling data in with its customers' CRM and reporting systems "to make it much easier to succeed in business," says Nabon.

VoIP Dialing sells its offerings to businesses, primarily larger entities with 50,000 minutes or more of voice traffic a month. Its direct sales staff emphasizes the value the company delivers in terms of simplicity and quality. Nabon added that VoIP Dialing also can help its call center customers increase their call center performance by offering tips in this realm.

While VoIP Dialing today relies solely on a direct sales staff to get its offerings to market, it plans to launch a channel program later this year.



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Microsoft Names New Leader

Microsoft Corp. has appointed Satya Nadella as CEO and a board member. He has been with the company since 1992 and previously served as executive vice president of Microsoft's Cloud and Enterprise group. Bill Gates, who served as chairman, going forward will take a more active role in the company as the new technology advisor. John Thompson, lead independent director for the board, becomes chairman.

ShoreTel Goes Hawaiian

The County of Maui, Hawaii, will use ShoreTel technology to outfit its approximately 1,600 employees spanning 65 sites with unified communications capabilities and, in the process, lower its telecommunications costs by 20 percent annually.

Aastra Acquires Telepo

Aastra Technologies Ltd.'s European subsidiary has acquired Telepo Ltd., a Sweden-based provider of cloud-based, multi-tenant enterprise communication solutions. Telepo's web-centric solution offers mobile integration, PBX and call center features, and pre-built web portals for multiple tiers of administrators. Telepo in 2013 saw more than 40 percent growth in active users as compared to 2012. The company, which is profitable, ended the year with more than 90,000 active users.

Telepoint Launches Neptune

Neptune Voice Services Platform is a new offering from Telepoint Global Hosting Services that offers an efficient and scalable cloud-based platform for VoIP service providers and resellers, enabling them to buy and sell minutes globally without any hardware infrastructure investment. "For the first time, Telepoint Global Hosting is making its proven wholesale voice platform available to any small and mid-size company for fractions of what these operations would typically cost," said Telepoint Global Hosting Services Partner and CTO Russ Bierschbach. "In addition to allowing more companies to compete, the Neptune Platform offers real-time reporting and monitoring, includes capabilities to increase responsiveness to market demands and, ultimately, allows service providers to maximize profits and minimize losses."

Broadview Powers Spectrotel

Spectrotel, a New Jersey-based competitive local exchange carrier which serves customers nationwide, recently introduced new PBX cloud solutions, which are powered by Broadview Networks' White Label Cloud Phone System.

"The hosted VoIP market is growing at an accelerated rate as more customers adopt this innovative technology," said Michael Hou, Broadview's Senior Vice President of Wholesale Services. "Broadview's White Label Cloud Phone System lets businesses of all sizes enter the market under their own brand and build their own revenue without investing thousands of dollars. We have been a leader in the hosted IP segment for many years and are excited that Spectrotel and others choose to leverage our experience to help their customers meet their business objectives."

Digital Rapids Expands Platform

New software components to the Digital Rapids Transcode Manager 2 automated media processing software and its underlying Kayak technology platform offer support for mixed-platform distributed workflows including ProRes encoding on Mac OS X; DVCPro and DVCPro HD input format support; and new video mixing features for overlaying text, graphics, timecode and additional video such as full-motion logo bugs into rich, multi-layered compositions. Darren Gallipeau, product manager at Digital Rapids, commented: "The new video mixing features also create new efficiencies for our users by enabling them to easily create visually customized and branded variants of their content as it is being processed into its final deliverable formats."

F&S Comments on E-SBCs

The Frost & Sullivan report "Global Enterprise Media Gateway and Session Border Controller Market," says that the media gateway still has quite a bit of life left to it as a way to enable businesses to support legacy platforms but adds that the growth of E-SBCs will carry on as businesses look to next generation communications technology. The E-SBC market, according to the firm, was worth \$1.98 billion in 2012 and is on track to reach \$2.54 billion in 2019.

Telegeography Talks Skype

Skype's on-net (Skype to Skype) international traffic grew 36 percent in 2013, to 214 billion minutes, according to TeleGeography. International telephone traffic from fixed and mobile phones continues to grow as well, increasing an estimated 7 percent in 2013, to 547 billion minutes. However, recent growth rates are well below the 13 percent average that carriers posted over many of the past 20 years, and the benefits of traffic growth have largely been offset by steady price declines. While the volume of international telephone traffic remains far larger than international Skype traffic, Skype's minutes are growing much more rapidly.



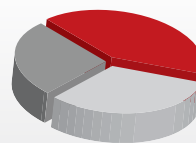
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Mobile Apps Help Organizations Work More Efficiently, Effectively

Mobile communications is transforming business. What people previously did at desktop computers they now do on smartphones and cellular-enabled laptops. So organizations now are creating mobile apps to enable their employees to be more effective while on the move.

Starbucks, for example, partnered with business process outsourcing company Appian to provide its marketing staff with tools to manage inventory, pricing and promotions for its non-coffee products (like coffee mugs and CDs) at the beverage company's retail locations. The IT staff was too busy with work related to Starbucks' core coffee products, so they used Appian for the other products, explains Appian CTO Mike Beckley.

It worked out so well that Starbucks later tapped Appian to mobile-enable its store inspection application, which Appian was able to do within weeks. Now Starbucks' store inspectors can download the app and use GPS to get the locations of the stores they need to visit. When they arrive at the stores they can take hundreds of pictures, and Appian compresses and captures those pictures, and can also collect inspectors' voice annotations.

So now inspectors can in real time record and store impressions of their visits while they are still there, explains Beckley, so they don't have to wait until they get to the office and do data entry. That can save time and result in the input of more detailed and accurate information. What's more, inspectors can leverage the app collaborate while on-site, offering ideas for improvement before they leave, he adds.

The new generation of mobile apps can enable true parity with the desktop, says Beckley, while first-generation mobile apps tended to be one trick ponies. And while most IT projects fail, Beckley adds, most mobile apps do not fail because if they're

properly designed they are so easy to use they meet their intended goal.

This is just one example of how the Appian platform can be and is being used. Appian, which has millions of licensed user seats, allows businesses to build applications to implement strategy in software without actually writing code. What results can help businesses do case management, handle customer service, address government reporting, track pharmaceutical trials, or just about anything else.

Appian's platform includes a visual design environment to enable the design and improvement of mobile apps, and to make those capabilities available on all mobile devices, desktops, and web browsers. The platform also has administrative tools to define workflows, business collaboration features, interfaces, and real-time business intelligence and analytics.

Gartner estimates that the mobile application development platform market was worth \$484 million in license revenue in 2012. In addition to Appian, others in this space include IBM and Pegasystems.

Big blue in early 2010 bought Lombardi, a business process management software and services firm that helps organizations automate and integrate business processes in an effort to be more efficient and lower costs. Two years later IBM added Worklight to its arsenal. That, as IDG reported at the time, gave the company a range of cross-platform mobile application development technologies.

BPM and CRM company Pegasystems Inc. in October of last year announced plans to buy Antenna Software, a leader in the Gartner 2013 Magic Quadrant for Mobile Applications Development Platforms.

"Traditional mobile technology can lead to separate channel-specific applications which hamper customer service and efficient operations," said Alan Trefler, founder and CEO of Pegasystems.

"Pega's distinctive customer-centric approach to mobility enables business users and IT to create optimal customer experiences across channels and devices. We believe that mobile devices should seamlessly operate with processes and cases to drive work to done. Pega and Antenna coming together offers our collective clients state-of-the-art mobile development, responsive UIs, device management and cloud-based Backend-as-a-Service."

Steve Kraus, senior director of product marketing for CRM Solutions at Pegasystems, recently told INTERNET TELEPHONY that leading customer service organizations tell him they need to become more agile and more simply engage with their customers regardless of channel or device.

"The leaders of customer-facing organizations want to capture their business goals, best practice procedures, and policies directly into a working application, one that engages their customers and employees in an intuitive manner," Kraus said. "And as they get feedback from their employees, customers and the systems themselves they need to rapidly and continuously adapt. As regulations change and new products come to market they need to support those new requirements without missing a beat, something they cannot do if that requires a new customization or changes in multiple applications."

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Video

Blue Jeans Brings Together What Had Been Separate Islands of Videoconferencing

Using the telephone is a no-brainer. You simply pick it up, dial a number, wait for a ring or busy signal, talk or leave a message when there's an answer, and end the call when you're done. It doesn't matter whether you're on a wireline phone on one service provider network and the called party is on a mobile served by another. It just works.

Once videoconferencing works as easily, affordably and ubiquitously, industry pundits have long told us, it will become as common as a phone call.

As anyone reading this magazine probably already knows, video communications has come a long way in recent years. Expensive room-based videoconference rooms have been joined in the marketplace by more affordable room solutions as well as products that enable workers to videoconference from their desktops, laptops, and even smartphones. New cloud-based videoconferencing services from a wide variety of suppliers now make this kind of communication and collaboration possible on a pay-as-you-go basis. And one offering on the market now builds bridges between different videoconferencing services, devices, and codecs – so that anybody on any device and any service, anywhere can quickly and easily initiate and/or participate in a videoconference.

That company is Blue Jeans Network. The cloud-based videoconferencing service provider is the only service in the world that can bring into one video meeting users of room-based systems from such companies as Cisco and Polycom, and people on computers, laptops, and other mobile devices, said Jay O'Connor, chief marketing officer.

Blue Jeans enables companies that already have invested in room-based systems to get more out of those solutions. It makes videoconferencing available to a wider swath of companies and end user devices. And, perhaps most importantly, it brings together into one environment people and devices that would otherwise be prevented from connecting via videoconference due to services and systems that operate as islands – allowing only those using select endpoints (like one brand of room-based videoconference system) or employing select capabilities or

services (like Facetime, Skype or Vidyos) to come together.

Meeting invites from Blue Jeans Network users offer different ways to join the videoconference, so meeting participants don't have to go looking for that information. Users of room-based system can just get on the video call automatically. People connecting via a browser must get a plugin. Wireless device users can use the Blue Jeans app.

Robb Woods, Blue Jeans head of sales engineering, said that the company also differentiates itself in the market by offering business-quality experiences. It runs its own BGP routing sessions, which gives Blue Jeans resiliency, redundancy, and intelligent geo routing so it can connect users to the PoP closest to them. As a result, there's less latency and less jitter. Additionally, Blue Jeans leverages a lot of the same audio and video codecs used by Facetime and Skype, for example, but it also brings to the table higher quality codecs for both video and audio. And Blue Jeans is interoperable with popular business applications including Microsoft Lync and Salesforce.com, and has an integration with InterCall.

Blue Jeans Network has enabled 3 million video meetings to date, has 2,000 business customers in 200 countries, and supports 130 minutes of communication minutes annually. Its

customers range from the world's largest businesses, to small and mid-market companies. Facebook is among the users of Blue Jeans Network, with more than half of the social network's employees using the service.

Pricing structures for the Blue Jeans Network services vary, but it starts at \$90 per user per month for small deployments; volume discounts are provided to entities with larger numbers

of users. Services are sold both from Blue Jeans Network and via its ecosystem of channel partners.

Blue Jeans enables companies that already have invested in room-based systems to get more out of those solutions.

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Video

R&M Values Global Enterprise Market

The global enterprise video market will grow from \$11.21 billion in 2013 to \$35.57 billion in 2018, according to Research and Markets. This represents a compound annual growth rate of 25.9 percent during the forecast period.

Wainhouse Calls Vidtel Acquisition Stealth

Vidtel in the fall was acquired by venture capital outfit Fidelity Investment, according to an October blog by Wainhouse Research. Ira M. Weinstein wrote that when Wainhouse reached out to Vidtel on the matter, it provided a no comment and that there was no announcement of the purchase. He added that Fidelity in the past invested in another videoconferencing business, Teliris. In another videoconferencing firm changing of hands in the fall, PGi acquired ACT Teleconferencing Inc. for about \$44 million.

Blue Jeans Study Offers Meeting Stats

Most people (94 percent) feel face-to-face communications improve business relationships, according to a study released in December by Blue Jeans Networks. Nearly three quarters (71 percent) of people believe they lost a deal due to the lack of face-to-face interaction and six percent have admitted to falling asleep

during an audio-only meeting. One-third of all meetings include one or more attendees participating from a mobile device.

The New Video-conferencing Normal?

Wainhouse Research in an August report talked about how videoconferencing, especially for the enterprise market, had not seen growth matching historical norms for several quarters prior and that things were not looking so great going forward. And it noted that LifeSize and Polycom at that time were both repositioning for what looked to be this new normal. For LifeSize that entailed founder Craig Malloy stepping back in as LifeSize interim CEO, replacing Colin Buechler, who had the CEO title starting in January 2012. At Polycom, that involved the company filing an 8K form with the SEC announcing a reduction of 4 percent of the global workforce, closing several sites, and some contract cancellations. That came in the wake of Polycom CEO Andrew Miller resigning.

Polycom Names Leav New Leader

Peter A. Leav has joined Polycom as president and CEO. He also will serve as a director on Polycom's board. Leav succeeds interim CEO Kevin Parker, who will continue as chairman.

Network Infrastructure

Alpheus Grows Texas Network

Alpheus Communications has expanded its network to reach 129,000 Ethernet-qualified locations in Texas. Alpheus Communications, a provider of Texas metro-regional fiber and networking solutions, owns facilities in Dallas-Fort Worth, Houston, San Antonio, Austin, Corpus Christi and the Rio Grande Valley.

Business Spending Forecast to Hit \$1.5T+ in 2014

Investment in equipment and software will reach an all-time high in 2014, according to the Equipment Leasing and Finance Association, which says that U.S. businesses, nonprofits and government agencies will spend more than \$1.5 trillion this year for

capital goods or fixed business investment (including software) and will finance more than half (\$860 billion) of those assets. "For a majority of U.S. businesses, equipment financing is a critical source of funding, helping them to acquire the equipment they need to operate and grow," ELFA President and CEO William G. Sutton, CAE, said. "Equipment acquisition plays a critical role in driving the supply chains across all U.S. manufacturing and service sectors."

IEEE Revisits Standard for Ethernet

The IEEE recently announced initiation of three new standards-development projects and an IEEE Standards Association Industry Connections activity that are all intended to expand on the IEEE 802.3 Standard for

Ethernet. The efforts aim to amend the base standard to make it more useful in emerging application areas. The new Industry Connections activity will engage global industry in discussion of the next-generation Ethernet Passive Optical Network.

Hurricane Electric Picks PICS

BICS, a global provider of wholesale carrier services, has been tapped by Hurricane Electric, operator of what it says is the world's largest IPv6-native Internet backbone, to provide the BICS Pan European Network 2.0 network to connect major European cities. BICS' 100 gigabit Ethernet network will enable Hurricane Electric to meet growing bandwidth requirements while controlling expenses.

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Where Retailers Are with Security

It is almost impossible not to be painfully aware of the security challenges facing major retailers. We watched earlier this year as the Target data breach seemed to grow in scope and level of malevolence, and upscale retailer Neiman Marcus revealed it also has been under attack. There is also the rampant speculation in the security industry that these revelations are actually just the tip of the iceberg, and more large retailers are in the bad guy cross-hairs.

A new survey from Sunnyvale, Calif.-based security solutions provider Fortinet finds that one in five U.S. small and medium businesses in the retailing sector are not even PCI compliant and lack security fundamentals.

If ever there was a wake-up call for retailing SMBs to take a serious look at not just becoming more educated and enhancing security, the survey also pointed to the growing interest in onboarding retailing analytics to better understand and assess customer data and buying decisions.

The Fortinet survey – based on interviews with 100 U.S.-based SMB retail organizations with fewer than 1,000 employees – highlights where SMBs stand in regards to compliance regulations, security policies and new technologies that help manage big data and security infrastructure.

Here are some highlights:

- While a majority of retailers are aware of an increasingly complex threat and regulatory environment and are applying best security practices and compliance policies, 22 percent of respondents are not PCI DSS compliant, and an additional 14 percent don't know if they are PCI compliant or not.
- 55 percent are unaware of their state's security breach requirements, and 40 percent lack any established policy adhering to those requirements. This creates the potential for regulatory compliance violations.
- The survey also found that many SMBs fail to employ strong security practices, such as policies to enforce password security. Fortinet says this puts them at risk for brute-force attacks, data breaches, and regulatory violations.

It almost goes without saying that if bad actors were to exploit the vulnerabilities of those without strong, never mind basic, security solutions and policies, the damage could be catastrophic. SMBs are hardly in a position to withstand the resulting regulatory fines, litigation, and the damage to their reputations. In fact, on the last point, the prospect of bad reviews going viral should be reason enough to appreciate the old adage that an ounce of prevention is worth a pound of cure.

On the encouraging side of things, the survey did register inquisitiveness about new technologies that provide better customer insights. It found that more than half of SMB retailers are looking to onboard retail analytics to help them understand purchasing trends and customer behavior in the store. Fortinet, based on its solutions portfolio, also inquired about customer interest in next generation security solutions that provide combined physical and network capabilities in a single appliance that could increase visibility, ease management problems and help be proactive as well as reactive in mitigating risks, and would reduce IT costs. On this front, it found a receptive audience with almost half of respondents saying they are familiar with the technology and either currently use it or plan to do so.

Fortinet delved a little deeper into SMB security issues regarding the increasingly valuable/invaluable area of Wi-Fi. Again this is good news and offers indications of a need to improve practices. Findings included:

- 15 percent of retailers offering free guest Wi-Fi fail to enforce any kind of security policy thereby exposing customers to potential malware, while increasing the risk of infection for a retail network

that is not properly segmented.

- Encouragingly, 60 percent of SMB retailers have password protections and enforce them regularly.
- Discouragingly, 40 percent don't require their employees to change their password at least once a year.
- SMB retailers are lax when it comes to disposing sensitive data – leaving bad actors a way to get at customer proprietary data. 59 percent of those surveyed said they have a data disposal policy in place, 29 percent lack any established data disposal plan, while 12 percent are completely unaware of their organization's data disposal policy.

There are a few other insights of note from the survey.

- 80 percent of respondents want to see physical security infrastructure, such as video cameras, DVRs, and alarm systems, housed in a single device that also manages network security mechanisms such as firewall, VPN, anti-virus and web application firewall.
- 53 percent said they are managing and maintaining their own security infrastructure on-site.
- 18 percent now also rely on a managed security services provider to augment their security defenses.
- 29 percent want to move more security functions to a third-party managed service provider.

There was also significant interest (59 percent) in retail analytics that can utilize Wi-Fi enabled smartphones to capture shoppers' data. Of that 59 percent, 75 percent are either actively utilizing these analytics or have a strong interest in them. Interestingly, only 25 percent say they would not use such capabilities because they believe it is an intrusion on their customers' privacy.

Peter Bernstein is a senior editor at TMCnet, the online entity of INTERNET TELEPHONY magazine parent company TMC.

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INTERNET TELEPHONY Congratulates Winners of the UC Excellence Awards

People are increasingly on the move, both while at work and play. Unified communications can help individuals more efficiently communicate and collaborate via voice, e-mail, chat, video, or whatever method, and to do so whether they are on wireline or wireless devices. It can enable them to make their availability know via presence features.

All this can add up to more effective communications for users and a more productive and profitable environment for employers.

Here are some of the best and brightest offering on the UC solutions front.

Congratulations to this year's batch of UC Excellence Award winners!

WINNERS

8x8 Inc.
Virtual Office Pro

ADTRAN Inc.
NetVanta 7100 with Voice Migration

Alteva
Alteva's UCaaS Solution

AudioCodes
AudioCodes 420HD IP Phone

AVer Information Inc.
EVC100 Video Conferencing Endpoint

BroadSoft
BroadCloud PBX

Denwa Technology Corp.
Denwa Unified Communication Platform

Digium Inc.
Switchvox

Fonality
Fonality Professional for Insurance

IceNet Wireless
ICES – Internet, Commerce and Entertainment Solution

IPitomy Communications
IPitomy IP PBX System

ISI Telemanagement Solutions, Inc.
Infotel Select - UC Reporting and Recording

MegaPath
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Metropolis Technologies
OfficeWatch XT Telemanagement for the Enterprise

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PanTerra Networks
WorldSmart

Patton Electronics Co.
SmartNode PRI VoIP Gateways

Plixer International Inc.
Scrutinizer 11

REVE Systems (S) Pte. Ltd.
REVE Session Controller

snom technology AG
Better Together over Ethernet (BToE) firmware

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Star2Star Cloud-Based Unified Communications System

Telesphere
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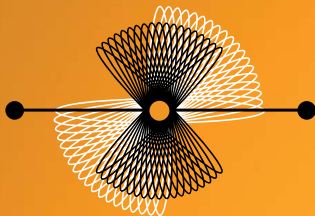
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Does Vitelity's vMobile Finally Make the Desk Phone Obsolete?

One of the exciting elements of tradeshow we've come to expect is, "What's new?" This year's ITEXPO Miami was no different, with a host of new product and service announcements (check out all the news and highlights here: <http://tmcnet.com/59250.1>).

As expected, the continuing trend toward enhanced mobility was a major theme, as businesses small and large continue to mobilize their workforces in an effort to increase efficiency, maximize productivity, while still allowing for a healthy work/life balance. This is by no means a new trend, as from the early days of unified communications, vendors have been struggling with the notion of fixed/mobile convergence – the ability to extend corporate communications capabilities to mobile endpoints.

It's always been a challenge, though, due to the connectivity required for OTT apps, or the need to automate call forwarding between corporate and cellular networks. It's never been a truly seamless experience, and often results in reduced QoS.

At ITEXPO Miami, Vitelity announced a breakthrough in FMC that it says will eliminate all the traditional challenges, and finally bring complete PBX functionality to the mobile world. Its vMobile software integrates with any SIP-based PBX, and is embedded in the mobile device thanks to partnerships with mobile operators, creating a seamless handoff between networks when moving between corporate and mobile environments.

Because of the tight integration with the mobile device, vMobile doesn't require a third-party app to function, and provides its functionality even in the absence of an Internet connection.

"This is true mobile convergence with your existing SIP-compliant PBX system," explains Vitelity's Chris Brown, who was instrumental in spearheading the development of the software. "When you place a call, it goes over the mobile operator's network, gets routed to Vitelity where it is converted to a SIP session, and is then routed immediately to your corporate PBX as a SIP peer."

Calls are all routed through the corporate PBX, allowing complete control, just as with calls to and from office desk phones, including monitoring, recording, barge, and other capabilities. In fact, every PBX feature set is available on the mobile device.

"This is your new office phone," says Brown.

Again, because of the software integration, no data connection is required to create the connection. If you have Wi-Fi connectivity, calls are automatically routed over that network. But Vitelity actively monitors network connectivity, and if you leave your Wi-Fi area, or if connectivity starts to degrade, resulting in packet loss, the call is automatically and seamlessly handed over to the cellular network.

Brown gave me a demonstration on the show floor, first using an Android smartphone – initial support is for the Android OS (not a surprise, given how close to the vest Apple prefers to keep its technology). I verified no Internet connectivity on the phone, and Brown proceeded to place a call using the phone's native dialer, not an OTT app or third-party dialer. Immediately, the desk phone at the booth linked to his identity showed his presence as being on a call. He was able to transfer calls and perform other key PBX functions directly from the smartphone.

Then came the fun part. Brown produced a Motorola StarTac – which has no app or data capabilities – and proceeded to perform the same functions again, because the calls are routed through the PBX and do not rely on a downloaded app. Both phones functioned exactly as the desk phone did, with the exception of being mobile.

I look forward to testing out the capability for myself, but based on what I've seen, vMobile delivers on what dozens of companies have sought to achieve during the last decade – true FMC without sacrificing any PBX functionality.

Android support is a great start, given its status as the most popular mobile OS globally. But, given the presence of Apple in the U.S. market, especially among corporate executives, Vitelity's key to success may lie with its ability to make inroads in Cupertino. Regardless, vMobile represents success where other vendors have fallen short and certainly gives increased merit to those who have been predicting the end of the desk phone.

"When I came to Vitelity, it was my mission to change things," says Brown. "I wanted to change the way people communicate, and I believe we did that today."

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A close-up, vertical shot of the body of a violin, showing the wood grain and the f-hole. The lighting is dramatic, highlighting the curves and textures of the instrument against a dark background.

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