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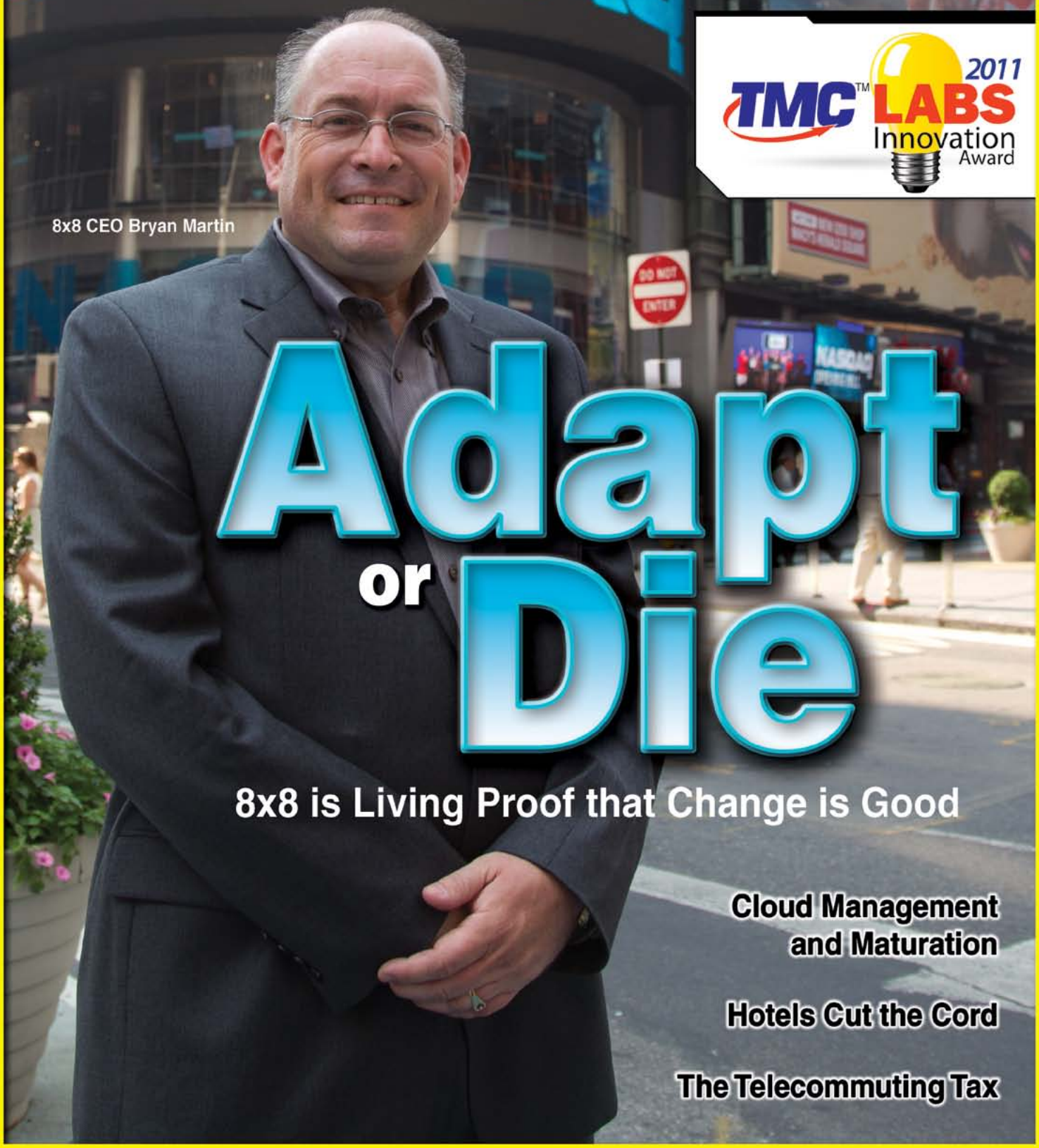

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Cloud Management and Maturation

Hotels Cut the Cord

The Telecommuting Tax

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Growth in VoIP, Hosting

As INTERNET TELEPHONY's cover story this month about 8x8, and our Vonage feature in June, demonstrate, voice over IP is alive and thriving despite the recent recession and slow economic recovery.

This issue's piece on 8x8 notes that the company has been profitable 13 of the past 14 quarters and added more new businesses in the March quarter than it's ever added before. That has garnered the company acclaim by such financial watchers as The Motley Fool, which in April 2011 named 8x8 as one of Wall Street's best hidden stocks.

Our June cover story, meanwhile, spotlighted Vonage. As we all know, Vonage has ridden a rollercoaster of highs and lows over the years. But it has found its footing, having successfully turned around its financial fortunes. In fact, in April, BESPOKE Investment Group noted that Vonage (which at $5.15 per share was up 129.91 percent at the time) ranked No. 4 among the top performing Russell 3000 stocks.

These are not isolated incidents.

As a May story in The Wall Street Journal reports, a new study from IBIS World includes VoIP as among the top 10 fastest growing industries. According to this data, VoIP providers saw 2010 revenue of nearly $12.5 billion, which is up 194 percent during the decade. The space is forecast to grow 17.4 percent from there by 2016.

"While wired telecom carriers dominated the dying list, voice over Internet protocol leads the list of thriving industries, illustrating the shift from one technology to another," notes Phil Izzo, who authored The Wall Street Journal piece.

Indeed, in 2007 the Pew Research Center's Internet & American Life Project found that just 8 percent of Internet users had placed an IP-based phone call online ever, and only two percent were doing so on any given day. Today, however, 24 percent of American Internet users make phone calls using such services as Skype and Vonage.

TMC's own Tom Keating recently added to the VoIP good news story, by noting in his blog that voice over IP now has more than 120 million subscribers worldwide and its growth looks set to accelerate, as predictions indicate a $40 billion annual VoIP market by 2015. The blog draws from new data from Point Topic, which reveals global growth in VoIP of 12.6 percent during 2010 and shows – as Mr. Keating put it – that there is plenty of headroom left for VoIP around the world.

"The growth of VoIP has been bumpy but shows signs of acceleration," says John Bosnell, senior analyst at Point Topic. "VoIP has all the hallmarks of a classic substitution commodity. This is where customers look at the service that is delivered by a new product and decide that it meets, or exceeds, the service they are currently receiving and when it is appropriately priced they will switch from one to the other."

Therein lies the problem with VoIP services from a how-do-you-continue-to-grow-the-business-while-retaining-reasonable-margins standpoint. 8x8 CEO Bryan Martin says repositioning VoIP and its other services as value-added solutions instead of simply low-cost ones is something on which the company is working. That's a bit of a tough sell, given the current economic climate and the fact that lower price is an easy way to make the sale. But Martin, for one, seems to believe this is the way to go, and the company continues to enhance its product portfolio to bring more value into the mix.

One way 8x8 and others are doing this is by moving into cloud-based hosted services. No big surprise there.

About 60 percent of 3,000 global CIOs that IBM recently surveyed said their organizations are ready to embrace cloud computing over the next five years as a means of growing their businesses and achieving competitive advantage. That's nearly twice the number of CIOs who pledged their allegiance to cloud computing two years ago.

Gartner forecasts that by the end of this year cloud-based services will account for almost a quarter of the overall hosting market, excluding co-location and mass market hosting. International Data Corp. indicates that spending on public IT cloud services will reach $72.9 billion by 2015, rising from $21.5 billion in 2010. IT

Telecommuting Tax: Now the States Are Killing Jobs

In August of last year I explained why there are so few jobs – in part the problem revolves around demonizing the successful by our politicians and in part because of excessive taxation. Part of the support for my post was an opinion piece from Michael Fleischer of Bogen Communications, a company in the telecom space I have followed for over a decade-and-a-half.

Some of you may think Fleischer is complaining too much and he needs to give back more of the money he earns to be fair. But you should know that in New Jersey he has to pay $74,000 so a worker can take home $44,000. He doesn't mention this, but I will; if he then is lucky enough to make a profit, he could pay 50 percent to more than 60 percent of that money back out to the government through federal and state taxes, as well as various fees for things like real estate taxes, regulatory compliance, etc.

Recently Fleischer was on Fox Business and isn't any happier with the state of the U.S. economy. He has nothing but venom to spew at politicians who make it more difficult for his company to succeed. He calls this the second summer of "no recovery" – referring to what President Obama and Vice President Biden referred to last year as the "summer of recovery." In fact, he is making no new marketing or sales investments until he has more clarity on the future.

Last September I asked the government to stop helping us, explaining how much damage it is doing to our economy through the words it uses and the actions it takes on a regular basis. As a single example I explained how a very well-intentioned bill with support from both parties to help more handicapped people become employed created a "protected class" which resulted in less handicapped people being employed. Time and time again, politicians make promises and subsequently get voted into office only to enact new policies and spend a fortune in the process to see the opposite result.

But if it wasn't bad enough that the federal government is doing its best to put undue pressure on businesses at a time when many of them are barely staying afloat, the states have joined in. Specifically, cash-strapped states are going after companies that have telecommuting workers in their jurisdictions, explaining such companies are "doing business in their state" and subsequently must pay corporate tax. Barbara Haislip at The Wall Street Journal refers to this as a telecommuting tax.

One solution to the problem is to have the worker resign, form a corporation and then get paid by the company. But the company would now have to pay even more to make up for lost benefits such as health care, which would potentially cost much more without the ability to put the worker in a large corporate pool, not to mention the added red tape on behalf of everyone involved.

Even worse – and this is an issue rarely discussed – if Obamacare does go into effect it will have disastrous consequences on many businesses that have incredible health care plans but don't have the resources to pay top dollar for employees. Many people work in the health care profession, for example, because they get great health care benefits included. Now the costs for hospitals and other companies in such a situation will go up, and they could subsequently be forced to shut down – meaning even fewer jobs.

Technology has unleashed massive amounts of productivity and as U.S. companies have to compete with those in India and China where there are far fewer regulations, taxes and lawsuits, the use of IP communications to enable things like telecommuting have allowed many companies to stay in business through the worst economy in many of our lifetimes. Now it seems the party is over and legal costs, fees and taxes from the states will potentially put the nail in the coffin for a number of businesses and, in turn, cost the U.S. economy even more jobs. IT

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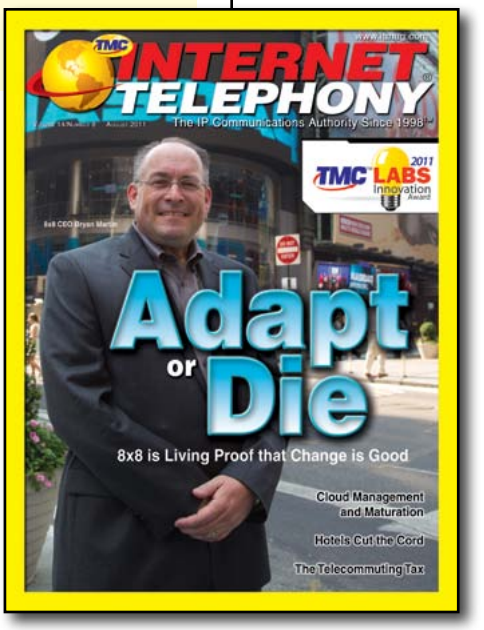
Contents

Volume 14/Number 8 August 2011

Columns

Cover Story



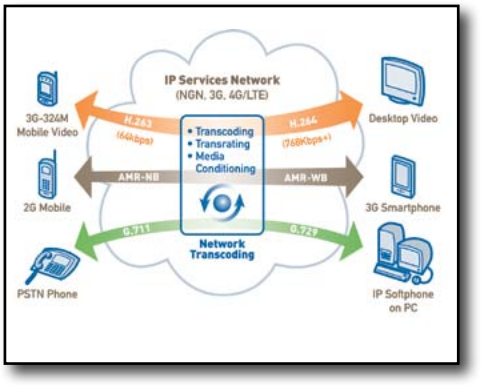
Special Focus

6

Feature Articles

Departments

44



By James DaBramo

Cutting the Cord

Hotels Turn to Fixed Wireless Connections for HSIA, Business Continuity

Unless you've been distracted playing Angry Birds, it should come as no surprise that wireless technology is the new communications cornerstone of our highly mobile society. It has also grown to be the bane of IT's existence. Nowhere is that fact more pronounced than in the hospitality industry where guests' bandwidth-hungry devices can cripple network capacity quicker than you can say trouble ticket.

Not since the viral explosion of the Internet have we seen a technology revolution like the one being driven today by wireless-enabled devices and cloud-based applications. And that trend, which shows no sign of waning, is especially acute for the hospitality industry because guests demand access to the same wireless devices they use daily in their homes and offices. A business traveler needs wireless bandwidth for VPN access, smartphone use and later, after the work is done for the day, for access to Skype to say goodnight to family at home, followed perhaps by streaming Netflix on a laptop computer – all services hanging off your hotel's data infrastructure.

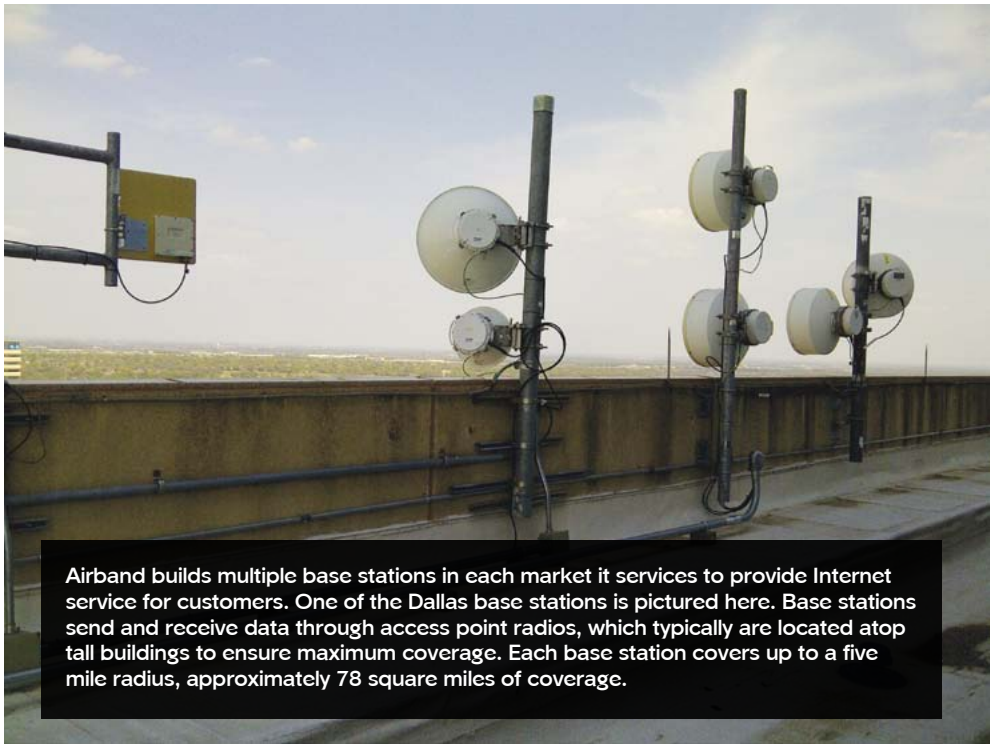
In addition, more and more hotels are relying on conventions and large group events to increase their revenue. These events often require an expanded Internet pipe to accommodate both the booth presentations as well as the large influx of guests who are also high bandwidth users.

And let's not forget leisure travelers – a family of four can place an even greater strain on a hotel's available bandwidth, especially when you consider that the family may need simultaneous wireless access for the children's Xbox, multiple smartphones and laptops used to upload vacation photos and videos to Facebook.

To stay ahead of these growing demands from guests' wireless devices, hotel IT directors traditionally increased bandwidth through local telephone or cable companies, adding capacity in expensive T1 increments – a method that's hard on the budget and not easy to deploy quickly.

Rather than using traditional technology and networks to respond to these challenges, many within the hospitality industry are seeking alternate ways to solve the bandwidth congestion problem, especially for incremental, short-term scalability to support conventions and other events. Innovative hospitality companies are increasingly deploying fixed wireless Internet access services because they are vastly more scalable, faster to install and far more affordable than wireline solutions. And, because fixed wireless service delivers a true diverse path from the wired infrastructure for connecting to the Internet, and is immune to cable cuts and flooding, hotels and their convention centers enjoy a level of business continuity that cannot be provided with just wireline services.

Time and money are the common reasons given by hotels for switching to fixed wireless Internet access. For example, the Extended Stay Hotels chain uses fixed wireless data connections at several of its properties because it gets six times the bandwidth for about the same cost as a couple of T1 lines. Extended Stay Hotels also avoids additional local loop fees because data is transmitted directly via the



Airband builds multiple base stations in each market it services to provide Internet service for customers. One of the Dallas base stations is pictured here. Base stations send and receive data through access point radios, which typically are located atop tall buildings to ensure maximum coverage. Each base station covers up to a five mile radius, approximately 78 square miles of coverage.

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Airband's James DaBramo

last mile, fixed wireless network, which bypasses local phone and cable infrastructure.

Prior to installing fixed wireless, Extended Stay Hotels locations utilized a single, dynamic T1 line for both voice and data services for the entire property, which included bandwidth for both guests and hotel office staff. As guest demand for bandwidth continued to grow, Extended Stay Hotels decided to dedicate the T1 line for use only by office staff and planned to explore new options to provide wireless access to guests. After comparing costs, Extended Stay Hotels chose fixed wireless from Airband because, for approximately the same cost as two T1s, they received 9MB of fixed wireless bandwidth for hotel guests.

Extended Stay Hotels also chose fixed wireless over traditional wireline services because it is committed to respond quickly to guests' bandwidth needs. Typically, fixed wireless connections can be installed in less than 30 days compared with 60 days or more for additional T1 circuits in urban locations. For suburban hotels or those that are not near a central business district, installing traditional wireline data access can be cost prohibitive because the service provider will charge the hotel for building the infrastructure to its location from the nearest point of presence. With fixed wireless access, the installation intervals are much shorter.

Hotels with large conference facilities can expect an influx of hundreds, if not thousands, of additional guests during large events. The traditional solution for providing temporary, additional bandwidth involves provisioning multiple T1s and making long-term changes to service contracts.

With fixed wireless technology, hotels agree to a base level of service that is scalable to an agreed-upon upper end; for example, a 20mbps circuit might be the property's standard service, but Airband can temporarily scale the bandwidth up to 50mbps to accommodate the event. In fact, bandwidth can be scaled up to gigE speeds, if required.

This unique, scalable feature of fixed wireless was particularly helpful recently to a five-star resort in Scottsdale, Ariz., when a VIP guest had an urgent need for dedicated Internet access. Within a few hours, the resort was able to provide the VIP guest with a 10mbps dedicated circuit that was separated from guest services and back-of-house bandwidth. When the VIP no longer needed the circuit, it was turned off, and the resort returned to its normal service level.

With a fixed wireless primary connection and wired back-up circuits, hotels and their guests can expect reliable uptime, fewer service interruptions, scalable bandwidth solutions for large events and superior customer service. Hotel IT directors can have confidence that their co-workers and guests will have uninterrupted service because fixed wireless technology solutions today are designed and engineered to provide uninterrupted access even during violent weather, all with the benefits of the industry's fastest installation times, ease of deployment and unmatched scalability.

The rapid proliferation of smart wireless devices and cloud-based applications make the future unpredictable and chaotic for planning network resources. Fixed wireless services provide the versatility and security for hotels to buffer against unplanned events and operating risks. This is why an increasing number of major hospitality brands are installing services from fixed wireless providers as their trusted high-speed data solutions. IT

James DaBramo is executive vice president of sales at Airband Communications Inc. (www.airband.com).


Airband subscriber units are installed at customer locations for connectivity to/from Airband base stations. Airband also deploys dedicated point-to-point radios for hotels that require higher bandwidth.

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By David Yedwab

Cloud Conversations Maturing – Rapidly

I have to admit, I have been skeptical about the cloud since we first started hearing about it. Wasn't that back in the last century? Perhaps it's because I grew up in the mainframe era and saw how quickly computing power at the hands of users, through the emergence of the PC, changed computing forever – and, I thought, also killed centralization, at the same time. Well, maybe I was wrong. And if the improvement in the level conversation about cloud is any indication, I was really wrong.

The level of conversation about cloud computing has matured significantly over just the past few months. At both ITEXPO in Miami, and Enterprise Connect in Orlando, I was singularly unimpressed by many of the conversations about cloud because they seemed to start with, "cloud will save you money" and end with "and cloud will save you money" with little substance in between. In just a few short months, at Interop, the conversations have matured to real discussions about what cloud can deliver, in terms of speeding deployments, outsourcing server deployments and support (both hardware and software), providing disaster recovery strategies, handling variable workloads, and several other useful capabilities – often without even mentioning the payment/financing methodology or perceived/actual price declines or even increases.

So, what does this stepped-up level of conversation and engagement by vendors mean? First, it means that we have to use these as our first few questions, when a vendor starts talking about cloud: When you say cloud, what do you mean? Are you talking private cloud (in my data centers) or in a public cloud (in somebody else's data center, either on a dedicated or shared basis)? And, what do you see as the benefits? How is networking handled? And, because I'm somewhat UC-focused, do you support SIP and how?

I'm truly surprised that I've moved this far in my thinking about cloud this quickly. Thinking about it and talking and researching I know why. It's because the major technical and financial barriers have truly come down – networking speed and costs, processor capacities (Moore's Law), and even issues like security and recovery are being addressed often with what I view as cloud's brother (or sister, depending on your preference): virtualization. But that will be the topic for our next discussion. **IT**

David Yedwab is a founding partner in Market Strategy and Analytics Partners LLC (www.mktstrategy-analytics.com).

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Disaster Preparedness

By Rich Tehrani & Max Schroeder

Continuity Planning 101 – A Continuing Educational Series

Potential Disaster – Not Attending ITEXPO in Austin

Organizations need to have business continuity/disaster recovery plans in place to avoid or minimize the impact of adverse events. Fortunately, the 21st Century has provided us with many great technologies that make this process much easier. Plus, new and exciting products are entering the market every day. This fact alone is ample reason to attend ITEXPO West 2011 Sept. 13-15 in Austin to check out the latest offerings.

ITEXPO has consistently presented a comprehensive mix of educational sessions and the latest technologies. With TMC's very successful strategy of expanding the scope of ITEXPO by incorporating co-located events, attendees will have a profusion of BC/DR-related technologies to see and evaluate. Therefore, you need a time management plan in place to maximize your ITEXPO experience.

For example, the 4GWE West 2011 Conference has moved well beyond theoretical discussions and onto the critical issues of how best to enable and exploit the mobile Internet and the mobile enterprise. Critical BC/DR issues like mobile security for the enterprise and how to enable and support mobile nomads will be addressed.

By visiting the Cloud Communications Expo, business professionals can learn the fundamentals of cloud-based communications business models. Attendees can also delve into how communications as a service can lower capital expenditures plus reduce project risks.

Ingate's SIP Trunking Workshop will include key BC/DR-related sessions including Hosted Unified Communications, Fax-over-IP, and some case studies of actual implementations.

Regardless of whether you plan ahead or not, ITEXPO will be a very valuable experience. With a game plan in hand, however, the visit can be elevated to the invaluable level. Begin with an evaluation of your organization's current BC/DR status. Resellers also need to evaluate their BC/DR product portfolios and look for gaps or outdated technologies. Balancing your time between conference sessions and exhibits is critical. Log in and review the ITEXPO site in detail. Next, make a list of must-see exhibits and conference sessions. The last step is to prioritize the list and put them into a daily calendar. IT

Max Schroeder is senior vice president of FaxCore Inc. (www.faxcore.com) and managing director of the DPCF. Rich Tehrani is CEO and group editor-in-chief at TMC, and conference chairman of ITEXPO.

Regulation Watch

By William B. Wilhelm and Jeffrey R. Strenkowski

Network Neutrality Debate Heats Up in the European Union

Close on the heels of the FCC's Open Internet order, on April 19, 2011, the European Commission published The Open Internet and Net Neutrality in Europe. The report comes amid ongoing debate in the EU concerning the proper role of government intervention in the Internet market.

The report does not set particular neutrality rules, but rather lays a groundwork for determining what further actions must be taken to "maintain an open Internet" across the EU. The report recognizes that network neutrality touches on a number of rights and principles enshrined in the EU Charter of Fundamental Rights, such as the respect for private and family life, the protection of personal data, and freedom of expression and information. The report also states that the Body of European Regulators for Electronic Communications is investigating network neutrality issues including barriers to switching services, blocking, throttling, transparency, and discrimination, and will publish by the end of the year the results of its investigations. On that evidence the EC will decide whether to issue additional guidance on net neutrality, and if significant and persistent problems are substantiated, whether to issue more stringent measures to achieve competition and consumer choice, with particular emphasis on transparency, ease of switching services, rules aimed at unjustified traffic differentiation, and a prohibition of the blocking of lawful services.

Demonstrating the focus this subject is expected to receive in the coming months, in a speech given in conjunction with the release of the report, Neelie Kroes, the EU's commissioner for the digital agenda, re-iterated her support for network neutrality, emphasizing that operators must increase service transparency, meet minimum quality requirements, and provide for speedier Internet service provider switching. IT

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

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By Alan Murphy

Managing Your Cloud Infrastructure, On- and Off-Premises

Although I've covered virtual machine and infrastructure management here before, I feel like I've barely been able to scratch the surface of what can be written on these topics. Every year seems to bring newer and better management solutions from the big virtual platform companies as well as from third-party management platforms and virtual hosting providers. Management is arguably the key factor in moving to a more agile IT model so it's great to see strong support for data center-level management from all major virtualization players, especially with vendor solutions that target virtualization in a cloud environment.

But management solutions for cloud environments (and virtual infrastructure for that matter) don't always have to come from hypervisor vendors. Despite the push from the platform providers to improve continually their management solutions, over the past year we've actually seen the most growth in cloud management tools from virtual infrastructure and cloud providers. This growth has been fueled by market demand, new platform tools from the likes of VMware and others that can be re-used by providers, and good old-fashioned competition. How an IT organization manages its off-premises cloud platform and what options are available to it is often the key differentiator in choosing a cloud provider. Luckily for cloud consumers, providers are beginning to understand that the easier they make it for the customers to control their own cloud environments, the easier it will be to bring in those customers.

Like management tools and cloud providers, not all cloud deployments are the same; there is not a one-size-fits-all management model for all cloud platforms. The type of cloud model that an organization chooses will greatly influence how its new cloud deployment is managed, and more importantly how – or rather, if – the platform can be integrated into its existing infrastructure. Ultimately, any cloud deployment should be managed as an extension of the existing data center, and the cloud management tools should provide the enterprise complete control over its portion of the off-premises cloud environment. In contrast, this level of control is much easier to accomplish if the organization has deployed an internal cloud since all of the platform pieces are still controlled internally. It's still not trivial to integrate a completely new, on-premises cloud platform with existing management tools, but it is something that can be handled by internal IT. Off-premises and hybrid cloud models are more challenging; there are more moving parts when moving infrastructure resources off-premises, most notably in the network and the infrastructure connecting the internal data center resources to the external cloud platform.

Data center and networking infrastructure is designed to be somewhat fixed. There is some room for dynamic agility at the network layer, but it's not nearly as flexible as the systems and applications running on top of the network. There is going to be some amount of up-front work – typically much more than expected – in connecting the internal data center infrastructure to an off-premises cloud provider. If done correctly with management forethought, the off-premises cloud platform should become a natural extension of the on-premises data center, which includes basic connectivity such as WAN links, IP addressing and subnets, routes, VLANs, etc. That first infrastructure integration step is often a lengthy and difficult process for the organization. All of the networking components that are so easy to manage in house can become huge barriers when an organization is dealing with an external cloud provider's network and its customer-facing IT staff. Every network is different and the provider has to work with the organization to align the shared cloud network with the unique internal organizational network. This is where the combination of a great cloud provider and more mature management tools can come together to create a successfully managed cloud platform for the customer. The true benefit of a cloud platform versus a hosted environment is in the scale and control that a cloud platform provides. Those two elements are dependent on an organization's ability to integrate and manage successfully the off-premises cloud platform, which allows scale and growth while maintaining control of the infrastructure.

Managing on- and off-premises cloud solutions will become more important than ever, and infrastructure management solutions will become the most critical components for a successful cloud integration.

As we're starting to see enterprise IT adoption of cloud services take shape, managing on- and off-premises cloud solutions will become more important than ever, and infrastructure management solutions will become the most critical components for a successful cloud integration. Management is all about control, visibility, and access: all things we take for granted when we own the infrastructure. With off-premises and hybrid cloud models, we have to rely on – or rather push – cloud providers to deliver a platform that allows complete infrastructure integration so we can manage our cloud resources as though they were located in our own data centers. IT

Alan Murphy is technical marketing manager of management and virtualization solutions with F5 Networks (www.f5.com).

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- SIP: Unifying the Distributed Workforce
- Fax-over-IP
- HD Video
- Unified Comms in the Cloud, or Own your Own?
- CASE STUDY BLOCK - Lessons Learned
- How-To Sessions: Building Your Own SIP Trunk
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Viewpoint: Voice of the Customer

By Elaine Cascio

Thinking of Jumping Into New Technologies? Make Sure You're Getting the Basics Right First

Many contact center professionals I speak with talk about how they need to do more on Facebook and Twitter and how important social media is for customer service.They point out how companies like United and Delta got black eyes on Facebook, or how Comcast resolves customer issues on Twitter.

But how many of the incidents that end up on Facebook or Twitter can be eliminated if companies just do a good job of caring for their customers in the first place?

By taking a get-the-basics-right approach, you'll be better prepared to take on new customer contact channels – and be more successful.

A few keys to success:

- Assess all current customer contact channels (or have an independent third party audit them). If you get failing grades, fix issues with people, process or technology before jumping into a new channel. Understand where there are opportunities for improving service and the customer experience.
- Have a customer contact strategy in place to understand where new channels can help meet your strategic goals.
- Start small, observe and measure and make sure you're adequately staffed to serve customers on another channel. Social media response time is measures in minutes, not hours, so being unprepared is just as bad as not being there at all.

Social media can be an effective tool for sales and marketing. From a customer service perspective, it helps us understand more fully what people are saying about the brand and respond to complaints and kudos. It's also a perfect tool for customer support forums. But don't expect to solve loads of customer service issues in a social way – be prepared to move discussions about billing issues, for example, to the phone channel.

So before you reach for the next shiny new thing, remember that it's not a panacea for poor customer service. Get the basics right first. IT

Elaine Cascio is a vice president at consulting firm Vanguard Communications Corp. (www.vanguard.net).

Tech Score

By Jeff Hudgins

Time to Get the Lead Back In?

It's estimated that the electronics industry has spent well over $30 billion to comply with the Restriction of Hazardous Substances (known as RoHS). The RoHS directive was officially adopted in 2003 and restricts the use of six hazardous substances in electrical and electronic equipment. The most notable restriction is lead. Electronic manufacturers around the world have redesigned their products to eliminate lead solder from printed circuit boards solder.

But Verizon and AT&T may not be convinced that lead-free solder meets the reliability standards of the central office. Last summer both carriers released their new test requirements (VZ.TPR.9307 and AT&T TP-76200) for any electrical equipment that uses lead-free solder. The temperature testing consists of thermal shock, temperature cycling, and over temperature. Other testing includes mechanical shock, destructive testing, and salt fog.

The battery of tests begins to make the NEBS-Level 3 testing look easy. How much will all of this testing cost the equipment manufacturers? Well, it depends upon the number of circuit boards in each platform. Each circuit board must be tested, and any board containing less than 4,000 solder joints must have more than one sample. Initial estimates range from $30,000 to $40,000 to test each board (excluding the cost of the damaged board after testing). And how long will this testing take? Plan another six months into the production release schedule.

Of course, the investment does not end with the initial qualification. Retesting is required any time the manufacturer changes its bill of materials, manufacturing process, or supply chain. Since a typical server could have as many as eight circuit boards or more inside, chances are some retesting will be required on a routine basis. And if you plan to sell into both service providers, expect the costs to double since the testing requirements are not the same.

So what's the final score? The simplest and cheapest way to comply with the new standards is simply to produce equipment with lead-based solder. Unfortunately, manufacturers have spent a tremendous amount of time and money to design out lead, and their willingness to offer a lead-based option is unlikely. Unless the service providers are prepared to start issuing waivers, the cost of lead-free equipment just went up, again. IT

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

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Up to 30 calls	$460	SN4960/1E30V SN4960/4E30V	SN4961/1E30V SN4961/4E30V
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By David Byrd

Quantifying Unified Communications

SIP trunking is considered an enabler for unified communications. Moving a business' communications infrastructure to SIP reduces cost, supports a range of UC applications, and simplifies integration. As such it is very important for VARs and IT managers to explain the added benefit and value of unified communications. Fortunately two studies released late last year offer supporting data that allows us to quantify in dollars and time the advantage gained by incorporating UC.

"Unified Communications Improves Business Outcomes, Lowers Costs, and Enhances Environmental Sustainability" by Microsoft examines a UC implementation from the standpoint of an enterprise, Microsoft.

Microsoft identified the following after implementation: increased end user productivity – 28 minutes per day or $86 million per year; shortened sales cycle – through collaboration more proposals are generated resulting in an additional profit of $11 million annually; reduced traveling costs - $92 million annually; and additional benefits were either non-quantifiable or small.

Since the majority of businesses and our target market are SMBs, establishing a cost benefit applicable to them is also very important. During the Broadvox 2011 Partner Summit, I pointed out that collaboration, an oft-stated benefit of UC, has little appeal to SMBs. Certainly, some SMBs have an interest in collaboration tools, particularly those that are geographically dispersed. However, it is not the concern of a majority. That was why I found the productivity summary offered by Digium to be particularly pertinent.

In the Digium IP Communications Buyer's Guide, five points are used to identify an average of 1.5 hours of time savings enjoyed by each employee using UC applications and tools. The five points are as follows: find-me, follow-me saves up to 30 minutes a day; unified messaging saves more than 40 minutes a day by providing improved access to e-mail, voicemail and fax; IVRs reduce hold times, saving 5 to 15 minutes per day; accessing office communications from a mobile device saves a minimum of 30 minutes a day; and; additional time-saving features include presence, built-in chat, business or web application integration, click-to-dial, and visual voicemail.

These productivity improvements are very consistent with my opinion of why SMBs should implement UC infrastructures. It is about accessibility and to be cliché, anyway, anywhere, anytime communication.

Now the reality is that a business is unlikely to gain 390 hours or 48.75 days of productivity per employee because it has implemented UC. I am sure employees will find ways to use some of those gains in other non-productive activity. However, consider if your business only saw a 50 percent improvement or 200 hours of increased productivity per employee then the result is a savings of $4,900 per year. That's a lot of money depending upon the size of your business. IT

David Byrd is executive vice president of sales and marketing at Broadvox (www.broadvox.com).

The Time is Now for Enterprises, Emergency Communications Professionals to Prepare for Next-Generation 911

By Jerry Eisner

Someone just broke into my apartment. I am in the closet; I don't want them to hear me. I sent a text message with the guy's picture to 911. Where are the police?

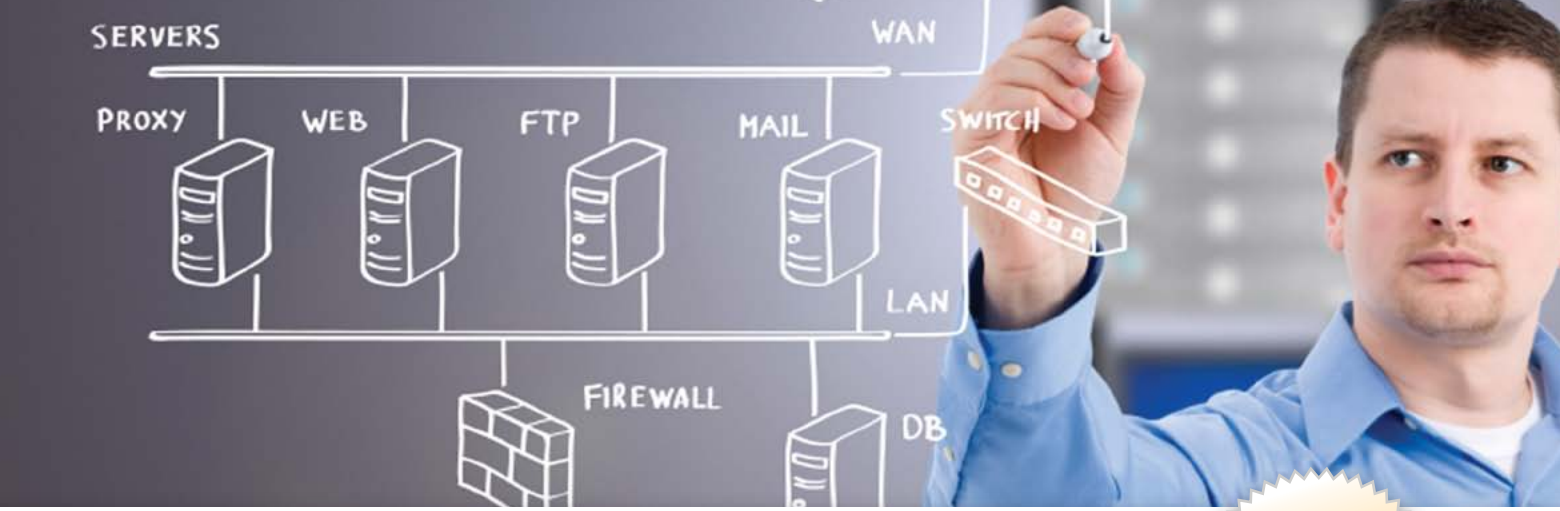
Unfortunately, today's 911 technology is not capable of receiving text messages. However, in the immediate near future, that capability and much more is coming with the deployment of Next Generation 911. NG911 is being designed to incorporate emergency calls for service from both traditional telephone devices like land line and cellular telephones and non-traditional methods including text, instant messaging, pictures and video.

The technology that makes these new capabilities possible changes the way 911 calls are handled within the telephone companies today. NG911 calls for SIP-based messaging on private, secure, emergency service Internet protocol-based networks. An easy way to understand the capabilities of SIP is to think of a freight train, where each car can carry a different piece of information, like a street number, JPEG file, or latitude and longitude. At the public safety answering point, new technology will be deployed that has the ability to unload the SIP train. You are probably already using SIP as part of your communications technology toolkit. When you use Microsoft's Skype to communicate with someone, whether IM, voice, or video, the underlying technology is based on SIP messaging.

As we move from the circuit-based telephony environment to the world of voice over IP and SIP messaging, a migration path has to support both technologies, seamlessly. There cannot be one moment where calls to 911 cannot be routed, processed, and delivered to the PSAP. That's why the National Emergency Number Association recently approved its i3 standard for key elements of NG911 systems.

As enterprises and emergency communications professionals begin the migration to NG911, proven technologies using gateways to both move between analog and digital voice and to handle and deliver the ALI or location data from the legacy world into the NG911 environment will ease the transition. IT

Jerry Eisner, ENP, is group director for public safety at RedSky Technologies (www.redskyE911.com).



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By Jason Emery

Diameter Routing
Core vs. Edge

ABI Research predicts mobile data traffic to increase at a compound annual growth rate of 39 percent from 2011 to 2016, from 7,955 petabytes this year to 60,508 petabytes in five more years. To put it in perspective, the 2016 number equals about 845,000 years of HDTV video.

To move and monetize all of this data, behind the scenes operators rely heavily on the Diameter protocol. Diameter controls how content traverses equipment and devices. For example, it carries the messages that give subscribers permission to access websites, applications and services. It delivers charging commands so service providers can correctly bill customers based on usage, time of day and other filters. Diameter is also essential for mobility management, giving subscribers the ability to roam onto partner networks.

Diameter communicates between network equipment such as the policy and charging rules function, policy and charging enforcement function, several gateways, the gateway GPRS support node, subscriber databases, mobility management engine, and other network equipment.

As operators move to all-IP LTE and IMS networks – and their underlying equipment such as MMEs, PCRFs and LTE home subscriber servers – their dependence on Diameter will exponentially increase. As Joe McGarvey, principal analyst at Current Analysis, writes, "A massive expansion of Diameter chatter, accordingly, will be the natural byproduct of the continuing explosion of mobile broadband networks."

McGarvey adds, "What's missing from current networks is the ability to handle this coming onslaught of Diameter signaling activity. The current solutions available for operators involve configuring each Diameter-based component in the network with the ability to communicate with all other components. While this addresses immediate internal issues, such a mesh-based signaling model will not scale and is not applicable to issues outside of the network related to roaming. Diameter signaling routers – as well as gateways and load balancers – relieve Diameter-based components of connectivity requirements and essentially establishes a centralized facility in the network [that] becomes the single point in the network for solving connectivity, interoperability and addressability issues."

Tekelec believes many of the problems encountered in initial SS7 network deployments are also problems in new Diameter networks. Implementing a centralized, hierarchical Diameter routing network helps to address those issues, similar to the benefits achieved by creating centralized SS7 networks years ago.

Two different approaches exist for the location of these functionalities: the core network and the network edge. Some specific reasons to locate Diameter routing in the core network include:

- Frequency of routing changes

Diameter traffic routing is inherently dynamic, based on multiple factors, including the number of concurrent sessions, the state of network equipment and a subscriber's location. As networks evolve and grow, operators need to update routing tables to maintain network efficiency. With a Diameter routing node at the core of the network, routing updates are made in one place, rather than at every endpoint in the network.

- Diameter traffic characteristics

Many Diameter endpoints are comprised of several servers, each with its own address. A core Diameter routing node can provide sophisticated load balancing and traffic management algorithms to both increase efficiency and to offer value-added capabilities, such as ensuring that all of the traffic associated with a unique session arrives at the same endpoint server.

- Number of connections

Networks relying on Diameter have large numbers of core network elements that must maintain unique associations with the others. That places a heavy burden on the endpoints as the number of nodes grows. Edge-based routers are typically designed to support a smaller number of connections – since fewer connections exist between edges than in the core. Diameter signaling routers designed for core routing can scale as needed to support the array of core network equipment using Diameter.

- Network and traffic management

As with SS7 networks, Diameter networks require dynamic intelligence to minimize the impact caused by the failure or congestion of individual network nodes. Core Diameter routers implement network management functions to deal with faults and re-route traffic in real time when problems occur. Edge Diameter routers lack the concepts of network management and traffic management, deferring to gateways or other connected endpoints to handle failures and congestion.

- Operational support

Core Diameter routers centralize operations, administration, maintenance and provisioning, and integrate sophisticated debugging and performance measurement facilities – where edge Diameter routers may not.

The question for Diameter routers is not if but when. And when the time arrives, operators will be best suited to consider their long-term Diameter needs.

Future use cases will likely include many of the following: charging and policy traffic load balancing, subscriber address resolution for both IMS and LTE networks, inter-operator roaming, translation of Diameter variants, interworking Diameter and non-Diameter nodes, and providing a centralized point for monitoring Diameter traffic. These tasks – and many others – are best enabled with a Diameter signaling router in the core of the network. IT

Jason Emery is director of product management at Tekelec (www.tekelec.com).

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By Hunter Newby

Infrastructure of the Internet Society

I was invited to speak on a panel at the Internet Society – New York Chapter on June 14, 2011, as part of the INET Conferences. The topic of the panel was "Pushing Technology Boundaries" and covered issues including Internet infrastructure models, the impact of potential technology breakthroughs and community fiber. Prior to the event the panel the moderator, Leslie Daigle, chief Internet technology officer of the Internet Society, sent out a list of questions to the panelists to set the stage and gain certain insights as to the various perspectives.

In an effort to educate in mass beyond the select 200 people who were in attendance the following are those questions along with my answers.

Leslie Daigle: The Internet started as an inherently collaborative network – indeed, an inter-network. What is the general Internet in this day and age, and what are the qualities of it that need to be preserved or nurtured to ensure it continues to provide the environment for innovation? Any that are not relevant?

Hunter Newby: Open, neutral interconnection at the physical layer needs to be preserved. Private peering/cross-connects between any two networks in a neutral colocation facility is the basis of the Internet. Without layer 1, there is no 2, 3, etc. I believe the term public Internet, which is widely used and as widely misunderstood, refers to the open nature of the Internet in regards to interconnection. It is more commonly thought to be associated with the security risks of data though, and that term is interchanged with public cloud (in reference to frame relay and ATM) and that gets confused with cloud computing, which is something entirely different. We should all be more concerned about preserving the concept of a dictionary and clearly defining terms. Public, or private, it all starts with layer 1.

Leslie Daigle: Rules of behavior have cultural and national boundaries as enforced by national laws. Indeed, the telecommunications industry has been governed by national (and international) regulations. However, the technical architecture of the Internet does not particularly recognize those frontiers. Could it? Should it? What would be the impact of those changes?

Hunter Newby: Fiber specifications, DWDM, Ethernet, Internet protocol are all global standards because of their efficiency and effectiveness. It's best to let that force of nature continue on its course. God forbid we have to go back to SONET-SDH conversions! The laws of nature are natural in a Darwin best of breed sense. The laws of nations are not as they are biased towards other interests. It is much easier to control and predict the behavior of machines, devices and components than it is to do the same for a nation of people. Then again, the machines help those who are in control of them to control the behavior of the people.

Leslie Daigle: The Internet is built on the assumption that new services and applications can be built and deployed, without requiring advance permission. This can create a tussle as those services may be competitive with ones offered by network operators. Is there a way to manage that, or is it just a fact of life?

Hunter Newby: The ability to build and deploy without requiring advance permission is all about one thing: control. Having it means not having to ask permission. Not having it results in the net neutrality debate. The net in net neutrality refers to network and not the Internet. Most people I have asked do not know this and think it is about the Internet. It is in fact about the control of access to the Internet. That is where the gate of permission sits.

I believe the term public Internet, which is widely used and as widely misunderstood, refers to the open nature of the Internet in regards to interconnection.

Nature will dictate, just as water flows down hill, the path of least resistance. The key is to have multiple paths or networks available. If there is only one there will be a gate. In a truly competitive field (four or more different transport networks) there will always be at least one that dissents and provides an open platform for others to build and deploy applications that people want to use without interference by the underlying provider of the transport of the application.

It was truly an honor to be on an agenda with such influential contributors to the global networking landscape as Tim Berners-Lee and Vint Cerf. The dialog throughout the entire day was very engaging and enlightening for many reasons and on many levels. To view the archived webcast please visit www.isoc.org. IT

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

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By Peter Radizeski

The Next Frontier

All eyes are on the cloud as the next big thing for telecom, but is the next frontier for agents cable?

As MSOs look to the channel to deliver the SMB space, agents may find that cable is the new face of telecom. It's similar with replacement services, but with a few surprises.

The MSOs are interconnecting their networks. This will allow for out-of-region multi-location deals. Cablecos are like baby bells in that they don't compete in a franchise region, so there isn't any overlapping network. The NNI allows for a larger footprint.

The MSOs are actively looking for more qualified channel partners. The rumblings I hear are that cable execs don't like the way agents present three quotes to the customer. They want the agent to be their advocate to explain why the cable offer is different (and more valuable) – or, even better, just sell cable deals.

Cable companies are seeing stunted growth in TV and residential broadband sales. They would like to grow their share of the B2B market. Cable is looking to the SMB space with voice (even hosted PBX), fat broadband pipes and metro Ethernet – sometimes business TV, especially for medical offices.

The wireless play is still being figured. Some are offering WiMAX or wireless Internet. Some sell mobile data either through their own network or through a Sprint/Clearwire deal. Just no signs of a quad-play bundle yet.

The big surprise is in the cloud space. TWC buying Navisite was a warning shot to signal that the MSOs are gunning for cloud services too. Cox announced that it will be building its own platform for electronic medical records. In Pittsburgh, Comcast has a partnership to utilize its network to link customers to Ascent's SAS70 Type II data center (and corresponding services like collocation, virtualization, DR/BC).

Certainly, the MSO space looks an awful lot like the telecom space back in 1999 with similar services and a growing need for B2B sales. IT

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

The Channel & AGENT NEWS

http://tmcnet.com/58970.1

Promero Strikes Up InConcert

Promero, a reseller and hosting provider of call center and CRM software, has become a reseller of the InConcert IP Contact Center solution. Founded in 1999, InConcert develops and delivers IP contact center solutions to such companies as DHL, Telefonica and Toyota. As part of the pact, Promero will be the exclusive reseller of InConcert Allegro Express, a rapid deployment pre-configured call center solution in a box/server configuration.

www.inconcertcc.com

www.promero.com

http://tmcnet.com/58971.1

VAR to Sell snom Solutions

Norango, a U.K.-based 24-hour telephone answering service, will enhance its portfolio with IP phones from snom. Norango traditionally focused on telephone answering, but with the addition of the snom range of products and hosted PBX, the company is now able to offer small and medium-sized businesses the complete solution to fulfill their telecom requirements. "We have traditionally stayed away from hardware as an offering; however, when we combined the rich feature set of snom with hosted PBX and our telephone answering service, we felt it was such a compelling combination that our customers could really benefit from it," says Mike Relf, sales director of Norango.

www.norango.com

www.snom.com

http://tmcnet.com/58972.1

SAP Adds Reseller

e2b teknologies, a company specializing in business software technologies, is now a SAP Business ByDesign solution reseller. As an authorized reseller, the company is now allowed to market, sell and deploy SAP Business ByDesign – the first native cloud-based ERP accounting system from SAP. SAP Business ByDesign is a fully integrated business management solution that delivers SAP software, on demand.

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Payments Solution Goes SaaS

PayCommerce has announced a reseller program that will enable ISOs to offer monthly subscriptions to its cloud-based universal business payments platform for small to medium-sized businesses at a retail price as low as $14.99 per month. In addition, PayCommerce offers a free single-user edition of its SaaS-based electronic global invoicing solution. PayCommerce is delivering an integrated cloud computing platform that provides customers with next-generation universal business payment solutions for vertical market segments. Its solutions are designed for ease-of-use and cater to small and large size business markets.

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http://tmcnet.com/58959.1

Don't Miss 4GWE

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Now in its third year, 4GWE has moved beyond the theoretical discussions of 4G technology and implementation and onto the critical issues of how best to enable and exploit the mobile Internet and the mobile enterprise. 4GWE in Austin next month will continue to explore the issues of expanding the coverage of 4G solutions for the wireless consumer while also exploring issues related to the wireless migration for the empowered enterprise. These issues include cloud computing, device proliferation, supporting a nomadic workforce, security and more. As part of ITEXPO, 4GWE has become the industry's premier gathering place for mobile network operators, fixed carriers, handset manufacturers, mobile Internet device manufacturers, application providers, the enterprise, and venture capitalists.

http://4g-wirelessevolution.tmcnet.com/conference/west-11/

http://tmcnet.com/58960.1

M2M Conference is Next Month

The M2M Evolution Conference, collocated with TMC's ITEXPO, is next month. This event, staged by Crossfire Media and TMC, is scheduled for Sept. 13-15 and will be held at the Austin Convention Center in Austin, Texas. M2M Evolution 2011 showcases B2B applications in the transportation industry, and examines the intersection of technology, regulatory issues, end user applications, and the ROI associated with M2M technology.

http://m2m.tmcnet.com//conference/west-11/

http://tmcnet.com/58961.1

Learn What's Super about Super Wi-Fi

Spectrum, free and open, creates lots of business and huge opportunities. In just 10 years, Wi-Fi went from almost being unknown to more than 250 million Wi-Fi access devices. Wi-Fi devices and Wi-Fi service has become ubiquitous. Will the same happen with the new TV white space spectrum? Leveraging the success of the first Super WiFi Summit in Miami, Crossfire Media and TMC plan to continue the discussion in Austin and provide attendees with an opportunity to hear from the major players in the white spaces arena.

http://www.tmcnet.com/voip/conference/super-wifi/2011/west/

http://tmcnet.com/58928.1

Ericsson to Manage Clearwire Net

Clearwire Corp. is handing over the management of its 4G network to Ericsson. The seven-year deal is aimed at helping the WiMAX service provider to save money, and 700 of the carrier's employees will start working for the vendor as part of the effort. Ericsson and Sprint struck a similar arrangement in 2009. Sprint is, of course, Clearwire's largest shareholder and a wholesale partner of the 4G service provider.

www.clearwire.com

www.ericsson.com

http://tmcnet.com/58938.1

Vendor Doubles Production Capacity

Mitsubishi Electric Corp. plans to double its annual satellite production capacity from four satellites to eight. To enable this, the company will invest more than $37 million to enlarge and upgrade its production facility in Kamakura, Japan. Construction is scheduled to be completed by March 2013. The new facility will have a total floor space of 7,700 square meters.

www.mitsubishielectric.com

http://tmcnet.com/58948.1

BT Intros Mobile Video

BT Conferencing has released a videoconferencing app for the iPhone, iPad, Android OS phone and tablet devices. The BT Engage Meeting Mobile works in conjunction with BT Engage Meeting Manager, a web-based tool with an intuitive conference wizard and allows hosts to control their videoconference equipment. It can be used for either in-room conference control or can be accessed while on the go.

www.btconferencing.com

http://tmcnet.com/58957.1

Norweigan ISP Picks Exalt

Direct Connect, an ISP bringing broadband services to rural Norway, has installed microwave backhaul systems from Exalt Communications to extend its network communities throughout Norway. Direct Connect says as it built out its subscriber base it was finding a constant need for higher capacity in the network, and the Exalt systems offered pay-as-you-grow scalability for it to add capacity as needed. By investing in its own high-capacity microwave links, Direct Connect can pay for the systems within six months to a year through savings on recurring fiber lease costs. It is also using Exalt systems on network expansion projects to reduce the number of fiber nodes in the network.

www.exaltcom.com

http://tmcnet.com/58954.1

Abrazo Works with ShoreTel UC

Tango Networks has tweaked its Abrazo mobile unified communication solution to support the ShoreTel Unified Communications Platform Release10.x. The Tango Abrazo solution fuses the advanced capabilities of the enterprise PBX/unified communications system with the flexibility of the mobile phone. Now with Abrazo, any mobile phone on a Tango-enabled network, regardless of type, can become a true extension of the ShoreTel Unified Communications Platform.

www.shoretel.com

www.tango-networks.com

http://tmcnet.com/58953.1

Multichannel Tool Addresses Marketing Campaigns

Brierley+Partners recently released a campaign management tool within the Brierley LoyaltyWare platform. This new platform allows marketing personnel to define, reuse, test, schedule and execute complex marketing campaigns that span multiple communication channels with a new user interface. These channels include direct mail, e-mail, mobile, web and social media. Marketers can make use of the Brierley LoyaltyWare tool to design, test and execute complex, multi-channel communication strategies.

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By Paula Bernier

Varnish Extends Web Acceleration Solution

The company that Facebook and Twitter use to help ensure high performance for their services has unveiled a new release of its caching solution and some other new initiatives surrounding it.

Varnish Software's latest web accelerator, Varnish Cache 3.0, has module support, which allows business and application logic – which can determine such things as what content to serve to what user, for example – to reside in the caching layer of the network.

"The module support is the distinguishing feature in this release," says Varnish CEO Per Buer, who attributes some of the success of Firefox to the fact that it too supports modules.

Varnish Cache 3.0 also can compress content before storing it in cache, meaning faster load times, better cache efficiency and reduced bandwidth requirements.

And this release includes what Varnish says is rudimentary support for HTTP progressive streaming. Full streaming support will be added to the product in the fourth quarter.

Buer says the HTTP protocol that powers the web today is starting to power almost everything else as well. In a couple of years, whenever you're watching VoD or live content it will probably also start to be pushed through HTTP, he adds, so this effort "piggybacks on HTTP."

Varnish Software, an open source company, is also launching some activities related to its web acceleration solution. In an effort to strengthen its community of users, the company is launching a repository where Varnish Cache users can share modules.

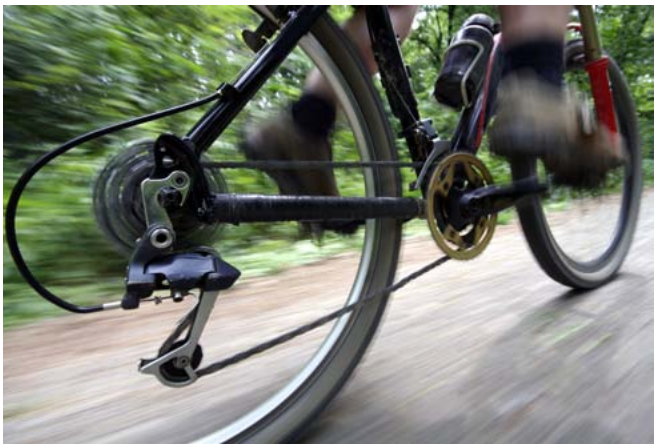
The company also has forged a partnership with cloud management platform provider RightScale Inc. to deliver a cloud-based version of its solution.

That steps up the competition between Varnish and Akamai, which the former company considers its closest competitor.

Buer says the Varnish solution can increase the speed of a website by a factor of 10 to 300 times, and can result in average bandwidth cost savings of 10 to 25 percent.

Web acceleration, always an important area, has become a particularly hot topic lately. In addition to CDNs like Akamai and web acceleration specialists like Varnish, some of the large telecom equipment outfits are also getting in on the act.

For example, Alcatel-Lucent Ventures recently unveiled a managed service called AppGlide Video Analytics that gathers, correlates and analyzes information on the network so service providers can improve the user experience; collect hard data in an effort to appeal to advertisers and content companies to put



their content on these service provider networks; and understand the performance that their own CDN partners are delivering.

Mark "Buck" Peterson, general manager of Alcatel-Lucent Ventures, a technology company and business incubator under Bell Labs, says service providers could use this on-net CDN internally to improve the user experience related to their own content, or they could offer it as a service to advertisers (13 percent of videos watched online are advertisements, according to Peterson), other content companies, or over-the-top content aggregators.

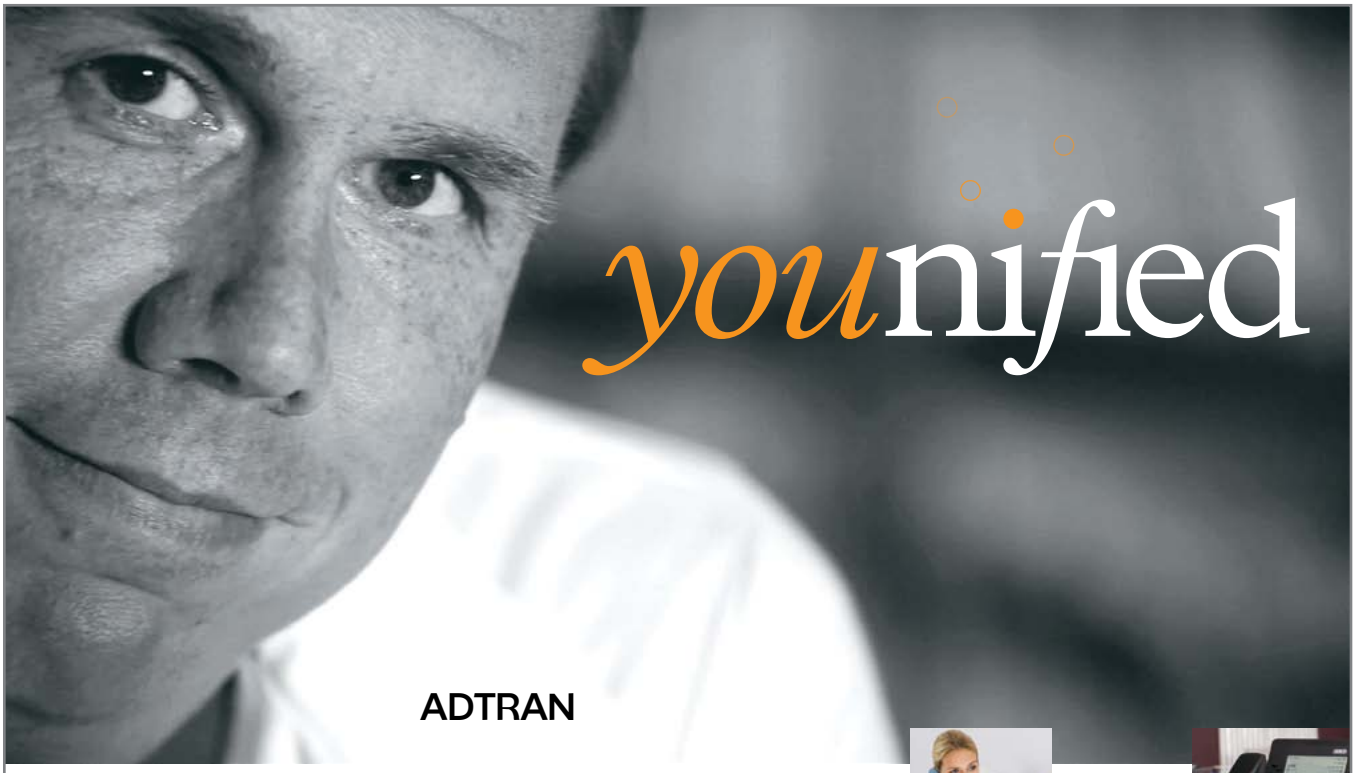
AppGlide Video Analytics, which runs on Amazon's Elastic Compute Cloud, is available for trial now. The company declined to provide pricing, but said that it will charge service providers for AppGlide Video Analytics on a per subscriber basis.

The unveiling of AppGlide Video Analytics followed by about three months the news that Akamai and Ericsson have joined forces. In February at Mobile World Congress the companies announced they are developing software that will enable Ericsson gear to interface with a policy control solution that ties into the Akamai CDN.

That will allow service providers like the telephone companies to cache popular traffic closer to customers – and within the wireless network. And that will accelerate content delivery, allowing service providers to not only offer a better customer experience, but to justify their investment in the joint Akamai/Ericsson solutions by offering premium services to end users and content companies, and by enabling those network operators to use their network resources more efficiently.

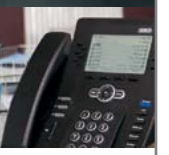
Akamai and Ericsson in February said they'd already tested the joint "cloud" solution, as they called it, with developers and expected to introduce it to service providers in the next six months, which would mean later this summer or in early fall.

Ericsson declined INTERNET TELEPHONY's late May/early June requests to provide an update on this effort. That may have something to do with the fact that Ericsson just announced its plans to buy Telcordia, which could potentially impact this offering. IT



My NetVanta® UC Story.

My name is Paul Lipscomb. I am a pediatrician and I became a doctor to help people. One of my biggest challenges is being accessible to patients not only during normal office hours but for after-hour emergencies. When an emergency call comes in it can be as simple as a concerned parent needing reassurance, or it can be something critical when seconds matter. And it's my job to find a solution.



Today, I'm proud to say that NetVanta UC is part of my solution. When that late night emergency call comes in, a parent can leave a detailed message of their child's situation. The NetVanta UC system immediately rolls their voice mail message to myself, or the doctor on duty. We get the message on our cell phones, via voice mail, text message, or email. That allows us to call right away and gives us the ability to assess their situation and provide fast, accurate feedback. The NetVanta UC system also allows me to operate without the expensive "after hours" answering service. I can now say I can save lives and save money at the same time. NetVanta UC helps me and my patients sleep better at night.

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Dr. Paul Lipscomb is a promotional representation. Actual case studies available at adtran.com/UC_DOC

EN918B03/01/11IT

http://tmcnet.com/58976.1

IBM, Red Hat Partner on KVM

Red Hat Inc. is working together with IBM to design products and solutions based on kernel-based virtual machine technology. The companies have teamed up and are driving the adoption of open source virtualization technology through joint development projects and enablement of the KVM ecosystem. Two joint customers, the Brazilian Federal Highway Police and Cortal Consors, a division of BNP Paribas, have both witnessed major benefits by deploying Red Hat Enterprise Virtualization on IBM System x servers. Lourival Filho at the Brazilian Federal Highway Police, says: "In the final results, it offered us energy saving, easier management of assets and more availability for services. Compared to proprietary solutions, we saved more than 80 percent in the overall cost."

www.ibm.com

www.redhat.com

http://tmcnet.com/58977.1

Oil Outfit Embraces Open Source

Santos, a supplier of oil and gas for Australia and Asia, has reported cost savings of $2.5 million after adopting Red Hat's Enterprise Linux solution. Santos has also achieved greater stability and faster performance, which has further helped in reducing its global carbon footprint. Santos is involved in oil and gas production in the Asia-Pacific region. Andy Moore, IS manager of Santos, says: "Red Hat has been a platform of choice for the oil and gas industry for some time because it's a preferred development platform for the major geoscience software vendors."

www.santos.com

http://tmcnet.com/58978.1

Investment Firm Targets 'Disruptive' Start-ups

With an emphasis on European start-ups, Open Ocean Capital has just closed its Fund Three with approximately $60 million (EUR 40 M) in capital in the first closing. Open Ocean Capital, the early-stage venture capital firm, is led by investors who closed the $1 billion sale of MySQL to Sun Microsystems in 2008. Patrik Backman, Open Ocean Managing Partner, says: "…while we continue to focus primarily on European start-ups deploying community and open-source business models, we're open to hearing from all disruptive companies that are interested in changing the world."

www.openoceancapital.com

http://tmcnet.com/58979.1

Shared Ride Service Goes Open Source

The ridesharing mobile service from Fraunhofer FOKUS, OpenRide, has been enhanced, thanks to the release of its source code. This release was made to improve and promote the environmentally-friendly traveling service called ridesharing. As a result, it is the first-ever dynamic ridesharing service software in the world to be released with an open source license. The open source license allows developers to make use of the software at zero charge, while also allowing for its customization based on the business need or individual requirement.

www.open-ride.com

http://tmcnet.com/59012.1

Firm Suggests Red Hat Strategy

The growing shift toward cloud computing platforms has created an incredibly lucrative opportunity for the sector, says www.stockcall.com. Because customers seem to prefer complete software bundles that satisfy their entire set of needs, consolidation has been a major trend in the sector as larger companies look to make acquisitions to fill in the gaps in their product lines. For this reason, some analysts believe it is possible that Red Hat Inc., with its strong middleware and virtualization presence, may benefit from an acquisition in the database market, though it is unclear whether the company has any intention to do this.

www.stockcall.com

http://tmcnet.com/58932.1

Microsoft Embraces HTML5

Recently Microsoft came out with the news that new Windows 8 immersive applications will be coded with HTML5 and JavaScript. This has sent a shockwave through the company's developer community, as the various programming languages the group is used to seem to have become obsolete overnight. Reports indicate that Silverlight will continue to be supported as well, but the forums are awash in fear, uncertainty and doubt.

www.microsoft.com

http://tmcnet.com/58935.1

FT Bets on HTML5

The Financial Times has launched a HTML5 Web app to allow readers to access any content across tablet and smartphone devices. After investing heavily in Apple's App Store, which boasts around 250,000 apps, the Financial Times realized Apple was limiting the financial and business news organization in a way that blocked it from achieving its marketing goals. The news organization also reportedly wasn't pleased with its search and discovery tools, thus pushing the Financial Times to ultimately shift to the Web, according to Rob Grimshaw, Financial Times' online managing director. "Anything an iOS app can do, the Web can do better," says Grimshaw. "We started off not knowing what could be achieved [in HTML]. But, one by one, we found that all the things that could be done in a native app actually could be done in a HTML5 app – and we haven't had to compromise on anything, though we were expecting to."

www.ft.com

http://tmcnet.com/58936.1

Google Apps Gets Present

Starting Aug. 1, Google Apps will only support the current and prior major release of Chrome, Firefox, Internet Explorer, and Safari on a rolling basis. "For web applications to spring even farther ahead of traditional software, our teams need to make use of new capabilities available in modern browsers," Google's Vice President of Engineering Venkat Panchapakesan says in a blog post. "For example, desktop notifications for Gmail and drag-and-drop file upload in Google Docs require advanced browsers that support HTML5. Older browsers just don't have the chops to provide you with the same high-quality experience."

www.google.com

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By Paula Bernier

Adapt or Die

8x8 is Living Proof that Change is Good

8x8 Inc. has come a long way, baby. But this month it expects to unveil a cloud-based video service. And that, in effect, will bring the company full circle.

You see, the company, best known today as a voice over IP service provider, got its start in life as a visual communications organization.

The Back Story

Founded in 1987 as Integrated Information Technology Inc., the company arose at the hands of two graphics chip company execs. In 1990, 8x8's current CEO, Bryan Martin, joined the company's video compression semiconductor architecture group.

Compression Labs was among the graphics chip company's first customers, and it provided the algorithm used by AT&T for its Picturephone. So Integrated Information Technology, with its four-person staff and in business less than a year, already had AT&T using its technology, notes Martin.

Integrated Information Technology dominated its space throughout the 1990s, when the ITU had yet to set standards around videoconferencing (although it added MPEG when that came along), says Martin. Then, in 1996, the company introduced its own videophone, ViaTV. However, around that same time it became clear that customers were more interested in IP voice than two-way IP video, so the company turned its attentions to voice semiconductors. That ended up being a decent move, as the company in 2000 won a fair amount of business from Lucent, and life was good.

Then everything changed.

In October of 2000, the Lucent division for which the company was a supplier got slashed. Indeed, the communications industry as a whole took a major hit with the dotcom bust and the WorldCom debacle. The once-explosive communications space was now in the midst of the telecom nuclear winter.

Martin had been CTO of the company, but amidst the turmoil he assumed the title of CEO. Cost cutting was the order of the day, so he downsized the company's workforce from 350 to 35 employees.

There were no OEMs left to sell to, so Martin and his colleagues needed to shift again with the winds of change.

Management decided to use the company's technologies to appeal directly to end users. In late 2002, the company launched

8x8 CEO Bryan Martin

a voice service based on its own chips and software under the Packet8 brand.

It was slow going at first. The company had just eight customers in its first month of billing, and employees took their phones home with them at night to provide customer service. But things improved quickly. In mid 2003 they put together $1 million in funding, which included their own money and some dough from one outside investor. Over the next couple of years the company raised a total of about $60 million.

By 2004 hundreds of thousands of residential subscribers were using Packet8 services. To continue on its path of growth,

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8x8 readied to address the business market. That same year it launched a simple hosted PBX service that used terminal adapters to plug into business phones.

8x8 was bringing in $3 million in annual revenues from its business customers by around the end of 2006. This group of subscribers offered better margins, lower churn and fraud, and fewer customer service demands than 8x8's residential customers, so the decision to expand to address business users was fortuitous. It was such a good move, in fact, that the board decided to focus the company's limited resources on the business side almost exclusively.

Real Time

Today, residential users account for just 10 percent of the company's annual revenues. By the end of May 2011, 8x8 had surpassed 25,000 businesses subscribing to its cloud VoIP, videoconferencing, unified communications, and managed hosting services.

"We added more new businesses in the March quarter than we've ever added before," says Martin, who adds that "business is very profitable these days".

In fact, 8x8 has been profitable 13 of the past 14 quarters. The company ended its fiscal year on March 31 with annual revenues of $70 million; $8.6 million in free cash flow from operations, $7.8 million of which the company used to buy back stock; and $18.4 million in cash (and no debt).

That has garnered the company acclaim by some financial watchers. The Motley Fool in April 2011 named 8x8 as one of Wall Street's best hidden stocks, praising the company for the way it "allows customers to feel they're calling users' offices, even when they're actually dialing into a cell phone."

"8x8 has been through a lot and survived," says Martin. "Now we feel like we're in the technological and financial position that's better than it's been in the history of the company, and we're growing aggressively,"

The company just got new site a couple years ago, and already it's bursting at the seams, he says. 8x8 employs 260 individuals, not counting 100 full-time equivalents that work at its call center doing customer support. It continues to add people in customer service, operations, sales and software development.

The Product

Virtual Office is the name of the company's flagship offering, to which it's added call center and UC functionality, call recording and presence management. Of course, mobility is also a component of the solution, which includes soft clients, web clients, and support for the iPhone and Android-based smartphones. 8x8 will support other mobile operating systems over time.

"Our goal is to proliferate our services so our services can run on any platform that is prevalent in the business market," he says.

Martin says Virtual Office is a great replacement for very high end business phone systems, although it's also suitable for small companies. The company also offers for less than $10 a month a solution called Virtual Office Solo. This provides a full and sophisticated suite of UC capabilities via just a web client. It was designed for telecommuters, but Martin says Virtual Office Solo also is a good, low-risk way to enable potential business customers to get a feel for what 8x8 can offer.

Eight lines is the average buy of 8x8 customers today, although the average for new customers is 11.5 lines. Voice services for these customers are supported by data centers in Silicon Valley and Ashburn, Va., at which 8x8 servers and high-speed interconnects are located.

But that's just the voice side of the house. The company also now plays in the data and video space.

Last year 8x8 acquired a managed hosting company called Central Host out of Los Gatos, Calif. The company manages servers in data centers on behalf of customers.

When they did deal, Central Host had a $1 million a year run rate; its average customer paid for management of about 10 dedicated servers; and each server only supported a single customer, Martin says.

In February 8x8 began offering virtualized servers, kind of like Amazon, says Martin. This summer it'll start providing server resources by the minute or the hour, he says, adding that 8x8 managed services also include subscription-based firewalls, back-up server services, security/VPNs and even hosted Exchange. The company has almost tripled revenues for this business since it bought Central Host.

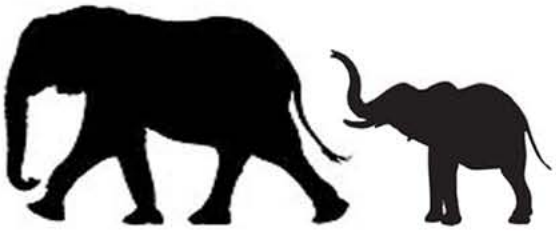
That may help explain why 8x8 continues to expand its efforts on this front through acquisition and the addition of more managed services.

8x8 on June 20 announced it had acquired Zerigo, a Littleton, Colo.-based company that provides virtual private servers, managed DNS services, and monitoring tools for cloud-based server operations. 8x8 says this deal, for which the terms were not disclosed, "aligns with 8x8's strategic plan to grow its cloud-based offerings through both organic and inorganic activities."

Martin indicated in his June 14 interview with INTERNET TELEPHONY that 8x8 has been on the lookout for acquisition opportunities. From the sounds of it, there could be more such activity from 8x8 in the future. He notes that 8x8 sells back-up services as part of its cloud offer. Right now, he says, 8x8 resells a service from a company named Mozy, but 8x8 potentially could use M&A to bring that in house and, in the process, improve its margins. An acquisition related to call recording might also be attractive to 8x8, Martin adds, saying the company would like to improve upon its speech-to-text functionality and call recording search tools.

Eyes Forward

As noted at the top of this article, 8x8 earlier this summer was readying a cloud-based video service with an eye toward launching it this month.



The conference phone with a memory...and that's not all

KONFTEL 300

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The Konftel 300 supports SD memory cards, so meetings can be recorded and played back. The memory card can also be moved to a computer for playing back, sending, or saving audio files. It can also be used for upgrading the Konftel 300 with new functions.

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> "The idea really is to start introducing video communication back to the small business at a price they can afford."
>
> - 8x8 CEO Bryan Martin

Basically, this service outsources the management of videoconferencing equipment for business customers, Martin explains. It's about managing disparate videoconferencing protocols like H.323 and SIP that are out there today to enable multiple endpoints to work together and to ensure a high-level user experience, he adds. NAT traversal, bandwidth management and control of the end-to-end solution from 8x8's data center is all part of the turnkey videoconferencing solution. 8x8 also brings along for the ride Virtual Office Pro (its lightweight videoconferencing software client) and its $1,000 video phone, for those customers who want them.

"The idea really is to start introducing video communication back to the small business at a price they can afford," he says.

Pricing for the solution varies depending on the number of participants involved and the resolution supported, but it's somewhere between $250 and $1,000 per month per virtual room. There are standard-definition, high-definition and gold HD (high-def with lots of participants) levels of service.

Go to Market

As it expands into new service areas, 8x8 also plans to make some changes to its sales approach. The company earlier this year hired on two Polycom sales executives to lead that charge.

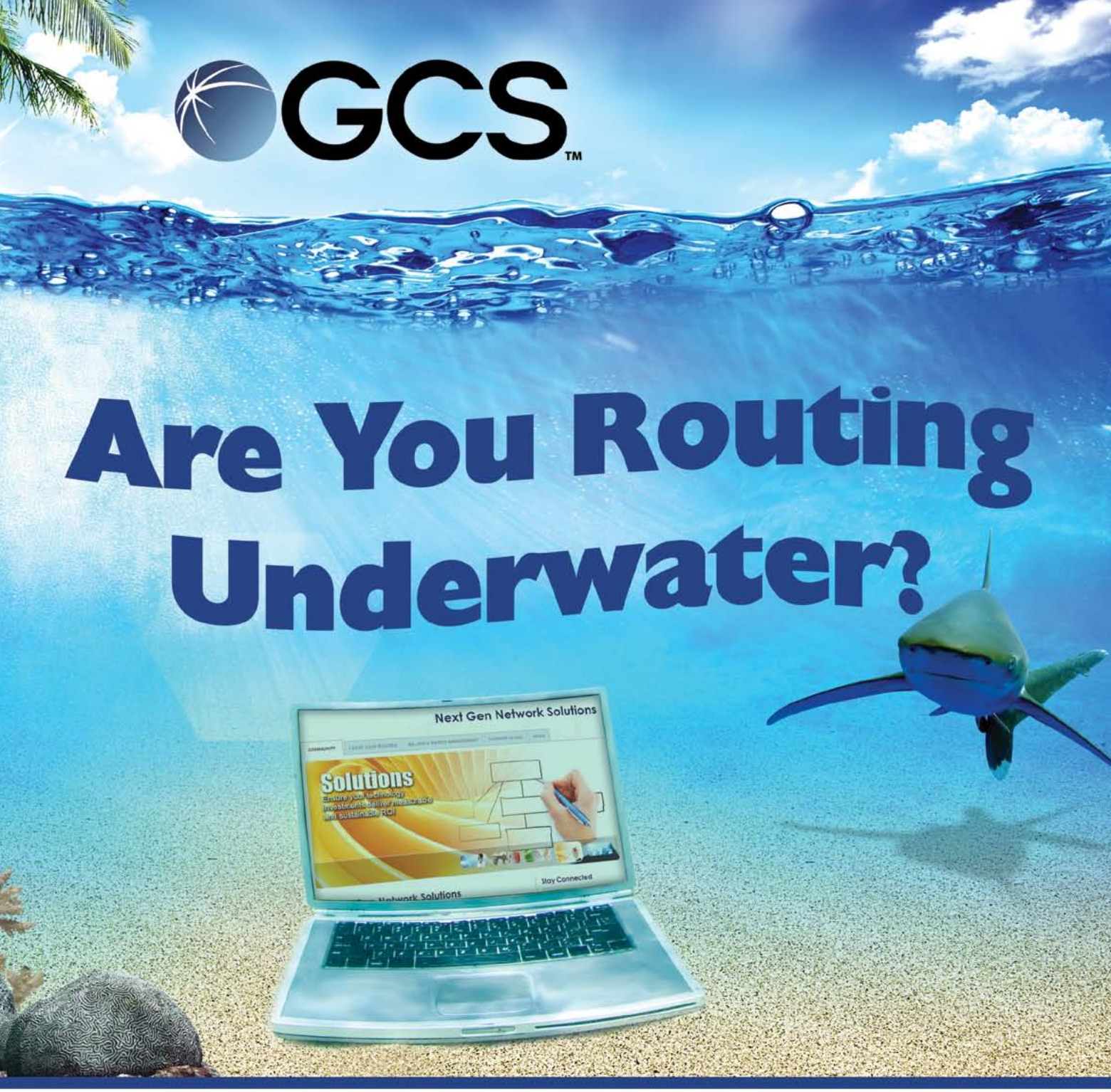
Kim Niederman is now 8x8's senior vice president in charge of worldwide sales. Martin says Niederman is making changes to inside sales that include some adjustments to personnel and bringing in some of his own people.

Don Trimble, also a former Polycom guy, is heading up channel sales. About 95 percent of 8x8's sales are done direct today; however, it appears as if channel sales will play a growing role in the delivery of the company's services in the future. Martin in mid June told INTERNET TELEPHONY that 8x8's channel program hadn't yet been officially unveiled, but that it has been working on the effort and had 15 resellers signed on that had resulted in nine new customers for 8x8.

Among 8x8's channel partners is master agent World Telecom Group, which with 2,000 agents is the service provider's largest channel partner. (WTG was a partner of 8x8's when its focus was on residential services as well.) Martin says 8x8 will announce more partners over the next couple of months. He adds that a big push for 8x8 is to forge more partnerships with businesses in the data hardware space. That would include companies that sell power over Ethernet switches and traffic shapers into LANs, he says.

Martin adds that Niederman and Trimble also are retraining the sales force to stop selling on price and start talking more about the value 8x8 delivers. With savings of six to seven times in the first year of use compared to existing solutions, it's not surprising that it's price that usually closes deals for 8x8, says Martin. But focusing solely on price during the sales process has led 8x8 to commoditize its own product to some extent, he says. So the company wants to help potential customers understand the benefits of HD voice, unified communications and recording on demand.

"Unfortunately that [typically] happens post-sale," says Martin. But, he adds, that may change with the introduction of business video. IT



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By Sean Duggan

IPv6: A Necessity in a Global Economy

Although it's been talked about for nearly a decade, the buzz about IPv6 is heating up, especially after the success of World IPv6 Day on June 8. Everyone who's paying attention knows that IPv4 addresses will soon be exhausted, so the adoption of IPv6 is inevitable.

Some U.S. organizations have not seen the urgency to support IPv6 because they say they still own plenty of unallocated IPv4 addresses – maybe enough to last them another two or three years. Unfortunately, that fact is quickly becoming irrelevant as the rest of the world around them has already begun transitioning to IPv6. Beginning in Asia and moving quickly throughout the Middle East and Europe, organizations are already adopting IPv6 for one simple reason: They don't have a choice; they can't get IPv4 addresses. And because the world today is so highly interconnected, this has business implications for everyone. Unless organizations that currently exist on the IPv4 Internet provide IPv6 connectivity for their public-facing web applications and services, new IPv6 users will be cut off from these resources.

No one understands this better than mobile carriers and Internet service providers. Both will soon have countless new IPv6 customers who want and expect the same Internet access and mobile services they've always enjoyed on the IPv4 Internet. The market has reached a point where supporting IPv6 is not an option for service providers. They, too, are running out of IPv4 addresses, and many of their upstream ISPs will only be able to provide IPv6 addressing for them in the future. If one provider can't supply enough addresses to meet customer demand, customers will go to a provider that can, even if it means converting to IPv6. Service providers can't risk losing existing customers to competitors, and they can only expand their subscriber base and services by supporting IPv6.

Faced with these market changes, service providers are struggling to find the most efficient and cost effective way to serve both IPv4 and IPv6 customers. They must provide connectivity to and between networks so that, for example, IPv6-only clients can access the IPv4 Internet. Once they can provide reliable IPv6 connectivity, they face the challenge of transitioning their internal networks to IPv6 without disruption.

Service providers can't afford to make massive changes in their subscriber networks all at once, and downtime is not an option, so a gradual migration strategy is essential. They need solutions that make it possible for them to begin supporting

IPv6 users without converting their internal infrastructures at the same time. Fortunately, there are options that enable service providers to gradually implement IPv6.

Tunneling is a mechanism for getting traffic that uses one protocol across a network that uses another protocol. DS-Lite and 6rd are two examples of tunneling methods used for handling both IPv4 and IPv6 traffic.

DS-Lite enables IPv4 traffic to travel through an IPv6 backbone network. For example, suppose an ISP's customer premises equipment, such as a cable modem in a residence, supports IPv6 but the client devices that connect to it are IPv4 only. When a client requests an address for a website that resides only on the IPv4 network, DS-Lite establishes an IPv4 tunnel across the provider's IPv6 network. By packaging, or encapsulating, the IPv4 address inside of an IPv6 packet, the client can connect to the IPv4-only website via the ISP's IPv6 network. Before the packet leaves the IPv6 network, however, the ISP's carrier grade NAT (CGN) must translate the IPv6 address back to the original IPv4 address so it can route the packet to its final destination on the IPv4 Internet.

DS-Lite has its place in certain scenarios like the one just described, but ultimately it is only a stop-gap solution. Because it still relies entirely on the IPv4 network to transport packets, DS-Lite doesn't help a service provider progress toward the end game of establishing a fully IPv6 infrastructure.

IPv6 rapid deployment, or 6rd, is another tunneling mechanism that is essentially the inverse of DS-Lite except that it tunnels IPv6 traffic over existing IPv4 networks. An important distinction from DS-Lite is that 6rd operates entirely within the end user's ISP network. As service providers begin imple-

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menting the preferred dual stack infrastructure, the use of 6rd is expected to fade relatively quickly.

With a true dual stack (not to be confused with DS-Lite) solution, both IPv4 and IPv6 protocol stacks are fully supported by the client device and the provider network. Dual stack is somewhat comparable to a person who is bilingual in English and Spanish; he or she can answer a question in either language depending on the language in which a question is asked.

top box. This solution enables service providers to begin transitioning their own internal infrastructures to IPv6 while still supporting IPv4 client devices. It also gives cable companies a way to avoid the time and expense of upgrading the firmware in set-top boxes and other CPE to make them IPv6-capable.

For traffic that passes through a service provider's network to a destination on either the IPv4 or IPv6 Internet, a combination of dual stack with both NAT64 and DNS64

Dual stack is somewhat comparable to a person who is bilingual in English and Spanish; he or she can answer a question in either language depending on the language in which a question is asked.

In a dual stack environment, all participants in the communication exchange can speak either IPv4 or IPv6. For example, if a client requests an IPv6 address for www.example.com and it exists, the client receives the IPv6 address and connects to that site across the service provider's IPv6 backbone network. If www.example.com exists only on the IPv4 Internet, the client receives the IPv4 address for that site and connects to it across the IPv4 network. Dual stack, then, is a mechanism that enables both IPv4 and IPv6 traffic and determines which protocol to use based on the request the client makes.

Using dual stack with NAT64 is an appropriate solution for service providers' own services and offerings such as customer web portals, and mobile, video, and web content that they offer to their customers. For instance, if a video service provider wanted to convert its video-on demand infrastructure to IPv6, it could use an application delivery controller close to its VoD servers to handle NAT64. Then, when an IPv4-only set-top box requests a video on demand, for example, the IPv4 request goes to the ADC, which translates the address to IPv6 and forwards the request to the cable company's network. When the movie starts streaming in IPv6, it comes back through the ADC device, which translated the IPv6 address back to IPv4 so the video can be delivered to the end user's IPv4-only set-

is the best solution. DNS64 provides name resolution for IPv6-only clients when they request a site that's only available on the IPv4 Internet. From the DNS64 server, the client receives a "synthesized" IPv6 address, which includes a pointer to a NAT64 server. The NAT64 server then translates the synthesized IPv6 address to an IPv4 address, connects the client, and then keeps track of both addresses so that the session between the IPv6 client and the IPv4 destination can continue.

For a service provider whose ultimate goal is to transition to IPv6 (while still supporting IPv4 as its prominence fades), a dual stack NAT64/DNS64 solution will help make that transition as seamless as possible. Unless they have a compelling reason to do so, providers that have not begun yet to implement IPv6 migration strategies are probably better off avoiding tunneling at this point in the game. Tunneling prolongs reliance on the IPv4 network and only delays the inevitable. With a dual stack-capable network and NAT64/DNS64 deployed where necessary, service providers aren't implementing interim throw away solutions; they're beginning to lay a solid foundation for a full transition to IPv6. If they can work with vendors whose solutions are already natively IPv6, so much the better. IT

Sean Duggan is director of product management at F5 Networks (www.f5.com).

By Ray Adensamer

Transcoding Cuts through Codec Complexity

With the advent of VoIP technology, continued advancements in telecom engineering and growing multimedia consumption, the variety of audio and video codecs in the network is increasing. This explosion of codecs is creating additional challenges for service providers in terms of increased codec complexity in their networks. In addition, the volume of media streams – particularly video media streams in the modern 3G mobile and LTE networks – continues to grow.

There are now hundreds of codecs to meet the needs of new service models delivered by all network types, including wireless, wireline, enterprise and satellite. For instance, in certain pockets of the evolving network where end-to-end IP broadband connectivity is available, the industry is seeing increased adoption of high-definition audio codecs, which deliver a high fidelity audio experience. At the same time, a huge installed base of subscribers continue to use the PSTN or 2G mobile services, where legacy narrowband codecs designed for 64kbps circuit-switched networks are the norm. Without a transcoding function somewhere in the call path, these endpoints would not be able to connect.

Challenges in IP Network Transcoding

Transcoding is the process of converting from one encoding format to another. Transcoding and other media conditioning functions require significant processing power in a network. This is best achieved with network equipment specifically designed to handle large volumes of IP media stream processing.

Codec complexity originates at the remote edges of the network, as many different device types frequently operate with their own preferred codec standards. For the network operator wishing to gain control over this complexity, a key objective in a transcoding network design is to reduce the total number of codecs supported in the core network. With fewer codecs supported in the core IP services network, the network operator can reduce operational complexity, lowering media processing investment and minimizing equipment capital expenditures and ongoing operating expenditures.

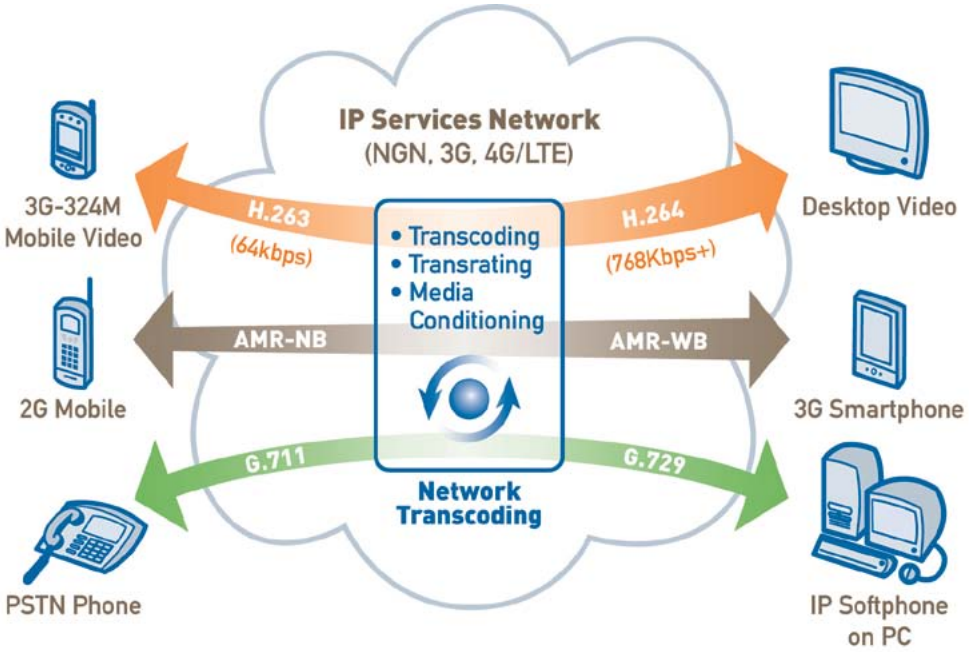
Another transcoding design objective is to reduce the media processing steps in the call path. Because transcoding is a processor-intensive function, each transcoding step adds a slight delay to the overall call delay. Therefore, by reducing the transcoding and media processing steps, overall call delay is reduced and call quality improved.

Network operators need optimized transcoding solutions that deliver economics, network simplicity and call quality. But to approach these questions, the first decision that must be made is where to perform transcoding.

Transcoding today is performed in one or more of three network device types: in the media gateway, or MGW; by session border controllers, better known as SBCs; or via the IP media server, or MS. The question then becomes: Which can best meet operators' cost, complexity and quality requirements?

Locations for Transcoding in the Network

One network location for transcoding is often found in MGW equipment located between circuit-switched access networks and the IP services core. The core function of a MGW is to convert a TDM circuit to an IP packet stream. However, TDM



Transcoding, when applied properly, can reduce overall network complexity and media processing costs.

investment has been declining, and with networks like LTE increasingly delivering end-to-end IP connectivity to the devices themselves, IP traffic growth will increasingly dominate.

Enterprise connectivity is also changing. In the past, enterprises connected their PBX equipment to the PSTN using E1/T1 or ISDN PRI circuit-switched trunks. Here also, TDM connectivity is giving way to SIP trunking and again, is diminishing while IP connectivity is exploding.

A second location for transcoding is sometimes found in SBCs located at IP network peering points. SBCs were originally designed to focus primarily on the IP signaling and security interface between two autonomous IP networks, such as a carrier network and an enterprise IP VPN. The SBC's core function is to analyze and update IP packet headers flowing across the border, but in turn, it is not always optimized for full-scale transcoding or other media processing needs.

However, operators have two SBC architecture alternatives: integrated SBC, signaling and transcoding in a single SBC element; or a decomposed SBC, signaling only in the SBC with transcoding in an IP media server. IP media servers are already found in many networks today to support a large variety of IP media stream processing functions, but relevant to this discussion, the IP media server has been delivering transcoding as an underlying function for years.

The integrated SBC was, as described previously, not originally intended for transcoding, so when you apply transcoding in both the SBC and the MRF, it results in an inefficient duplication of media processing resources. The second option, the decomposed SBC, allows the SBC to focus on what it was intended to do, while the media server focuses on what it was designed for – media processing. This approach meets providers' need for improved economics, reduced network complexity and enhanced call quality by providing a cost advantage over alternative approaches, scalability, media conditioning capabilities and deployment flexibility.

Transcoding in the IP Media Server

Using an IP media server provides an optimized approach for IP-to-IP transcoding in 3G mobile, LTE and IMS networks. A media server can deliver audio and video media processing for IP telecom services offering multimedia conferencing, ringback tones, IVVR applications and more. In addition to these media processing capabilities, it can support built-in transcoding. An IP media server with such capabilities can perform large-scale, real-time transcoding between different codecs in large service deployments.

The RadiSys CMS-9000 media server

A media server-based transcoding solution with signaling only performed in the SBC can deliver up to a 50 percent cost advantage over other approaches with integrated transcoding. Due to a dense digital signaling processor platform and centralizing media processing in a general purpose media server, transcoding efficiencies are achieved and costs decreased. Meanwhile, the signaling-only SBC will typically have much higher call per second performance, compared to performance when the SBC needs to perform signaling and transcoding together. Also, by reducing the number of transcoding operations in an end-to-end call path, cost is further reduced and call quality is improved.

In addition to audio transcoding, carrier networks often require other media stream processing capabilities, referred to as media conditioning. IP media servers have the capability to perform transcoding on IP media streams in real time while also performing other functions including voice quality enhancement, video transcoding and transrating and IPv4/v6 address scheme normalizing.

Voice quality is an important requirement for many network operators that offer telephony services based on VoIP technology. Despite providing tremendous economic benefits, VoIP also presents new voice quality challenges such as dropped packets, variable packet delay, and packet reordering and corruption. In-network quality enhancement solutions, generally referred to as VQE, are available to effectively address these issues using techniques like acoustic echo cancellation, dynamic noise reduction and packet loss concealment.

Voice quality improvements can be achieved as part of the transcoding solution design itself. As mentioned earlier, each media processing step adds some level of delay in the call path. Rather than media being processed twice as in an integrated SBC approach, first in the SBC and again in the media server, by focusing transcoding and media conditioning functions on the media server, media is processed only once in the media server, reducing delay by up to 50 percent and improving overall voice quality.

An IP media server approach to transcoding also provides more flexibility in terms of network location support.

For example, in one approach the media server is controlled by a signaling element in the network using a control interface such as SIP or H.248. The signaling element can be an application server, call state control function or the signaling component of an SBC. By using this approach, not all calls are processed by the media server, only calls requiring transcoding. This reduces equipment investment, while also allowing per-stream control of services media processing and media conditioning.

Another approach involves the media server being deployed directly in the call path. This approach eliminates the need for external control integration, which simplifies overall network design deployment. It also allows selective media conditioning based on rules and triggers.

Network operators have a variety of transcoding solution approaches available on the market today. By choosing to perform transcoding and media processing in the IP media server, service providers are supported by a solution that is optimized for IP-to-IP transcoding in 3G mobile, LTE and IMS networks, scalable across wide range of codecs, economical and flexible. IT

Ray Adensamer is senior product marketing manager for RadiSys (www.radisys.com).

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By Tom Keating

INTERNET TELEPHONY Congratulates TMC Labs Innovation Awards Winners

TMC Labs has enjoyed discovering new and truly unique and innovative products and services within the VoIP industry for several years and awarding them a TMC Labs Innovation Award. Our 12th annual TMC Labs Innovation Awards was certainly no exception. TMC Labs has been testing, examining, and reviewing products since 1994, and one of the best parts of the job is seeing unique and innovative products for the first time.

This year marked several strong contenders in these specific areas: testing tools, video, and unified communications. TMC Labs uses a rigorous selection process when selecting innovative products. This year, TMC Labs proudly bestows 19 companies with TMC Labs Innovation Awards, which are published in two parts to accommodate our in-depth write ups about the winners. The complete winners list is published in both issues; however, the detailed write ups are presented in two pieces, beginning with 01 Commnique and ending with Jabra last month, and starting with Lyrix Inc. and ending with Vocalcom this month.

Lyrix Inc.

Mobiso Cloud Based Speech Assistant

www.mobiso.com

Speech-recognition IVRs are popular with financial institutions and large enterprises that can afford to maintain racks of servers, update speech recognition engines, and all the other maintenance involved with a speech-enabled IVR. Some small to mid-sized organizations have dipped their toes in these waters, but it is sometimes just too cost prohibitive to maintain. But what if you could outsource the speech-recognition IVR to the cloud? This would mitigate any upfront hardware costs and result in overall lower TCO. Well, that's what Lyric's Mobiso Cloud Based Speech Assistant aims to do. The Mobiso Speech Assistant is a speech-enabled auto attendant that utilizes Lyrix's patent-winning PeopleFind technology, and the power of SIP. It claims to be the first fully hosted cloud-based speech-enabled auto attendant solution in the marketplace.

Lyrix explains, "Lyrix is a cloud-based service provider with over 10 years of [experience with] public and private clouds. We work with network service providers, PBX manufacturers such as Cisco and Mitel, as well as hosted VoIP providers to establish the SIP connectivity and the exchange of directory records between the customer and Mobiso Speech Assistant. The proven, highly accurate Speech Assistant lets customers reach employees quickly and effortlessly without the frustration of traditional dial by name lookup."

Mobiso Speech Assistant uses best-in-class ASR technology from Nuance. It's very easy for VoIP customers to get started with this solution – in 30 minutes either as a partner or end customer via SIP registration or SIP trunking. Once a customer is configured, Mobiso creates a cloud tenancy for the customer and directory adds, moves, and changes flow to the cloud, keeping the customer's speech directory up-to-date. Once enabled, a user dials the speech assistant through the IP PBX and is passed to the Mobiso cloud over SIP, where Mobiso converses with the caller to determine their destination. The call is brief, and the user is transferred to the extension or phone number stored within Mobiso. The user may speak people, places, product names, customers…whatever names the customer feels are useful. External callers, trying to reach customer's users, can be serviced by Mobiso the same way, with a company greeting welcoming the caller and then routing the caller to the correct destination; in this way, Mobiso serves as a customer service application in addition to a speech dialer for the customer.

Metaswitch Networks

Metaswitch SIP Session Router (SSR)

www.metaswitch.com

The Metaswitch SIP Session Router (SSR) provides centralized routing, SIP normalization and load balancing and session management for SIP-based voice, video, instant messaging and multimedia traffic within and between the mobile, fixed line and transit networks of service providers. The SSR addresses scaling problems when session routing decisions become much more complex, requiring a dynamic, real-time routing decision for each individual session for multiple sources and destinations within a network. These sources and destinations are SIP signaling elements such as session border controllers, wireless mobile switching centers, IMS call session control systems, and Class 4 and 5 softswitches. Scalability of the SIP Session Router is achieved by applying N+1 proxy blade scaling coupled with their own SIP load balancing servers resulting in an architecture achieving greater than 500,000 concurrent SIP sessions per instance of the SSR using COTS hardware.

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Metaswitch has applied its innovative, extensible protocol interworking technology to a large scale, core network SIP proxy network element with three main objectives: centralized SIP signaling routing, SIP normalization and SIP load balancing. Metaswitch's innovation for the SIP Session Router is providing the industry's first XML toolkit, which eases interoperability by enabling the modification of incoming and outgoing SIP messages to accommodate variants. The toolkit is flexible enough to add, replace and modify SIP headers, parameters, and content bodies from one call leg to the other as needed. The key benefits to the service provider are flexibility to utilize the SSR to normalize SIP traffic across multiple network domains and reduced interoperability testing complexity and costs associated with expanding or adding new network nodes. Metaswitch scripting allows free-form header manipulation ensuring future proofing of the solution.

Metaswitch explains, "The Metaswitch SSR XML scripting toolkit advances SIP protocol manipulation and takes it to a new level by leveraging XML technology in combination with the Metaswitch field-hardened Ignite protocol interworking framework/OS, shared with the Metaswitch Service Broker platform. In combination, our XML-based scripting toolkit allows an unprecedented level of protocol manipulation to enable any-to-any SIP variant interworking as opposed to today's limited hard-coded solutions. The ultimate benefit of this technology advancement is to ensure SIP technology from one manufacturer will work another manufacturer. As LTE and IMS continue to gain momentum, assuring SIP interworking is essential for best-of-breed networks."

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Radware	Alteon 10000 Application Switch	www.radware.com
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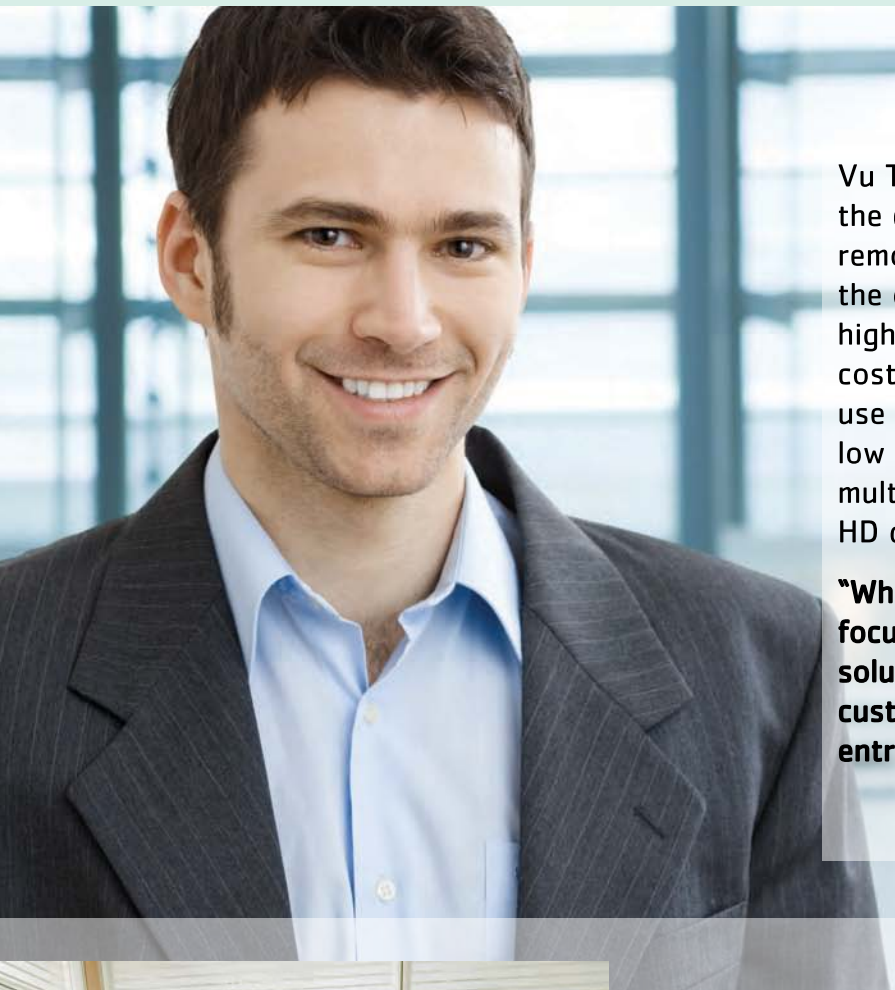

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- Vu CEO Devita Saraf

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Polycom
SpectraLink 8400 Series Wi-Fi Handsets
www.polycom.com
The SpectraLink 8400 Series phone handsets are the fourth generation of the SpectraLink 8000 product line. The SpectraLink 8400 Series could be called the Swiss Army Knife of VoWLAN handsets since it is the only VoWLAN handset that includes 802.11n, HD voice, web browser, and even an integrated barcode scanner. The product's other key features include an XML API for application support, open SIP platform, industrial-grade durability, advanced noise cancellation, HD voice docking station, and instant messaging and presence with Microsoft UC (OCS/Lync) platforms. The SpectraLink 8400 Series handsets target vertical markets including health care, hospitality, manufacturing and retail.

These phones are the first to use standard smartphone browser technology (WebKit) with the appropriate enterprise-grade security, quality of service, and management. They also have integrated push to talk for instant group communications, a popular feature in many verticals. The SpectraLink 8400 Series handsets are the first Wi-Fi phones in the industry to support dual microphone noise reduction technology. The combination of dual microphones and the Polycom proprietary spectral processing technique reduce stationary noise (that with a constant background such as HVAC, hum from machinery, etc.) and non-stationary ambient noise (that with rapid or random change, such as a person talking, background music, traffic, or typing). This allows for excellent audio quality even in extremely noisy conditions such as data centers with cooling fans, production floors in the factory, or shipping areas.

Polycom developed the QBC application to provide simple and flexible integration of the integrated barcode scanner in the SpectraLink 8450. The primary use for a barcode scanner is to emulate a keyboard as an input device for the purposes of automating data input. When you scan a barcode, the scanner may be configured to send the decoded information to a computer, just as if you'd typed the information using the keyboard. The decoded information is inserted in the application at the point where the cursor is. Lastly, for improved durability the handsets also feature: rubberized gaskets, removable battery packs for 24x7 usage, an internal magnesium frame to protect the internal circuitry, shock-mounted LCD, and over molding.

Radware
Alteon 10000 Application Switch
www.radware.com
The Alteon 10000 Application Switch is a high performance, NEBS 3-compliant carrier-grade ATCA platform that delivers on demand, extendable throughput of up to an impressive 80gbps of application delivery capacity. It provides advanced application acceleration capabilities and scalability for carriers, mobile operators, ISPs, and large enterprises data centers that require a high-end ADC solution. Performance metrics include 1.4M layer 4 connections per second, 800K layer 7 connections per second, and 44M concurrent connections.

The Alteon 10000 is built on a modular, ATCA chassis. It features 15 ports of 10GE/GE (SFP+ pluggable optics) and additional 8 ports of 1GE (copper). The 6-slot chassis of Alteon 10000 accommodates four payload blades, each providing 20gbps of throughput, up to a total of 80gbps. All the chassis blades are hot swappable, allowing blade replacements without stopping the entire chassis and ensuring maximum uptime. Alteon 10000 also provides high MTBF with three AC/DC load sharing, hot-swappable power supplies and two hot-swappable fan trays.

One other innovative feature is that the Alteon 10000 takes advantage of the industry-peerless Virtual Matrix Architecture technology. VMA is a fast and flexible architecture embedding multi-CPU and multi-core components, which leverages the entire system's capacity while providing the parallel performance of distributed processing resulting in linear layer 4-7 scalability.

Streamcore
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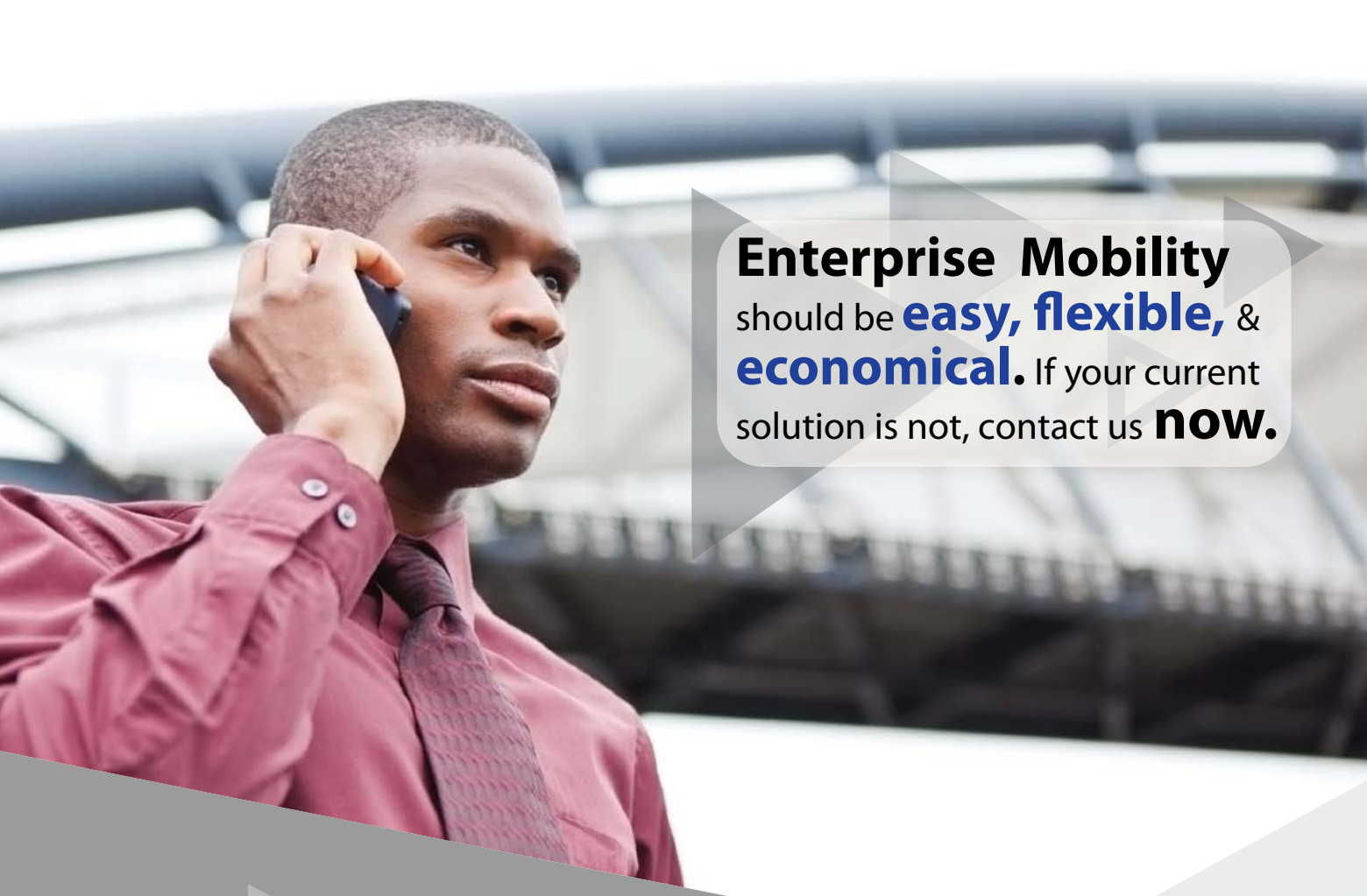
www.streamcore.com
Business-critical unified communications & collaboration applications from Cisco, IBM, Microsoft and others are making monitoring, controlling, and prioritizing data travelling over bandwidth-restricted WAN networks even more critical. One challenge is getting visibility into your network and ensuring that UCC applications have the bandwidth they need, especially when they run over bandwidth-restricted WAN links. Video traffic in particular is a challenge for enterprise networks because it uses a large amount of bandwidth, but even non-UCC apps like P2P sharing apps can quickly bring a WAN to its knees.

Streamcore helps customers have this visibility and gives them the ability to apply practical business-based UCC policies to manage performance for real-time video, VoIP and collaboration applications, whether delivered over traditional private networks or through cloud-based solutions. Streamcore ensures that organizations can cost-effectively employ IP telephony, unified communications and either desktop or room-based videoconference solutions without any network performance degradation.

The StreamGroomers are plug-and-play appliances that can be deployed in any network location including data centers, headquarters, branch offices or in front of Internet access links. StreamGroomers are positioned in line between the LAN and WAN access router. Streamcore traffic management offers combined network flow analysis and monitoring, QoS enforcement and traffic shaping. Even traffic exchanged with remote sites without a StreamGroomer can be monitored and controlled. This is a key capability for managing any-to-any VoIP/video flows or traffic coming from third-party data centers, such as private or public cloud service providers.

The StreamGroomer Manager (SGM) is a Web 2.0-based centralized platform to manage all visibility and control services provided by StreamGroomers. Streamcore's centralized management provides unified centralized management on a single server for all operations including, real-time monitoring, performance supervision, reporting, control policies provisioning, StreamGroomer management, etc. It can manage 2,000 StreamGroomers and has support for multi-tenancy.

Streamcore tells TMC Labs, "Streamcore has developed the first product on the market unifying all visibility and control features required to solve the network performance challenge for UCC, with new innovative technologies. What also makes Streamcore unique is its business-oriented management approach, a novel breakthrough in network management. Streamcore's objective is to empower IT/UCC executives with a set of capabilities which, for the first time, enable them to manage their networks and services in a business-oriented fashion. Given Streamcore's unique combination of core technologies, executives can pragmatically apply business



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Product Of The Year 2010 Unified COMMUNICATIONS

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requirements to UCC visibility and control policies and allow Streamcore's solution to manage all of the underlying complexity."

The key to this secret sauce is the company's deep packet inspection. Streamcore's hierarchical DPI is based on a unique embedded software module that detects all forms of application and UCC traffic on the network: data vs. audio vs. video, codec, clock rate, SSL-encrypted webconferencing, etc. With this technology, customers are able to set up relevant visibility and control policies per UCC traffic type. Highlighted features include real-time troubleshooting (passive audio/video measurements, network performance statistics), network assessment (active audio/video measurements, traffic auto-discovery), traffic shaping, advanced QoS (to manage prioritization between types of applications and UCC traffic), desktop video QoS engine, and WAN load balancing. Lastly, the solution provides performance measurements for any incoming RTP audio/video traffic, including MoS, latency, and packet loss.

Sunrise Telecom

Sunrise Telecom RxT Smart Productivity Test Platform with realGATE
www.sunrisetelecom.com

The rapid growth of cable, telecom, and wireless services has presented challenges for service providers tasked with deploying, testing, and maintaining new technologies. Having separate testing tools requires significant training and larger capital expenditure on multiple test platforms. Sunrise Telecom developed an all-in-one solution to address these challenges. The RxT is a single handheld testing device that enhances field technicians' productivity with its innovative removable test modules and ability to handle deployment, measurement, and troubleshooting, reducing the need to carry additional gear in the field. The device features QuickSWAP modules, which can be easily popped in or out. It also makes the device future proof as new technologies, such as new network connectors, are developed.

The RxT is the first test and measurement platform to include GPS-based geo-tagging, providing service providers the opportunity to add location stamps to test records. This feature provides customers with an extra level of documentation and validation (e.g. identify test sites).

It features a large color touch screen, wireless connectivity, long battery life, smartbook functionality, and centralized workflow optimization. In addition, the RxT integrates with realGATE for asset management, report management and workflow optimization helping to reduce capex/opex and helps ensure high-quality subscriber services. Fully integrated with Sunrise Telecom's realGATE workflow optimization system, the RxT goes beyond testing and offers a complete managed solution for telecom, cable, and mobile operators. This field platform is capable of quickly verifying a wide range of advanced services in a single modular handheld device. Further, the RxT's ease of use minimizes learning time, quickly boosting productivity, translating into jobs done more quickly and efficiently with more satisfied customers and fewer repeat truck rolls.

Vertical Communications Inc.

Wave ISM 2.0
www.vertical.com

Wave ISM 2.0 is Vertical's latest software upgrade for the Wave IP 2500 and Wave IP 500 Business Communications Systems. The Wave IP 500 is designed for branch and small offices, supporting up to 50 users while Wave IP 2500 is designed for medium offices, supporting up to 500 users. It features comprehensive unified communications capabilities, contact center functionality, call recording, reporting, and custom call routing applications.

Additionally, with the 2.0 release Vertical announced the field trial of an integrated fax server and Voice Server 2.0 , an integrated vXML IVR platform, which now offers both automated inbound and outbound applications. A new feature in 2.0 is the ability to have a mobile extension, which can be a user's cell, home phone, or a softphone. They offer a feature-rich softphone called ViewPoint Phone. Wave Impulse, an integrated, secure and private instant messaging solution adds to the UC functionality. Also part of the UC feature set is that it now has Microsoft Exchange integration with always-on real-time synchronization of contacts and voice mail. The ViewPoint Shared Folders feature lets you share ViewPoint Call Monitor, contacts, voice mail and call logs between users. It also sports powerful find-me/follow-me rules. One unique feature is cascading voice mail, which is a rules-based distribution and escalation of voice mail notifications, so important customers' messages aren't ignored. A Wave Client API is available, enabling developers to extend the functionality of Wave as well as integrate with third-party enterprise applications. Unlike many competing systems, call recording is standard on Wave IP. Lastly, there are many voice applications that are offered for Wave IP, including an API client that allows customers to create custom integrations with third-party applications such as CRM, billing, hospitality, pharmacy software suites and more.

Virtual PBX

Virtual PBX Complete
www.virtualpbx.com

Virtual PBX Complete is a hosted IP PBX designed for small and mid-size businesses. The company claims to have invented the first true hosted PBX in 1996, and we have no reason to disagree with that assertion. Unique to the offering is that you can use any combination of existing phones, phone switches, analog or IP phone lines, cellular phones, or any other type of phone. Virtual PBX explains, "Unlike other hosted PBX services, Virtual PBX Complete supports complete blending of analog and IP telephony, while simultaneously incorporating open SIP peering. Most traditional hosted services work with analog lines but do not handle VoIP. Most IP PBX providers require IP telephony for all users and only allow PSTN use in call forwarding. Our service embraces both PSTN and SIP traffic at all times and in all places. We also support SIP standards, allowing clients to use phones and VoIP services from other providers when desired, instead of requiring our own proprietary VoIP registration."

Virtual PBX has other innovations to its credit. It was the first company in the hosted PBX space to offer ACD queuing for call center applications, call routing to a distributed workforce, find-me/follow-me call forwarding, auto-attendant greetings, menus in a distributed environment, and much more.

Important features include supervised call transfers, multi-business support, multi-stage dialing, and automatic routing based on incoming caller ID. Unlike many hosted PBX offerings, Virtual PBX features both powerful hunt groups and powerful ACD queues. ACD options including load balancing, skills-based routing, hierarchical routing, overflow routing, call hold and callers waiting limits. The system includes real-time monitoring of phone system activity by extension or department, including callers on hold, calls in progress, hold times, caller IDs, and more.

continued on page 64

Only The Mobile Executive Will Survive

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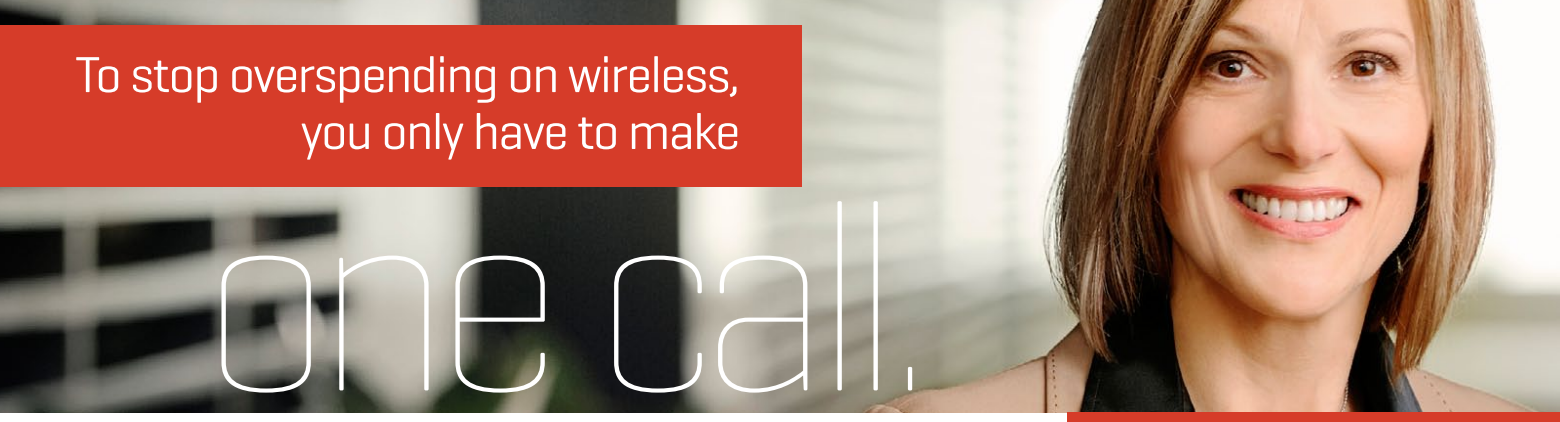

OneCall Manage is the industry's leading provider of WEMaaS (wireless expense management-as-a-service) solutions. Our solutions uniquely combine advanced business intelligence and proprietary algorithms to automatically pinpoint opportunities to reduce your monthly wireless spend and better allocate that spend to meet your business needs.

Because we automate analysis of both your spending and your users' behaviors, you can quickly and easily discover exactly where you're over-spending—without the cost, time or effort associated with conventional WEM. You get actionable insight. And you get it fast.

Why you need OneCall Manage

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Your best long-term partner for wireless expense management

OneCall Manage does more than just pluck low-hanging fruit from your current wireless spend. Thanks to our advanced technology and unmatched understanding of how wireless carriers structure their invoices, we can help you keep optimizing your wireless spend over the long haul. Our complete, highly automated WEMaaS solutions enable you to:

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CELEBRATING 15 YEARS IN BUSINESS
15 YEARS
1996 – 2011

WHO?

Vital Communications, Inc. was founded in 1996 and has been distributing IP Telecommunications and Networking Solutions to resellers for over 15 years. We are one of the fastest-growing Value Added Distributors of IP telephony and network products in North America. We distribute solutions from over 20 different manufacturers, and supply thousands of telecom resellers, carriers, interconnects and integrators throughout North America. Our mission is to provide the best solutions, support and customer service to our resellers and to remain an innovative Value Added distribution leader.

WHAT?

Vital Communications, Inc. sets itself apart from other distributors by truly being a Value Added Distributor. We provide pre-sale and post-sale support and engineering services to our resellers as well as ongoing support to help them support their customers. We are constantly testing NEW products and looking for the solutions our resellers need to help them remain competitive in the constantly evolving IP telephony marketplace. These as well as many other services offered by Vital Communications, Inc. — such as Advanced Logistics Services, Financial Services, Engineering, Support and Configuration Services — help our resellers effectively and efficiently sell and install the best IP telephony and network solutions for their customers while making substantial profits for themselves.

WHY?

Vital Communications, Inc. is not an "everything to everyone" distributor. We focus on offering a smaller quantity of product lines and manufacturers to allow us to remain focused on those products. This allows us to have more knowledge of these products than any other distributor. We also stock these products in three regional warehouses, which enables us to deliver them to our customers faster than other distributors. This is why more and more resellers are coming to Vital Communications, Inc. then ever before. Contact us today to see how we can help you sell more and be more profitable.

WHERE?

Vital Communications, Inc. currently has three regional distribution centers that we own and operate, allowing us to quickly and accurately deliver products to our resellers.

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Unified Communications (UC) describes a situation in which technologies such as voice, email, presence, video and instant messaging are integrated and presented to the user via a single, intuitive user interface. UC solutions enhance productivity and streamline communications for the end user by leveraging functionality such as presence status and "click to communicate". To achieve a high quality communications experience, it's important to use the correct audio and video devices. Fontel can help analyze your needs and recommend the product(s) best suited for your unique situation.

Fontel, Inc. is a wholesale distributor with over forty years of experience in the communications industry.

We are proud to offer high quality, yet competitively priced, UC products. We specialize in audio and audio/video UC devices including headsets, IP phones, conferencing units and IP camera's. Centrally located in the United States, **Fontel supports global accounts with our friendly & knowledgeable staff that strives to understand our customers' needs and provide unrivaled support.**

With the ever changing advancements in technology, Fontel understands the importance of offering our customers cutting edge solutions to carry them into the future. From the newest wireless technology, to the latest in High Definition/Audio/Video, digital sound and VoIP-

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Enhance Your Business Communication

snom technology AG is a highly specialised manufacturer and developer of comprehensive solutions for IP-based business communication. snom was founded in Berlin in 1996 and quickly established itself as a leading pioneer in the VoIP sector. Today, snom has operations across the globe with subsidiaries in the US, Italy, France and Great Britain and selected sales partnerships in more than 60 countries.

snom headquarters in Berlin

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snom's portfolio of cutting-edge SIP-based telephony devices are recognized for their rugged commercial grade performance, reliability and ease of interoperability which has made snom the VoIP handset partner of choice for the industry's leading VoIP service providers, hosted VoIP, IP PBX and Unified Communications solution vendors.

Why:

SNOM'S INNOVATIVE IP SOLUTIONS: FLEXIBLE, SAFE, ENERGY EFFICIENT

Since it was founded, snom has been developing solutions based on open standard SIP (Session Initiation Protocol). Interoperability, functionality, quality, design and an attractive price structure are the standards that snom has adhered to from the beginning.

GET MORE INFORMATION HERE:

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Why choose Vitelity? In addition to providing you with more products and services to offer your customers, we simplify things by providing you with unmatched customer service, carrier-grade quality, and competitive rates.

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Making the Most of Experience

By Erik Linask

How much experience do you have? Yes, I'm talking to you, sir. It's your experience that matters.

It's not a new concept, by any stretch. In fact, the user experience has been driving technology innovation for ages. You've seen it in gaming, from Atari's Adventure game to BioWare's Dragon Age, from Ultima on the Apple II to World of Warcraft. You've seen it in movies, from Star Wars: A New Hope to Revenge of the Sith (not to mention all the 3D animated films that have been released over the past two years). You've seen it in mobile phones, from the Motorola DynaTac to today's smartphones from Samsung and HTC. And you've seen it in operating systems, from the 30-year-old MS-DOS to iOS 4 and Android 3.2.

In all areas of technology, the incremental changes we witness are a function of driving an enhanced user experience (well, with the underlying drive for increased revenue, as well, of course). But, in order to make money, you've got to create an enticing and memorable user experience.

According to Ribb, the most innovative brands go beyond their traditional businesses as product vendors, but see themselves as offering a service to their mobile customers, allowing them to easily determine what content they receive.

"Innovators – I call them mobile brands – have stopped pushing and are pulling what the client wants and are delivering on those demands," she adds.

She's not wrong, and she also notes that the experience, though moving heavily into the mobile environment, must be able to cross environments, creating the same, personalized user experience across all platforms and devices.

Take Facebook, for instance. It has created a desktop social experience that even Google will find hard to beat. Because of that experience, it has also built an almost unimaginable need to enable Facebook sharing from any website with designs on succeeding. The same goes for Twitter. And soon Google+. Where Facebook fell short was with its mobile experience. It's iOS and Android apps don't come close to delivering the same,

"As a business, you have to provide access to all of your brand's resources."

Terry Ribb, co-founder and CMO of Relevens

It's why Facebook has more than three-quarters of a billion users. It's why Twitter hosts more than 50 million tweets per day. And it's why Google+ may have a chance to eventually overtake both of them – it boasts many of the best features of each. It's also why HTML5 isn't a short-term fad.

Initially, though I always believed it would change Web development for the better, I wasn't entirely convinced it would have the clout many predicted. After a conversation with TMC CEO Rich Tehrani, who quickly showed me the Financial Times HTML5-based Web app, and after listening to Terry Ribb, co-founder and CMO of Relevens, at the recent DevCon5 conference, I decided to give it some more thought.

Ribb explained that we are entering a new era of the Web experience. Where Web 2.0 was about merely downsizing content for mobile devices, Web 3.0 is about increasing content, but doing so in a personalized manner.

"Today's Web 3.0 leaders are designing mobile life experiences and asking, 'How do I fit within the user's mobile life?'" she says. As for the users, they are demanding, ""Give me what I want, where I am, how I want it, right now."

intuitive, functional experience. But, its HTML5-based mobile site (m.facebook.com) comes much closer to capturing the original desktop experience. All you have to do is replace your app with a bookmark to the mobile site.

Also take a look at the new mobile site from ESPN (m.espn.go.com). In addition to actually providing cleaner navigation than its desktop site, its videos are also now viewable by iOS users. Sports fans should also check out Sport Illustrated Snapshot, available in Google's Chrome Web Store. It delivers an as-of-yet-unparalleled interactive, customizable experience.

But, it all goes back to Ribb's comparison between Web 2.0 and Web 3.0.

"As a business, you have to provide access to all of your brand's resources," she says. "And you have to deliver a true, interactive, one-on-one experience."

We've only begun to witness the power HTML5 developers can wield but, if these early examples are any indication, our Web experience is about to take a sharp turn towards becoming an extension of our individual personalities. Sit back and enjoy and new world of Web apps. IT

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It also features Smart Caller ID and Call Preview, which let workers know who is calling, what they are calling about, and how the call entered the system before answering the call. Voicemail interrupt is a nice feature that lets users send callers to voicemail and listen in on the message being left. If the user decides to accept the call, the voicemail can be interrupted and the call connected.

Vocalcom

Hermes.net V4.1

www.vocalcom.com

Vocalcom's Hermes.net V4.1 provides an inbound/outbound solution, which can be used as a standalone contact center application or can seamlessly connect to an existing PBX. If a customer is using a legacy Avaya switch, Vocalcom can provide native integration with outbound predicative dialing and scripting. The platform offers a seamless CTI layer for the Avaya platform and connects directly to Avaya's network via AES Server. Vocalcom provides an open database allowing end users to customize the system to their needs. The Hermes platform handles both voice and data with a comprehensive set of management tools. The latest version, V4.1, provides powerful tools such as CTI, IVR, ACD, predictive dialing, scripting, e-mail, chat, fax, CRM integration and recording under a single VoIP/SIP enabled platform.

Vocalcom also offers a hosted option. At the customer's location Vocalcom only requires a PC with a web browser and bandwidth of 100kbps for each agent to run the application. Vocalcom allows both IP phones as well as a provided softphone as phone options. Vocalcom tells us, "Vocalcom was the first to market with a unified multimedia application – inbound, outbound, fax, SMS, chat, e-mail, print; first to market with the .NET call center application; and truly open SQL/.net architecture." IT

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