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VOLUME 12/NUMBER 5 MAY 2009

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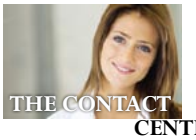

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(rtehrani@tmcnet.com)

EDITORIAL
Group Editorial Director, **Greg Galitzine**
(ggalitzine@tmcnet.com)

Executive Editor, **Richard "Zippy" Grigonis**
(rgrigonis@tmcnet.com)

Associate Editor, **Erik Linask**
(elinask@tmcnet.com)

TMC LABS
Executive Technology Editor/CTO/VP, **Tom Keating**
(tkeating@tmcnet.com)

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Graphic Designer, **Lisa Mellers**

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Internet telephony is revolutionizing telecommunications through the convergence of voice, video, fax, and data, creating unprecedented opportunities for resellers, developers, and service providers alike. ***INTERNET*** **TELEPHONY®** focuses on providing readers with the information necessary to learn about and purchase the equipment, software, and services necessary to take advantage of this technology. ***INTERNET*** **TELEPHONY®** readers include resellers, developers, MIS/networking departments, telecom departments, datacom departments, telcos/LECs, wireless/PCS providers, ISPs, and cable companies.

Is Google the Future of Telecom?

Google is one of those remarkable companies that, if their activities were described to you 15 years ago, you'd never believe such a company could ever exist outside the realm of science fiction & fantasy novels. Even the fabulous cafeteria of their New York offices caused a sensation when it opened in 2006.

Like President Obama, Google is "spreading the wealth around," technologically speaking. First they got everyone's attention by revolutionizing the mobile phone world with the open source-based Android, and now they've taken one of their acquisitions, GrandCentral, and put it on steroids in the form of Google Voice (www.google.com/voice). Former GrandCentral (and soon to be Google Voice) users received an email reading: "Once you choose to upgrade, you will automatically get all the great new features (transcription, SMS, conference calling, cheap international calling, Goog411 integration, etc.), and new voicemail and SMS messages will begin appearing in your Google Voice inbox."

Just listing and describing all of Google Voice's capabilities would take a page. Perhaps the first and most important feature is Google number, which provides you with one number for all your calls and SMS. You also get Call Screening (announce and screen callers), "Listen in" (listen before taking a call), Phone Routing (phones ring based on who calls), Forwarding Phones (adds phones and decide which ring), Google voicemail (check online or from your phone), Voicemail transcripts (voicemail-to-text), share voicemail, Conference Calling, Call Record, Call Switch (switch phones during a call), view your inbox from your mobile, GOOG-411 (directory assistance), and you can initiate calls with the one-click "Quick Call" feature. Similarly, users can click to send SMS messages from the homepage. The features just go on and on.

Interestingly, you get mobile access to Google Voice, which elevates the platform to that of today's more advanced unified communications systems and services.

It's been said that Google Voice has so perturbed Telecom Equipment Manufacturers (TEMs), that they're scrambling to offer equipment that will enable network operators to deploy services that parallel those of Google Voice. For example, Alcatel-Lucent (probably coincidentally) unveiled its Release 2.1 of its 5155 Rich Communications Manager, a web portal-based platform that, like Google Voice, integrates voicemail, SMS, email, etc. and allows them to be accessible from various wireline and wireless devices.

Ultimately, we're sure Google will evolve its services to become more business-like and will be able to track, analyze and archive all forms of communication that enter and exit its platform. Best of all, applications are starting to appear for Google Voice. Eventually such suites begin to take on the flavor of contact center/CRM applications, and end up communications-enabling most business processes. Google's highly secure Chrome browser will doubtless play a future role in all of this, along with Google Gears that enable web applications to run offline. Eventually, one would expect that Google's ocean of functionality will become free-floating, reproducible on iPhone, BlackBerry, S60, etc., as well as the Android-based T-Mobile G1 (or some other future "Gphone"). Already Google's Voice Search feature has been ported to run on BlackBerries, just as it does on the iPhone and Android, wherein you hold down the Talk button and speak search terms into the phone (it also supports Google's My Locations, that displays search results based on your location as reckoned by your smartphone's GPS, WiFi, and cellular triangulation data).

In short, Google may ultimately offer a complete, seamless communications environment that can serve large and small businesses as well as it does consumers. It could well bring about the kind of communications revolution that years ago we naively associated with the emergence of such VoIP telco look-alikes as Vonage, all of which today appear quite conservative, even pedestrian in nature. **IT**

Richard Grigonis is Executive Editor of TMC's IP Communications Group.

Talking with 8x8's Debbie Jo Severin

This month's article, "The effective Marketing of VoIP Services," mentions 8x8, provider of the 8x8 Virtual Office and Packet8 (www.packet8.net) broadband business, residential, video and mobile communications services.

As we were going to press we learned that 8x8 just took on board Debbie Jo Severin, their new CMO and VP of Marketing, who reports to 8x8 President&CFO Dan Weirich. Severin has over 20 years of marketing experience (Covad, NorthPoint, Valiant Networks, PrimeOne Tele-TV, Pacific Bell Video Services). It sounded like she'd be a great interview, and I wasn't disappointed.

When asked what excited her most about joining 8x8, she replied, "8x8 is a great company with a proven track record for delivering robust, reliable and mature IP communications solutions. To be part of the company at a point when market adoption is on the verge of accelerating really excites me. In fact, the biggest and most obvious opportunity for 8x8 is to capitalize on the tremendous momentum it has already achieved with the Virtual Office hosted PBX phone service and to broaden the adoption of this economically advantageous telecom solution in the SMB marketplace."

I then inquired as to whether today's economy would change how she promoted 8x8's services. "From a positioning point of view, I don't think it changes our approach at all," she said. "In fact, the current economic climate makes our services all the more attractive. We promote how our IP communications services typically save companies 50 percent or more on monthly recurring telecom charges and 90 percent on the initial capital equipment costs. I think that message is even more relevant and powerful in this economy."

"From a demand generation approach, I expect we'll continue to get more and more focused using online marketing," Severin said. "MarketingSherpa says that 84 percent of IT professionals begin their technology purchase decision research on search engines. Other research indicates that over 90 percent of small businesses do some research online before making a business technology choice. We need to be where our target segment is looking – online."

Yours Truly was curious as to whether 8x8 would take on the video market, since they were one of the first companies to roll out a video phone. Severin replied, "Video is definitely an area 8x8 has excelled in technologically. Although we'll continue to offer video communications services, we believe a more significant opportunity lies in the development and delivery of more fundamental business IP communications services such as hosted voice and unified messaging. We'll continue to build momentum in this area."

8x8 is moving upmarket, so I asked her what 8x8 could offer big companies. "First, 8x8 has been a solid company for over 20 years, is publicly traded and profitable, and holds 73 patents for internally-developed technologies inherent in its services," she said. "Second, in the current economic climate, companies of all sizes are exploring hosted PBX services in lieu of premise-based alternatives as financial and personnel resources are scaled down. Corporations with distributed locations, for example, can benefit tremendously from a hosted telecom solution that rides over an existing broadband network and requires minimal upfront capex. 8x8 is an undisputed leader in the VoIP market with a mature, reliable and highly scalable network. Besides hosted PBX solutions, 8x8 offers very competitive IP trunking services that companies with existing premise-based hardware can utilize to reduce monthly recurring costs."

Severin thinks that 8x8 will remain the dominant hosted-VoIP provider in the growing SMB market. Knowing 8x8, she could very well be right. IT

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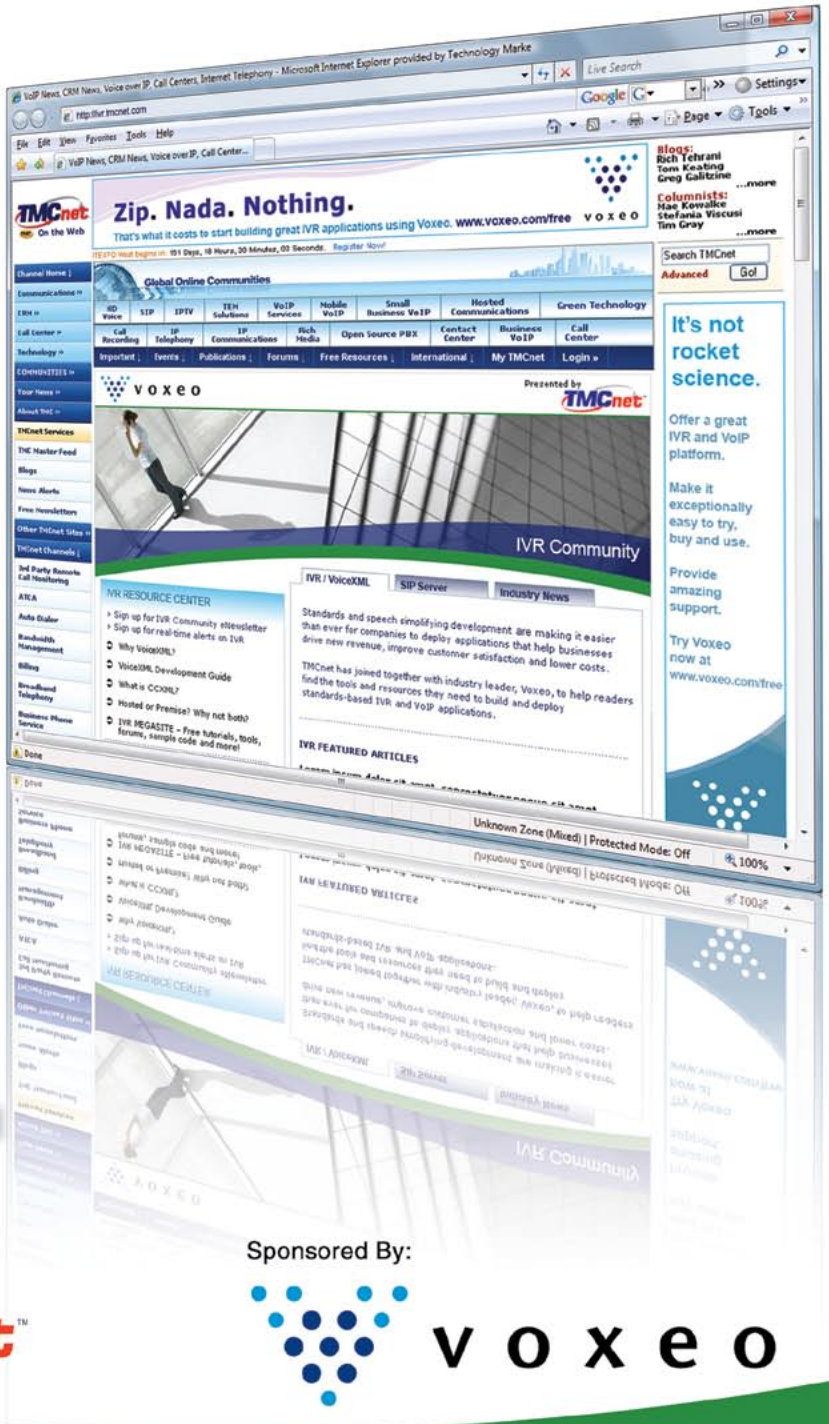

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Introducing the

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Volume 12/Number 5 May 2009

What's On TMCnet Right Now?

To stay current and to keep up-to-date with all that's happening in the fast-paced world of IP telephony, just point your browser to www.tmcnet.com for all the latest news and analysis.With more than 36 million page views per month, translating into more than 3.1 million unique visitors, TMCnet.com is where you need to be if you want to know what's happening in the world of VoIP.

Here's a list of several articles currently on our site.

Obama to Ease U.S. Telecom Restrictions in Cuba

While sketching widely anticipated, new rules that will ease U.S. citizens' trips and money-transfers to Cuba, the Obama administration announced that domestic telecom companies can apply for licenses to do business in the Caribbean island nation. As Laura Meckler of The Wall Street Journal reports, citing an unnamed administration official, the new rules will allow U.S. telecom companies to set up TV and mobile phone services in Cuba.

www.tmcnet.com/6428.1

Huge Struggle Over Broadband Looms

The Australian government is moving ahead with a $31 billion national broadband network that will operate on a structurally separated, wholesale-only basis, with all licensed retail providers able to buy and use the network. The network aims to connect 90 percent of Australian homes with service at speeds up to 100 Mbps. Separately, as part of the recently passed American Recovery and Reinvestment Act of 2009 (the "stimulus plan") the Federal Communications Commission was asked to create a national broadband plan, and submit that plan to Congress in February 2010.

www.tmcnet.com/6429.1

Province of Ontario Launches Ambitious E-Waste Diversion Program

In a bid to limit e-waste from Ontario, Canada's most populous province, the Ontario Electronic Stewardship (OES) has recently launched an ambitious program to divert an additional 160,000 tons (176,000 lbs) of such material landfill and into reuse and recycling solutions. Currently about 25,000 tons (28,000 lbs) are collected annually in the province through public and private sector programs. The industry-developed-and operated- Waste Electrical and Electronic Equipment (WEEE) program is setting up a network of collection sites where consumers and businesses can drop off unwanted electronics with assurance that they will be recycled according to North American environmental standards.

www.tmcnet.com/6430.1

Innovation — It's Out There if You Look

While it's true that service providers can do things with IP to create network-based differentiation in areas like QoS and QoE, only the most ardent telco loyalists will say that is sufficient for competitive advantage. Whether the network is really good or really, really good, service providers have more leverage to be competitive around service innovation. Incremental improvements in the network will always be needed, but in today's market, the end user is no longer a passive subscriber. Aside from the fact that there are so many alternative service providers to choose from, there is simply a much richer palette of communications possibilities to work with.

www.tmcnet.com/6431.1

TMC's Whitepapers of the Month

Visit TMCnet's Whitepaper Library (www.tmcnet.com/tmc/whitepapers), which provides a selection of in-depth information on relevant topics affecting the IP Communications industry. The library offers white papers, case studies, and other documents that are free to registered users.

SMS Security - Malicious attacks are just around the corner. Are you protected?

The messaging market is growing rapidly and has become a very profitable piece to the mobile operators' revenue puzzle. Unfortunately, growing security threats such as spam, spoofing, flooding (DoS attacks), fraud and handset viruses pose an increasingly significant threat to the mobile operator. Although these threats haven't made a big impact to operators' bottom lines yet, the security threats and seriousness of them will increase quickly, just as they did with PCs. This whitepaper discusses how operators can leverage monitoring and advanced security techniques to protect their mobile subscribers, network and business.

www.tmcnet.com/4451.1

SIP Pocket Guide — Session Initiation Protocol (SIP)

Session Initiation Protocol (SIP) is a signaling protocol used for creating, modifying, and terminating sessions with one or more participants in an IP network. SIP has been adopted by the telecommunications industry as its protocol of choice for signaling. SIP is an RFC standard (RFC3261) from the Internet Engineering Task Force (IETF), the body responsible for administering and developing the mechanisms that comprise the Internet. Tekelec's SIP Pocket Guide is an exclusive reference guide for Session Initiation Protocol professionals.

www.tmcnet.com/4452.1

Four Key Ingredients For Successful Mobile Services

Mobile Service Providers struggling to compete and succeed in the changing 3G market must address the need to enhance their voice offerings and deliver new, winning mobile applications, mobile video and innovative experiences for their customers. Many companies are accomplishing this by consolidating on a single, software-based platform that also allows them to launch innovative new services that go beyond voice to video, instant communication, video conferencing, and other new ways their subscribers want to communicate. This whitepaper discusses four key ingredients for making the approach work: IVR consolidation, flexible deployment, new media capabilities, and a future-proof platform.

www.tmcnet.com/4453.1

This Month's Featured Channels

E911

http://www.tmcnet.com/channels/e911

IP Phone System

http://www.tmcnet.com/channels/ip-phone-system

Conferencing

http://www.tmcnet.com/channels/conferencing/

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Get the latest news and information on managing fixed and mobile communications expenses. The community — sponsored by TnT Expense Management, and powered by TMCnet — allows visitors to connect with industry experts, gain valuable insight into communications management best practices, and increase their understanding of how TEM can impact the bottom line.

The Telecom Expense Management Community will showcase daily content updates, including:

- Informative articles
- Breaking news
- Analyst information
- Case studies
- White papers
- Live event links
- and much more!

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http://telecom-expense-management-solutions.tmcnet.com/

Next Wave Redux

By: Brough Turner

Voice, Presence and Telephony N.0

Despite more than a decade of development, VoIP services today are little different than traditional telephony as practiced for a century. Yes, we've decorated the original service with voicemail, email notifications and phonebook auto-dialing, but the fundamental service remains the same. You place a call, you wait to be connected and then you find out if the other person is available and willing to talk.

It's true that increasingly we find people using IM to check in advance whether the other party is available and, if not, to agree on a better time. This may be integrated, as pioneered by Skype, or independent but, if this is Voice 2.0, it's only an incremental improvement. One issue is telephony has gone mobile while IM remains tied to the desktop. SMS can provide equivalent coordination, but the mobile user interface keeps the two functions separate. When you need to talk, it's easier to just attempt the mobile voice call and fall back to voicemail or SMS if the call fails.

Several years ago, a new voice messaging service emerged in Asia that addressed part of what's needed. It's called Voice SMS. Like mobile text messaging, Voice SMS is an asynchronous push messaging service, except with voice clips (typically less than 30 seconds). This means the two parties do not have to be available at the same time and it allows people time to think about their next utterance in a dialog. And as a push service, the "conversation" flows much more naturally than it would in an exchange of voicemail messages. In the U.S. and E.U., several asynchronous voice messaging services have launched, for example, Pinger's voice messaging service or Palringo's IM with push-to-talk. In each case, messaging is asynchronous like Asia's Voice SMS, but the user interface is improving.

The ultimate solution should seamlessly transition between asynchronous voice messaging, push-to-talk and one-on-one live conversation as desired. Recently Rebelvox demonstrated how this might work (although as I write this there is no product or service available). Like Palringo, an instant messaging interface lets you see if your correspondent is available. A push-to-talk button lets you send them an asynchronous voice message. You each can see a history of your messages, voice or text, in an IM format display. But here's the breakthrough: If you see a message coming in live, and you choose to, a single click lets you listen in catchup mode (silences dropped) and, once you are caught up, seamlessly connects you in a traditional voice telephone call. Now that's Telephony N.0! IT

Brough Turner is Chief Strategy Officer of Dialogic (www.dialogic.com)

Inside Networking

By: Tony Rybczynski

Happy Networking

Back in Fall 1997, I was approached by TMC Publications to write a monthly column in *CTI Magazine*. I immediately accepted, and then was asked what I was going to write about for the next 6 months – a not insignificant challenge. I called the column "Inside Networking", and little did I know that it would run for 132 issues, first in *CTI Magazine*, then in *Communications Solutions* magazine and most recently in *Internet Telephony*. It's been a great experience, though now it's time to move on (my blog at blog.tmcnet.com/the-hyperconnected-enterprise continues).

Over the years, I have covered many topics, ranging from converged networking, security, optical and wireless to business aspects. The latter should never be overlooked. One of my favorite photographs is that of a modern suspension bridge, one of several I saw while going down the Yangtze River. What was striking is that the bridge stops at the edge of a mountain…. There is no road!. The message is clear: technology, no matter how wonderful, has to take you where you want to go. Just because you can do something, doesn't mean that you should.

Titles are always fun. For example, there was "The Sensei's Guide to Multiservice IP", sensei being a title of respect, "master" if you like. Then there was "The Webplex: The Result Of Web Site/Call Center Unification". While "webplex" wasn't picked up by others, this certainly continues to be a hot topic today. You may have read about Lenovo's elounge, that creates a virtual storefront using technology from Nortel, known as web.alive.

In October 2006, I was recognized by TMC Publications as one of the top 100 Voices in IP Communications. It was an honor to share this distinction with people such as Michael Powell, a past FCC chairman ; Vint Cerf, a long time acquaintance and inventor of TCP/IP; and Phil Edholm, the CTO of Nortel Enterprise.

Back in December 2001 I wrote: "We have seen dramatic ups and downs. The good news is that the network has become an intrinsic part of virtually every business, with the demand for networking still as strong as ever."

I can echo this same thought today. Happy networking, and good health to all my readers. IT

Tony retires on April 10th 2009, after 37 years with Nortel. He will, however, continue to write "The Hyperconnected Enterprise" blog.

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By: Michael Stanford

802.11n in Handsets

802.11n will be finally approved at the end of this year, and it is huge for voice over WiFi.

Compared to 802.11g or 802.11a it can quadruple effective throughput (to 100 Mbps), improve rate at range and improve battery life. This is with a single antenna, since MIMO is unsuitable for handsets.

Recent 802.11g chips for phones have made great strides in power efficiency. First, 802.11e contains a feature called WMM Power Save; this greatly increases battery life. Second, the chip industry has been making great strides in power management in every kind of chip. These improvements come from several sources, but the most significant one is partitioning the chip into numerous blocks, and keeping the blocks that are not in use powered down. The trick is to switch on each part just before it is needed, then to switch it off again immediately. 802.11n chips deliver these benefits, plus they greatly improve rate at range. Faster transmissions mean that the chip spends less time powered up. Even though the 11n protocol is compute intensive and burns a lot of power when it is running, the faster transmission speed means that each bit sent or received uses less battery than an 802.11g bit. With these new chips, talk-time on WiFi is better than on cellular connections.

The 100 Mbps of effective throughput with a single antenna is also worth explaining. Changes to the protocol bump the nominal transmission speed from 54 to 72 Mbps. Other changes reduce the overhead from 50 percent to 30 percent, resulting in an increase of effective throughput from 25 Mbps to 50 Mbps. There is also a new mode that increases the single-channel bandwidth from 20 MHz to 40 MHz, doubling the throughput by using two adjacent 802.11 channels simultaneously. Maximum 802.11 throughput figures are rarely achieved in the real world; the transmission rate falls rapidly with increasing distance and other impairments. 802.11n has several features to keep transmission speeds high even at a distance. The one to look for is STBC (Space Time Block Coding), which yields some of the benefits of MIMO on a single antenna.

No phone contains 802.11n yet, but it is imminent; four vendors (Broadcom, TI, CSR and Redpine) have 802.11n chips for handsets either sampling or already in production. IT

Michael Stanford has been an entrepreneur and strategist in Voice-over-IP for over a decade. Visit his blog at www.wirevolution.com.

By: Max Schroeder

A Reseller Educational Series: Management Skills for Success

First, work on basic or formerly "natural" skills. For example, in an up market everyone has a positive attitude — naturally. Now, you have to work at it. In particular, you need to work with your sales and support teams as they have daily contact with customers and prospects and you do not want them projecting a down attitude.

"Build a winning team" is a standard mantra but in tough times your entire organization has to grasp the fact that everyone is in SALES regardless of their title. The company will survive as a winning team or fail as a collection of losers so sharpen your coaching skills.

I often get asked the question "How do you luck out and always have the best products to sell?" Well, luck has nothing to do with it – I make sure I am aligned with the best products via in-house development or partnerships. If your products or services do not stack up against the competition then you must *switch* or *fight.* If you cannot switch then sharpen your team's fighting skills to make sure they can deliver the winning punch. Focus on the unique features of your products or services. Stress that your company "adds value with the industry-best pre-sales and post-sales support — whatever it takes to win."

Over-deliver on your commitments if slow times have resulted in extra time. For example, call customers and ask, "is there anything we can do anything for you?". A few minutes of free product re-training goes a long way in demonstrating your commitment to service. Customer retention, including support renewals, is critical in a down economy — fight for success.

Price often comes up as an issue but generally it is not the most important issue. Refine your negotiating skills so you can uncover the real issues and avoid price cuts unless absolutely necessary. If a customer wants a discount for recurring revenue like annual support contracts be prepared to offer a 3 or 5-year option. IT

For more info: http://blog.tmcnet.com/blog/rich-tehrani/nortel/selling-communications-in-a-recession.html

Max Schroeder is Senior Vice President of FaxCore*, Inc. (www.faxcore.com).*

By: Hunter Newby

Time to Put Down the Old Dog

The tremors of the coming deep recession should be shaking communications and IT managers right out of their shoes. So much has be bandied about regarding the impact of the recession on IT and communications spending that the only thing that can match words with the speculation is the U.S. Broadband Stimulus package. We are either going to live through the worst disaster ever, or the greatest thing that ever happened. In either case, the IT and communications buyers have a perfect opportunity to seriously examine VoIP Peering.

In any other economic situation rosier than this the IT and communications managers escape the challenge of having to learn something new by making their day-jobs of dealing with putting out fires look like they're doing what they're supposed to be doing. The truth is that they should be looking at the future as well as the present. VoIP Peering is not really that complicated. They only think it is because they do not understand it. Old dogs *wanting* to learn new tricks is even more of a rarity then being able to teach them new ones.

The high-level analysis for the current economy is fairly simple:

1. How much do you spend across your enterprise in a month/year on voice including local access, origination and termination?

2. How many providers do you have immediate access to for those services?

If the answer to #2 is less than 5 it is a pretty good bet that the answer to #1 is 50-75 percent higher than it should be. When you think of voice in the IP domain your telephone closet becomes your gateway to the world and not just the RBOC, a CLEC and three IXC's. Linear TDM interconnects become dynamic SIP trunks and real diversity and redundancy can be achieved. Or, you can keep doing things the way they have been done for 20 years and pay too much for it. It's time to put down the old dog and get on with it.

The limitation with VoIP Peering isn't technology, it's awareness. IT

Hunter Newby is the Chief Strategy Officer and a Director of a Special Purpose Acquisition Corporation focused on the communications industry. Reach him at hunter@hunternewby.com or visit www.hunternewby.com.

Integrator's Corner

By: Kenneth M. Smith

Email: An Overlooked Element in Securing Enterprise Communications

Many organizations are focused today on securing voice communications. State security regulations and other compliance initiatives tend to focus on encrypting data on notebook computers and portable devices. Email communications, however, still tend to be overlooked.

Environments that are serious about keeping sensitive information from getting into the wrong hands will look at one or more of the following solutions for securing their email communications:

PGP/MIME end-to-end security: Pretty Good Privacy (PGP) is a mature solution that uses public key cryptography to secure content and digitally sign messages.

S/MIME end-to-end security: Digital certificates can be used with most email applications and provide seamless message protection using the certificate support built into the email application itself. All of today's most popular email applications have digital certificate support built in.

Site-to-site email encryption products: Products exist that act as a security gateway, encrypting messages on the fly as they pass between sites.

Web-based client-to-site SSL mail transport solutions: These solutions reroute sensitive messages to a secure server on a company's DMZ network. This server stores the actual message and sends a notice to the recipient that they have a new 'secure' message waiting, and provides them with a secure URL.

Site-to-site TLS encryption between mail hosts: A feature supported by many of today's Simple Mail Transfer Protocol (SMTP) systems is Transport Layer Security (TLS). If enabled, this lets two SMTP hosts use TLS to transfer mail within an encrypted tunnel.

Simple Password Protection / Encryption: If more robust technology isn't available, or your organization does not exchange sensitive information very often, simply password protecting or encrypting the content before sending it is a security improvement.

The current state of email insecurity needs to be addressed if we want our electronic mail systems to continue to be the backbone of corporate communications. Eventually, users should expect messages to be digitally signed or encrypted. IT

Kenneth M. Smith, CISSP, CISA, GCIH, is a security solution architect at Forsythe. Smith has 11 years of experience in information security, including payment card industry standards (QSA), data privacy issues,

Nitty Gritty

By: Richard "Zippy" Grigonis

Elma Bustronic's 3U VPX Load Board

Elma Bustronic (www.bustronic.com) of Fremont, California, famous maker of high backplanes and system accessories — and which debuted the industry's first VXS Extender Board in January 2006 — has announced a new 3U (5.25-inch) VPX Load Board. A load board tests the cooling and power of a computer platform. Back in August 2007, for example, Elma released a hot-swappable AMC form factor load board to test and debug MicroTCA systems.

Elma Bustronic's new 3U VPX Load Board can confirm that a chassis meets the VITA 46/48 power specifications for VPX and aids in locating hot spots in the enclosure. The load board tests a system's cooling capabilities by first applying the load to the power supply for verification and creating the necessary heat to confirm chassis cooling. By locating hot spots in the chassis, a system designer can verify where to optimally redirect the airflow to prevent overheating. The 3U VPX load card features a microcontroller-based stepped load control to 100W maximum. The rotary switch selects the voltage setting while pushing the ON switch will cycle between different power levels shown on the LED display. The set load power levels are saved in EEPROM.

Other features include a power reset button (to minimum level) and a SYSRESET signal on the two test point outputs. Go-No-Go indicators are present for 3.3V, 5V, 12V, +12V_Aux, -12V_Aux and 3.3V_Aux. There is also anIEEE injector/ejector handle to provide a secure and convenient latching mechanism. Bustronic is also planning a 6U (10.5-inch) VPX Load board as well as conduction-cooled version in the coming months. IT

Richard Grigonis is Executive Editor of TMC's IP Communications Group

By: Huw Rees

Is Hosted VoIP Ready for Enterprise Deployments?

Hosted VoIP solutions fall broadly into two categories:

a) Basic (SIP) trunking with minimal features
b) Full-featured hosted PBX or hosted Centrex.

According to AMI Partners, these services have grown quite significantly over the past few years with the number of seats deployed increasing from 394,000 seats in 2006 to 3,000,000 seats by 2010. However, virtually all of these seats are deployed in small or medium sized businesses. To a large extent, enterprise customers have not adopted hosted VoIP services. Why is this, and is the time right for them to do so now?

There are a number of reasons why larger enterprise customers have not adopted hosted VoIP to the same extent as the SMBs. First, there is an inherent inertia inside a large business driven by the mindset that only PSTN trunks can provide the kind of quality and reliability demanded by the users (and most importantly the CEO). The fear of the unknown and resistance to change is palpable; no one is going to get fired for installing a new AT&T PRI trunk, but they might get fired if they install a new (unknown and scary) hosted VoIP service! Secondly there are some genuine concerns about the real availability of the services, the end to end QOS and even the viability of some of the new service providers.

So, has the time come for enterprise to move to hosted VoIP services?

Clearly, times have changed from just a year ago. We are in the depths of a deep, worldwide recession and almost all businesses, especially large enterprises, are feeling significant pain. No longer can they accept the status quo; they must look for ways to cut costs and become more efficient. For hosted VoIP providers, this is an opportunity that had not previously been afforded. But just cutting costs is not going to win an enterprise contract as the genuine concerns outlined above must be addressed. Let's look at these in more detail:

a) Scalability. Is the system scalable for large enterprise? How can this be shown? Are simulated results good enough or is an enterprise deployment needed before you can win one (chicken and the egg problem)?

b) Availability and reliability. Does an enterprise really need five 9's? Is four 9's sufficient based upon the reduced costs and the ability to route calls elsewhere in the instance of an IP network failure issue, for example?

c) Manageability. Is the system manageable for many thousands of extensions? For example, the interface to manage 100 extensions may not be adequate for managing 10,000 extensions.

d) Quality. Most enterprises are probably not going to rely on a single IP connection for both voice and data (though with the availability of MPLS circuits and guarantees of QOS from the access provider and the VoIP service provider, there is certainly no reason not to finally merge the two), so the VoIP service provider needs to guarantee some level of QOS based upon a Layer 2 or private peered arrangement with the access provider (assuming they are not one and the same). Voice quality can actually be improved over the PSTN with the deployment of wide-band codecs or "HD voice" as it is sometimes referred to.

e) Security. Are security-conscious enterprises going to allow un-encrypted voice over the public Internet? Probably not, so a plan for encrypted authentication and encrypted voice will likely be needed in any enterprise proposal.

f) Viability. Is a $100B (or maybe $10B nowadays) enterprise going to trust its mission critical phone services to an unprofitable, cash poor service provider? Any smaller service provider will have to make a case that it is just as viable (or even more so) as the customer's previous vendors. With the recent bankruptcy of Nortel, perhaps this case isn't so hard to make?

In conclusion, the time is ripe for service providers with products and services that can meet the criteria described above to market to enterprise customers. In all likelihood, SIP trunking will make the first inroads, as this is the least disruptive to the enterprise and any installation can be quickly reversed if problems are encountered. But enterprise is also ready for penetration by hosted PBX and hosted IP Centrex, especially if they have not already invested in an enterprise IP-PBX or are looking for integration with multiple smaller branch offices. The cloud of recession could indeed have a silver lining for our industry. IT

Huw Rees is Vice President of Business & Channel Development, 8x8, Inc. (www.8x8.com)

Did you know...

Telephone numbers were first used in 1879 in Lowell, Massachusetts. During a measles epidemic, Dr. Moses Greeley Parker feared that Lowell's four operators might succumb to the disease, thus bringing about a complete outage in telephone service. Parker recommended the use of numbers rather than individual names for calling the more than 200 subscribers. That way, substitute operators could be more easily trained in the event of a similar emergency. The ultimate solution to the problem, however, first appeared with the invention in 1891 of the electromechanical switch by an undertaker named Almon Brown Strowger.

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Voice over IP is transforming the business communications space with immediate benefits, including cost savings, added features, greater functionality, remote access, and more. Finding the right VoIP phone system for your business can be a challenge, which is why FreedomIQ brings you the VoIP Phone Systems community on TMCnet.

The community presents a reliable resource for your business communications needs, with expert advice and the latest news from the VoIP industry.

http://voip-phone-systems.tmcnet.com

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UC Unplugged

By: Mike Sheridan

Enterprise UC: Changing Communications, One Business Process at a Time

I recently spoke with a customer in the retail industry about how his company could apply new methods to improve business processes. As a director of customer care, he had interesting insight into what processes could be "fixed". For example, when the product inventory in his warehouse falls below a certain level, the Enterprise Resource Planning (ERP) system should automatically look at the presence of people in the enterprise who can resolve the issue. The system should then automatically initiate a call, send an email or deliver an instant message to notify the appropriate people in manufacturing and shipping. Then, the system could automatically inform the appropriate sales person or sales manager and also simultaneously contact the customer with the change in status.

This is a perfect example of Communications-Enabled Business Processes (CEBP), the third step along the unified communications (UC) journey. In my previous two columns, I mentioned the four destinations of the UC journey — and that there are different benefits associated with the different phases of implementation: 1) Individual Productivity; 2) Workgroup Productivity; 3) Communications-Enabled Business Processes; 4) Enterprise Transformation.

The CEBP stage, also known as Enterprise UC, involves embedding UC capabilities into business processes that extend across functional groups throughout an enterprise. This may require some cultural changes to adapt to the modifications in processes. Companies should carefully consider their desired benefits as part of the planning process, and ensure they have achieved a certain level of "maturity" (translation: people should be using it) in the use of presence before moving to this next step. Adoption activities should be included in the overall plan, with appropriate training, incentives, metrics and cultural expectations defined for each role. Example: to avoid any one person being "overloaded" or contacted too much in an *ad hoc* manner, it may be necessary to assign coverage periods for different people in a department so that someone is available at all appropriate times, without affecting an employee's "day job".

Identifying communications "hot spots" in processes, planning the implementation and ensuring user adoption can open up a world of very tangible business benefits. Enterprise UC can increase, sales, enhance customer satisfaction and loyalty, improve vendor relationships, and reduce errors, waste and costs. And, maybe make a certain customer care director's life a bit easier. IT

Mike Sheridan is Senior Vice President, Strategy and Marketing, Aspect (www.aspect.com).

Ask the SIP Trunk Expert

By: Steven Johnson

Tools for Diagnosing and Troubleshooting

SIP trunks can deliver excellent voice quality and reliability. However, employing tools for diagnosing and troubleshooting problems with the VoIP media stream helps avoid potential issues, including QoS. This is especially important for enterprise environments — where voice is a mission-critical application — and for carriers, who rely on delivering quality voice service.

For both carriers and enterprises the metrics that can be gathered at an enterprise network's point of entry are valuable in identifying and diagnosing problems that could degrade voice quality. Enterprise Session Border Controllers (E-SBCs) are located at the right place in the network and are often equipped with diagnostic tools that can be used to isolate the source of problems.

For carriers, the demarcation point between their network and an enterprise network can also serve as the first line of defense. An E-SBC can sit in the network and serve as this demarcation point, gathering the statistics necessary to monitor service delivery to maintain QoS. This allows carriers to see the primary statistics for determining the quality of the call through the network and diagnose whether problems are caused on the public or private side.

Another tool (for enterprises and carriers) is media quality scoring. With the E-SBC as demarcation point, it can monitor the RTP stream and compute statistics for the number of packets sent, bytes sent, jitter, number of missing packets and maximum number of consecutive missing packets. This information can be gathered as separate data for each direction and reported individually. It can also be used to compute a Mean Opinion Score (MOS).

Last, the E-SBC can be placed in front of an existing firewall, allowing the E-SBC to employ QoS rules with the introduction of SIP. An E-SBC will enable the use of SIP, leave an existing SIP-unaware network firewall in place and still provide the bandwidth management necessary to ensure that voice receives priority, and therefore does not suffer from conflicts with data packets which can stand delay, where voice cannot.

Voice quality and reliability are competitive differentiators for carriers and enterprises alike. Taking the right steps to diagnose and troubleshoot issues before they become serious makes smart business sense. IT

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

inGate

SIP Trunking Global Online Community

http://sip-trunking.tmcnet.com

All You Need to Know About SIP Trunking

Today's enterprises are constantly looking to improve their communications infrastructures and leverage the latest communications technologies to enhance their business opportunities.

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By: Don Witt

Call Centers — Boom or Bust?

VoIP in 2009

My prediction seems to be panning out. 2009 looks like it is going to be a very good year for Voice-over-IP telephony. That does not seem to be the case with all VoIP market segments. Call centers seems to be having their ups and downs.

Resellers Have Pulled Back

We have had several resellers that were planning to target call centers pull back on their efforts. It seems that they have sensed a weakness in the call center market. This was strange to me since the VoIP market is going through a very strong period of growth. What seems to be the problem with call centers?

Even though there may be some cut backs, the in-bound call centers seem to be holding their own during the economic hard times.

Call Centers' Function

Call centers have evolved to respond to customer demand or to provide services to a company. They can be both internal or external to the company. When customers need to contact someone for support, sales, information, account information, or to change services, an in-bound call center is generally what the customers has dialed into. If the company wants to contact its customer base, expand the customer base, take a survey, etc, they are using services provided from an out-bound call center.

In-Bound Call Centers

In-bound Call centers are the preferred call centers for telephone companies. Is it any wonder, the calls are longer in duration. The in-bound call centers have been taking a hit recently as many have been out sourced to overseas call centers. With the improved quality of VoIP and the lowered telephony costs, outsourcing has had an advantage to many companies by both lowering telephone costs as well as personnel costs. This trend seems to be reversing as many companies have had a negative response to the unintelligible answering the phone and trying to carry on a conversation in English.

Even though there may be some cut backs, the in-bound call centers seem to be holding their own during the economic hard times.

Out-Bound Call Centers

Out-bound call centers are used in a proactive way for the business, political party, poling agency, etc. You will find predictive dialers used to call a list. Predictive dialers know when: there is no answer, a calling machine answers, or a human answers. When a human answers, there is typically a short delay until the call is transferred to an out-bound call center staff person. This is usually when I hang up.

The out-bound call center has been recently affected in three ways:
- Outsourcing
- Call duration charges
- Economy

The outsourcing of call centers is not news. Outsourcing has had its damaging effects. It is possible that this trend is reversing.

However, carriers have been getting crippled by short duration calls and have taken steps to penalize companies that tie up their circuits with these calls. These short duration calls are a direct result of the out-bound call center hanging up on the answer machine, no answer, or humans hanging up on them. This has proven to be a serious problem. Additional charges are now being assessed against the offending call centers to the tune of tens of thousands of dollars a months.

If that is not enough, the economy has probably been the biggest blow to the out-bound call center. As indicated previously, the out-bound call center is used for advertising, surveys, poling and more. Most of these functions come out of the advertising budget and are viewed as expenses. Now that times are tough, businesses are cutting expenses and the out-bound call center expense is one of those areas being cut — BIG TIME.

My assessment of the call center market right now is:
- In-bound call centers are a Boom/Steady
- Out-bound call centers are a Bust IT

Don Witt is President of cyLogistics (www.cylogistics.com).

www.tmcnet.com/5056.1

Epitiro Appoints Paralink as Femtocell Solutions Distributor

Epitiro, a broadband communications company enabling ISPs, mobile operators and government regulators to effectively understand Broadband service delivery, today announced Paralink Networks, as its distributor of FemtoLab and FemtoLite test solutions for China, Hong Kong and Taiwan.

Paralink Networks is a privately held corporation specializing in a range of network test equipment to manufacturers, mobile operators and broadband service providers, with corporate offices in China and Taiwan.

The Femtocell Test Suite reports real-time IP-based service delivery metrics based on actual traffic events in the broadband backhaul often as a result of network issues or ISP traffic management policies.

www.epitiro.com

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www.tmcnet.com/5057.1

Eaton Launches Value-Added Reseller Program

Eaton Corp., a diversified industrial manufacturer, says it's launched a new value-added reseller program called "PowerAdvantage Partner," which allows IT solution providers to build their own power practices.

The program is designed to provide VARs with the tools to deliver "greater value" to their customers, according to company officials. It also is expected to help maximize revenues within key growth segments — power and energy efficiency.

With the PowerAdvantage Partner Program, VARs can become more knowledgeable in power and create new revenue opportunities by helping their customers invest "wisely" in energy efficient power protection solutions. Eaton has designed its latest offering in two tiers — authorized and certified. While the "Authorized" tier supports VARs that want to offer power quality solutions without building in-house expertise, the "certified" tier support those looking to establish a comprehensive power practice.

www.eaton.com

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www.tmcnet.com/5058.1

Cbeyond Teams with TBI, Expands Footprint

Cbeyond, Inc. has formed a master agent partnership with Telecom Brokerage, Inc. to focus on selling solutions featuring its BeyondVoice with SIPconnect and Microsoft Response Point, the software giant's IP-PBX system for small businesses.

Cbeyond has built a strong client base with many small businesses by providing IP-based communications and IT services. TBI plans to offer this integrated solution through its network of 800 sub-agents. All TBI subagents are eager to grow their revenue streams by reselling SIP Trunking solutions that feature Cbeyond and Microsoft Response Point.

Brad Linden, the vice president and general manager of the indirect channel for Cbeyond, said that this partnership will expand the distribution of the company's services and also allow more small businesses to benefit from Cbeyond's portfolio of productivity-enhancing applications.

www.cbeyond.com

www.tbicom.com

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www.tmcnet.com/5059.1

Heartland Technology Solutions Joins AltiGen's Reseller Network

Heartland Technology Heartland Technology Solutions has eight offices across five states and is also a Microsoft Solutions has joined the growing AltiGen Communications reseller network of. Harlan, IA-based Gold Certified Partner.

HTS was founded in 1985 and it currently offers technology solutions for small and medium size companies. This includes EncompassIT — managed IT services, network infrastructure and security, telephony and unified communications, document imaging, surveillance, global positioning systems, disaster recovery services and business consulting.

By collaborating with Microsoft Certified Partners such as HTS, AltiGen secures a key advantage over its competitors in the field. HTS will play an important role in introducing new technologies, such as Voice over IP, to the market place. This feature will become an important element in AltiGen's growth strategy customers migrate from traditional telephony platforms to a converged, IP Telephony solution.

www.altigen.com

www.heartlandtechnologies.com

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www.tmcnet.com/3583.1

DORETEL Communications Now Offers Cisco Authorized Refurbished Equipment

DORETEL Communications now offers the Cisco Certified Refurbished Equipment Program as a price competitive and trusted alternative when buying new Cisco equipment is not an option. The Cisco Certified Refurbished Equipment is described as "ideal for customers faced with tight or limited capital spending budgets, "lowest price option" procurement policy, maintenance and extension of legacy networks, and immediate network equipment delivery."

With a comprehensive inventory of over 2,500 different products, the Cisco Certified Refurbished Equipment program offers a range of current and end-of-sale products to support a variety of network infrastructure. Cisco Certified Refurbished Equipment enables customers to protect their budgets and get the most out of their network investments. Cisco Certified Refurbished Equipment can also be financed through a variety of financing programs to further increase budget flexibility.

www.doretel.com

Talking with Sarah Graham Linares, VP of Revenue Assurance and Product Development, TMC Communications

By: Richard "Zippy" Grigonis

TMC Communications (www.tmccom.com) – no relation to the TMC that publishes this magazine – is a telecom service provider and reseller that offers a wide range of long distance, local, VoIP, data and enhanced services to businesses nationwide.

An innovative company that's experienced enough to handle the complex demands of large enterprises yet nimble enough to offer individual attention to customers, its 99 percent customer retention rate results from a combination of 24/7 assistance, the ability to develop superlative and cost-effective solutions for each unique situation, not to mention their ability to negotiate the best deals with top U.S. carriers. (Aside from its own network, TMC delivers services through such major long distance and data partners as Qwest, Global Crossing, Verizon, AT&T, Level (3), and PAETEC.)

All TMC services are sold exclusively through a nationwide team of experienced, independent telecom Agents. To learn more about TMC's successful relationship with the channel, Yours Truly recently spoke with Sarah Graham Linares, Vice President of Revenue Assurance and Product Development.

RG: You work closely with your Agents.

SGL: We've supported the Agent channel exclusively since our founding in 1997. We support about 300 Agents, about 100 of which are very active, quoting and selling our services. We've been a provider of voice data and all the products that surround voice and data. We focus on solutions selling – not just selling the cheapest rate per minute. We wrap products around our services such as products that support inbound call centers. Our customers may need advanced toll-free services or TDM and/or VoIP. We can provide all of those types of things. If they require data services, they can call upon a network managed services product we call Titan that allows us to do bandwidth management on that data circuit and helps them manage the data coming in-and-out of their site. Titan monitors a network and provides reports on metrics relating to applications, sites and network link performance. It even provides MOS [Medium Opinion Scores] and enables users to maintain and prioritize the bandwidth different applications need so that things like video downloads don't interfere with VoIP calls.

We support Agents in a unique way – because we have so many we want to be as efficient for them as for us. Our many automated tools allow us to provide quotes to them quickly. If they're out in the field and they need a quote for a particular customer, they can either call us and we'll service them that way, or else they can log into our automated tools and indicate that, 'I am at so-and-so address and here's the phone number. I would like a quote on voice and data services, and some other products available around this address.' So it's important that we not only support them from a product standpoint, but that we work in tune with the way they work. If they need a quote at Midnight, they have the access to get one from us. Moreover, those tools in the background are all very automated and instant in nature, so if they're looking for a quote on voice, they'll get instant quotes on the local loop provider or the port for data, the rate per minute, or whatever is necessary for the Agent to do business. Then they can pick what commissions they want. Agents want to sell services at rates that are good for both them and their customers – if they can get a 25 percent commission, obviously they'll go for it. But if the market is pushing them down to something more like 10 percent, we'll give them all sorts of mix-and-match commission options in conjunction with our tools, so they might receive, for example, 10 percent on voice but 25 percent on data.

From the voice side, we're usually dealing in per-minute rates. If an Agent can sell a service for 2 cents a minute, then they'll get a pretty high commission. If they need to sell it for somewhere just over a penny, they'll get less of a commission. But we also can put customized proposals together – on the voice side it's all about the patterns of calls that are made. A customer always calling the NFL cities and RBOC areas means that they'll enjoy a cheaper rate per minute. Agents just need to know where their customer is. Same thing with data. We can sell them an Internet-type product, a private line, MPLS, or we can help them design a network to suit the customer and we can throw in some other types of products such as Titan to help them manage their network.

RG: So there are a series of predefined packages?

SGL: Although we have flat rates – since Agents prefer them – we also offer what we call 'pinpoint pricing' which allows an Agent to get the CDR (call detail record) that they get from their current provider and provide that to us and we'll run our rates over that traffic and provide them with something like a customized proposal that says, 'The best carrier for you is Carrier X.' Or perhaps there's a Least Cost Routing opportunity where we can include-several carriers in the customer's network designand not only provide them with lower rates but also disaster recovery and multicarrier solutions so they continue to have service even if a particular carrier has an outage. So yes, there are 'packages' that we can assemble, but although we can put together a package for a customer, you can mix-and-match between our many products and design exactly what the customer needs. Sometimes you need to sell one thing to get in the door and then you sell them something else next month.

To ensure that we are on-track with our Agents and we're in alignment concerning what products they're selling and what our support looks like, we have an advisory council that consists of our top Agents, with whom we meet quarterly. This allows us to be informed as to what they're hearing in the field. What do they need in the marketplace? What new VoIP, data or unified communications product do they need and how can we help them deliver them to their customers? We also conduct lots of training, because everyone needs to understand what's going on in the marketplace and what the products are. So we do things such as hold webinars often with our Agents. Sometimes they're carrier-specific, sometimes they're product specific, or sometimes we're holding training on tools that we're offering to our Agents.

RG: Can your services be rebranded?

SGL: Some Agents do choose to rebrand the services, but most of the time they're selling TMC. If the Agent is large enough, we'll co-brand or put their name and logo on the bill, if that's what they choose. So we really end up being their back office from beginning to end. Basically they get a commission on a monthly basis and we'll take care of everything else. We also have a new product that allows clients to take what TMC can do on our switch and enables the client to be able to do it too. For example, TMC's Be your own RespOrg service allows the customer to manage their own enhanced toll-free services. The customer can reserve their own toll free numbers, change routing (time of day, geographical, percent allocation) reroute toll free numbers to an alternative carrier in the case of an outage and manage their own account, vanity numbers, etc. by accessing the SMS database. TMC provides the training and support for this service.

Agents can be a one-man shop and it's that guy and his computer, or they can be multi-layered with lots of staff and a back office behind them. But whatever the size of the Agent, we do the largest part of the work for them, depending on their choice. Sometimes they want to be very much 'high-touch' themselves and we let them guide us on exactly how involved they want us to be on a daily basis. Other Agents just bring us a customer and want us to completely manage the customer relationship after the sale. We love both types of Agents and will support either one as needed.

RG: What is your geographical coverage?

SGL: North America is our main focus, although in the new VoIP world there are call centers worldwide and 'super call centers' that may have three locations in the West and perhaps one in Costa Rica and one in the Philippines – we can support that type of customer too. For example, we have a very sophisticated Agent who sells to a particular vertical in the infomercial arena. He sells minutes to call centers that, when viewers see a toll-free telephone number flashing on their TV screens, call on the lines servicing that number. He can support that kind of call traffic volume to multiple call centers, since one center won't handle it. The Agent supports many customers that exist as a sort of community of call centers, and he can move traffic back-and-forth between and among them, since we have the ability to allocate traffic between call center locations. These call centers are great customers and we are the first Tier-1 support for them with transport, billing and customer care, and the Agent is the salesperson who goes out and gets the deals.

RG: You appear to be heavily into customer service.

SGL: Yes. Several years ago we introduced a premier support program. Customers are assigned a dedicated support person who acts as their first line of support for questions about their account or service. They also get a monthly call from their premier support manager. to check in and to see how things are going and how's their business doing and if we can help them with anything else. This proactive approach to customer service has been extremely well received by both customers and agents. Customers who bill at least $3,000 a month are automatically included in the program.

From our solution-based relationships with clients we get interesting feedback. For example, clients are asking for more SIP Trunks, which save money because the call traffic doesn't go through the PSTN. This is inline with the analysts at Gartner Group, who say that telecom spend won't be going down but the market will be more specific on what and who they spend their money on. IT

By: Peter Radizeski

More Agents or Lift the Ones You Have? Part 2

Last month, among other things, I asked in a general way if you survey your channel anonymously to get feedback on any training you dispense. Let's focus on that for a moment. In particular, do you seek feedback regarding –

- what they remember of the training one week later;
- was it valuable time spent?
- what can they directly apply?
- any clients in the database that might be a fit now?
- do they know how to pitch the service/product?
- do they know who we target? and why?
- have they looked at their notes since the call?
- is working with you "easy & enjoyable"?

A carrier once asked me what they could do to make working with them easier. I answered explaining about the poor follow up. Sadly, it was never addressed. If you are going to drop the coin on a channel, don't set it up for failure.

At Channel Partners Expo in Vegas, carriers and master agents were looking for new agents and visiting with old ones.

- What are you specifically looking for in your next agent?
- What questions will I ask a prospective agent?
- Are we a quoting machine or lowest-priced carrier?
- Does the agent already have a carrier like us? If so, why is he looking?

And I know some of you are thinking, "We just want to sign up agents!" Sure, but it isn't about numbers. It's about, "Enrolling partners into your Program." (Or maybe it's just a Numbers Game — lots of agents, thousands of quotes, hope for the best, and why aren't they selling my stuff?) Right now, wholesale VoIP providers are looking for me to help them train their customers to sell more SIP trunking and Hosted PBX. They want their client ITSPs to be more successful. If you are a VoIP company and you have 75+ partners, is that a successful channel? Not unless 15 of those partners are selling a deal every week.

I'm not saying don't add new agents. I'm saying look at your current agents and figure out how to make them more successful so that they can create more revenue for you. It is a partnership after all. IT

Peter Radizeski is head of RAD-INFO, Inc., a consulting agency specializing in the telecom industry.

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Whether you are a start up or an established company, a one-person business or an organization of 100 employees, a VoIP-hosted phone solution with a lower TCO, reduced complexity and more advanced communication features is the obvious and smart choice.

But, one size does NOT fit all! As such, TMCnet has joined together with one of the industry's leading IP communications service providers, 8x8, Inc., originator of Packet8 Internet Phone Service, to educate the business and residential communities on the advantages and efficiencies of VoIP-hosted phone service.

VoIP Services For SMB & Residential

voipservices.tmcnet.com

By: Rose Klimovich

Content Distribution Networks (CDNs)

One of the key service providers in a Co-location Center are Content Distribution Networks (CDNs). CDNs allow the efficient distribution of content (web pages, video, software patches, games, etc.) over the Internet. As content demand, especially for video, grows, there is more traffic that can benefit from CDN services. The CDN industry has a plethora of providers (over 50). CDNs are provided by more well-known companies like Akamai and Limelight, by integrated providers like AT&T and Level 3 and by smaller players like Bit Gravity and Highwinds.

So how do you know if you need a CDN for your website?

1. Depends a lot on your content: If you have content that is very sensitive to latency/packet loss performance, then you might want to use a CDN. This is especially true if you have all your content in one location and are trying to get to users who are far away. The CDN will distribute your content, moving it closer to the user so the user sees better performance.

2. Availability and performance issues related to the Internet: Sometimes the path from your servers to the end users can be slow because of your network providers. Using a CDN may avoid this.

3. If your traffic load is inconsistent: You can always buy servers/storage/bandwidth to support your peak traffic. But if you have higher traffic on some days than on others that means you will often have poor utilization. It might be cheaper to use a CDN to smooth out your traffic.

4. You have security concerns for denial of service and other malicious attacks: A CDN may help here if it provides security at the edges and can see across more websites that may be having problems. CDNs cannot prevent attacks but may help you deal better with them.

5. Limited visibility: CDNs can often give you tools so that you can see how your environment performs. Reports can include where users are, errors, page views, etc. These reports can help you improve the experience of users of your content.

6. You need value-added services: Many CDN providers also provide other content management services like encoding, management and monitoring of content.

So, if you fit any of these, take a look at CDNs. IT

Rose Klimovich is Vice President, Product Development, Telx (www.telx.com).

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By: Gary Kim

www.tmcnet.com/5028.1

Broadband Stimulus: Unanticipated Complications for Rural Grantees

Nobody who thinks they might want to apply for funds is going to say this, but the recent National Telecommunications and Information Administration meeting on the broadband stimulus plan essentially amounted to an hour of platitudes and half an hour of officials saying "that's a good question," and "you tell us what you think we should do." It hardly was a confidence-inspiring performance.

Worse, expectations are running too high, overall. Not much is really going to change, even after the money is disbursed, according to rules not yet written, against an institutional backdrop that in some cases forbids spending money in a rapid and efficient way.

As with so much of the rest of the chaotic, untargeted federal spending now going on, it is "just a down payment."

The legislation mandates spending in every state. So think about an average of $140 million, not billions. To be sure, that amount of money could be a big help to lots of small providers in rural areas, if they are able to apply, and if taking the money does not change their business models. It isn't clear such rural providers will be able to apply, and if they can, that they can keep their existing business models.

The Stimulus Act gives an additional $2.5 billion to the U.S. Department of Agriculture's Rural Utilities Service broadband loan and grant programs. RUS is directed to fund projects where at least 75 percent of the area to be served is a rural area "without sufficient access to high-speed broadband service to facilitate rural economic development," says the Free Press.

But existing RUS regulations specifically forbid grantees from offering telephone services over their grant-funded broadband facilities if a customer is already receiving such service from a local telephone company. This restriction undermines the ability of new entrants to operate profitably by offering "triple play" services of phone, Internet and television, Free Press argues. In other words, taking the money comes with strings that forbid grantees to create the bundles that now are an industry staple.

"If an existing local telephone company refuses to deploy broadband, this regulation creates a barrier to entry for any other broadband provider," the Free Press says. So, for starters, the program requires the RUS to change its existing rules for the permanent programs it runs. The strings that come with the money, in other words, might force permanent changes to rules RUS uses to award funds.

That's the same problem some governors have with accepting other forms of "stimulus" funding for some programs: they require states to make permanent changes in rules.

Program grantees also are also prohibited under existing RUS regulations from using grant monies for deploying their own broadband transport facilities, the Free Press notes. This restriction greatly reduces the ability of a non-telco incumbent (such as a wireless provider or a cable company) to use grant funds to upgrade their existing facilities to offer broadband services.

To the extent that alternate facilities are precisely what smaller broadband providers use, and arguably the sort of facilities-based competition telecom regulators everywhere in the world think is helpful for promoting competition, the stimulus money runs into a brick wall.

The Food, Conservation and Energy Act of 2008 ("the Farm Bill") eliminated a previous RUS restriction that limited participation in the loan program to companies that serve less than two percent of the nation's telephone customers. In other words, lawmakers were trying to loosen rules on larger companies making investments, because many potential customers will get service fastest if some large companies that already have facilities on the ground can apply.

The new law, however, does limit the amount of funds that can be awarded to the larger companies to less than $3.75 million per year. How many large companies think that amount will buy them much? Worse, the "open access" requirements for any provider accepting the money make it unclear whether taking the money likewise permanently changes their business models. In a worst-case scenario, service providers might find themselves unexpectedly required to offer new wholesale access to their networks or forbidden to offer some forms of quality of service protection even for customers that want those protections. IT

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www.tmcnet.com/4396.1

Interactive Intelligence Revolutionizes System Monitoring

Interactive Intelligence recently announced the release of a new communications system monitoring product, Interaction Monitor. This new add-on product has been introduced into the company's contact center automation and enterprise IP telephony solutions. Interaction Monitor is designed to help customers improve operational efficiencies and increase reliability.

The new solution enables customers to remotely monitor and troubleshoot Interactive Intelligence software, hardware and peripheral devices. With Interaction Monitor, IT managers can enjoy a single client interface for remote system monitoring of errors, warnings and failures, along with automated log retrieval. Alerts are sent to administrators though e-mail based on event criticality. The solution can also send alerts via the Web.

www.inin.com

www.tmcnet.com/.4398.1

Plantronics Offers Savi Wireless Audio Solutions

Plantronics has introduced the industry's first suite of unified communications wireless headset systems that integrate multiple devices and applications for improved business collaboration and cost savings.

Melanie Turek, industry principal, Unified Communications at Frost & Sullivan, sees the value in this type of solution. "Intelligent headsets that can unify devices and applications to help eliminate costs and improve workforce collaboration are truly essential for successful UC deployments," she said.

The Savi Series features two wireless headset systems: Savi Office and Savi Go. Savi Office is designed for office workers and provides a single wireless headset for mixing desk phone calls with PC audio and softphone calls. Savi Go gives mobile professionals a simple-to-use wireless headset to connect to PC and mobile phone communications. Both products have variants that support UC offerings from leading providers, including Avaya, Cisco, IBM, and Microsoft, and other popular services, such as Google Talk and Skype.

www.plantronics.com

www.tmcnet.com/.4399.1

Verizon Business Offers Managed UC Based on Microsoft OCS

A new managed service announced by Verizon Business, based on the Microsoft Office Communications Server 2007 R2 platform, is designed to deliver unified communications functions to the desktop, enabling workers to enhance communications through real-time instant messaging, presence, Web conferencing and VoIP.

According to company officials, Verizon Business is one of the first global service providers to offer management of Office Communications Server 2007 R2, which was specifically designed to meet the real-time communication needs of today's distributed workforce.

"Unified communications is a transformative technology that has the power to change the way people communicate and work together to be more effective, creative and productive in the office or on the go," said Michael Marcellin, vice president of global managed solutions, Verizon. "By managing this leading software-based solution, Verizon Business can help customers take the complexity out of introducing unified communications across an enterprise while keeping their resources devoted to their core business activities."

www.verizonbusiness.com

www.microsoft.com

www.tmcnet.com/.4400.1

Mitel Nets Security "Cred" with JITC Accreditation

Mitel announced it has achieved Joint Interoperability Test Command (JITC) certification — a high level of security accreditation granted by the U.S. Department of Defense (DoD) — for its Mitel 3300 IP Communications Platform (ICP).

The Mitel 3300 ICP is designed to provide IP communications capabilities to businesses and organizations from 10–65,000 users on a wide variety of telephony and computing devices. It provides advanced unified communications with WAN and mobile connectivity and, through open standard interfaces, integrates seamlessly into business processes and associated applications.

JITC tests and certifies technology for the armed services and government. As a result of meeting all critical interoperability requirements, the 3300 ICP is added to the DoD's Unified Capabilities Approved Product List and is certified for use within the Defense Switched Network.

www.mitel.com

http://jitc.fhu.disa.mil/

www.tmcnet.com/.4401.1

ShoreTel Scores Big Win at Verizon Center

ShoreTel has a new customer. The Verizon Center and the NBA's Washington Wizards have reportedly deployed a ShoreTel UC system in the $200 million sports and entertainment facility located in the nation's capital. Verizon Center and the Washington Wizards selected the ShoreTel system for its 108 luxury suites and office operations based on its flexibility and enhanced features.

Over 650 ShoreTel phones were installed with the ShoreTel UC system preconfigured for easy installation in the executive offices, luxury suites, locker rooms, tenant service areas, and press room areas. An additional 700-plus analog extensions were deployed. The ShoreTel system supports direct dial to toll-free numbers from credit card verification machines at select analog extensions throughout the building allowing for the streamlining of the sales process for visiting vendors. Each of the 108 luxury suites was outfitted with large display screen phones with a capability to personalize the display screen with pictures of the Washington Wizards players or the arena.

www.shoretel.com

www.tmcnet.com/5032.1

BT Intros Unified Communications Services in United States, Canada

Seeking to help companies develop a customized unified communications and collaboration strategy, BT reportedly has introduced a comprehensive new family of consulting services in the U.S. and Canada markets. Officials at BT say the services help companies cut through the hype of unified communications services.

The UCC Strategic Planning and Assessment umbrella provides four services. The first one is the UCC Strategic Planning where BT's business consultants develop a UCC strategy and roadmap. In the second service, BT focuses on defining the business benefits of an organization's UCC strategy. The third service involves BT developing a return on investment calculation for specific UCC decisions. The last service is UCC Infrastructure Gap Analysis where BT studies an organization's existing technology environment.

www.bt.com

www.tmcnet.com/5033.1

Deutsche Telekom Selects ECI Telecom

Deutsche Telekom AG (DT) has selected ECI Telecom to participate in its Next-Generation Factory (NGF) initiative for PSTN — all IP substitution.

The NGF project is designed to improve DT's network from circuit-switched to IP-based, improving performance and reducing network complexity and simplify the carrier's network architecture, integrate the several platforms being used now, and provide the flexibility necessary for new services through common service capabilities.

ECI would supply DT its Hi-FOCuS MSAN (Multi Service Access Node), which supports ADSL2+, VDSL2, SHDSL and SIP-based voice services. DT will also be deploying ECI's central office-based F152 and M82 platforms and its M41 outdoor-optimized platform.

www.ecitele.com

www.deutschetelekom.com

www.tmcnet.com/5034.1

Business VoIP Provider Broadvox to Offer SIP Trunking through TBI

Broadvox officials announced a deal with Chicago-based telecom master agent Telecom Brokerage, Inc., to help bring reliable, scalable and interoperable SIP trunking to businesses by offering unlimited local calling and lower long-distance rates through new or existing IP-PBXs.

According to David Byrd, vice president of marketing and sales at Broadvox, TBI understands the comparative advantages and associated costs of the industry's best carriers. "A relationship with TBI provides the opportunity for increased commissions, national exposure and business growth, not only for Broadvox, but for Broadvox VARs and TBI subagents as well," Byrd said.

Geoffrey Shepstone, president of TBI, said his company is "pleased" to bring Broadvox's customized communications to its membership.

www.broadvox.com

www.tbicom.com

www.tmcnet.com/5038.1

Guests at MGM Mirage Get Personalized Offers via Mobile

Seeking to deliver personalized, targeted promotions to their guests' mobile phones, six MGM Mirage properties have chosen services from Acxiom and Acuity Mobile. Experts in marketing believe that mobile marketing has the potential to be bigger than internet marketing in the coming years. With the SMS and voice alert services being used as the vehicles of promotion for the new products and services, mobile marketing is fast emerging as the best form of advertising. For properties such as MGM Mirage, it's easier to enroll the interested guests to receive the promotional offers. This way, MGM Mirage can ensure that the guests receive updates on its latest promotions.

The MGM Mirage properties programs provide real-time offers, property information and entertainment promotions directly to guests' handsets. With their mobile device, guests can receive targeted special offers, alerts, quizzes, contests and many other unique and valuable benefits.

www.mgmmirage.com

www.acxiom.com

www.acuitymobile.com

www.tmcnet.com/5035.1

Covad Intros SIP-Based Voice Service

Covad Communications has unveiled a new Integrated Access service, an all-in-one phone and Internet service for businesses with up to 35 employees per location, delivered over a T1 connection, and offering new scalability.

"Covad Integrated Access service has been completely retooled for reliability and flexibility," says Jake Heinz, vice president and general manager, Covad VoIP, "allowing smaller businesses to start small and then add lines as needed."

The new offer is built on Session Initiation Protocol trunking and supports a wide range of IP, digital and analog phone systems. Pricing start as low as $435 per month with no installation fees, depending upon contract length and services ordered.

www.covad.com

www.tmcnet.com/5036.1

Report: Social Media on TV Helps Service Providers and Advertisers

Market research and consulting company Parks Associates recently released a new report, 'Social Media & User-Generated Content,' which found social networking on television will soon be a trend that helps increase U.S. advertising spending in social media to almost $3 billion by 2013. The report also predicts that by 2013, social networking users will be over 95 million.

The report also indicated that more than one-fourth of broadband users aged 18 to 24 are interested in social media features on the TV. Apart from multiplayer gaming and in-program chat, users want features such as "most watched" lists. Also, nearly 23 percent of U.S. broadband households said they want to view content from sites like YouTube and Flickr — on their TVs.

www.parksassociates.com

www.tmcnet.com/5042.1

Proxim's WiMAX Product Family Receives FIPS 140-2 Level 2 Certification

Proxim Wireless has announced that its Tsunami MP.11 high security (HS) line of base stations and subscriber units are the first point-to-multipoint wireless broadband products to be certified with Federal Information Processing Standards Publications (FIPS) 140-2 Level 2 validation.

The products met stringent security requirements for cryptographic modules, according to company officials. FIPS 140-2 Level 2 validation is a requirement for any cryptographic product that will be used in a U.S. government agency network. The cryptographic product is certified only after it meets the security requirements of healthcare organizations, financial institutions and other highly secure enterprises.

The Tsunami MP.11 HS product family offers "ultra-secure" enterprises with FIPS 140-2 level 2 compliant point-to-multipoint products in the 5.1-5.95 GHz, 4.9 GHz, 2.4 GHz, and 1.8 GHz frequency bands.

www.proxim.com

www.tmcnet.com/.4403.1

Bradon Technologies Intros Web Conferencing for BlackBerry

Bradon Technologies has announced a new Unified Communications breakthrough, with their online meeting application for the latest BlackBerry smart phones from Research In Motion, including the BlackBerry Storm and BlackBerry Bold smart phones.

Using Bradon's proprietary SAViiDesk technology, users can participate in online meetings by using their BlackBerry devices. Bradon's SAViiDesk technology provides a new method of real time SaaS (Software as a Service) collaboration via the Internet, allowing conferences that can include an unlimited number of participants located throughout the world who can fully participate using their BlackBerries.

SAViiDesk also enables instant connectivity so that participants have a broad range of options for later revisiting the entire conference. Bradon Technologies is offering a free, 30-day trial that provides BlackBerry users with unlimited usage and unlimited hosts.

www.bradontechnologies.com

www.tmcnet.com/5039.1

UniData Intros SQ-3000, WiFi Video Conference Phone

Entering a market that analysts say is poised for growth, a Seoul-based IP telecommunications solution provider is unveiling a WiFi video conference phone. Officials from UniData Communication Systems Inc. introduced their SQ-3000 with support for high-resolution video telephony on its 2.8-inch touch screen. The device includes 240-by-320 resolution, and supports both the 802.11a and 802.11bg standards.

Other features included 30 fps video recording/playback, G.722.2 Wide-band audio codec, conference call, mp3/mp4 playback and XHTML browser, and officials say their offering is suitable for conference calls between branches at home and abroad, with up to three hours of video calling and six hours of voice calling time.

www.udcsystems.com

www.tmcnet.com/5041.1

Wes-Tex Telecommunications Selects Airspan Advanced WiMAX Solutions

Wes-Tex Telecommunications, working with systems integrator Stutler Technologies, has selected Airspan advanced WiMAX solutions for a city-wide deployment in Big Spring, Texas.

Wes-Tex, a rural local exchange carrier, has previously served customers through traditional leased wired lines that were proving too costly. After detailed research, the company chose Airspan's WiMAX solution as it felt it best met its needs in delivering high-speed Internet as well as quality voice services.

"Airspan and Stutler were able to devise a solution that allows us not only to continue serving our current customers with voice, but also to expand our customer base with added services such as high-speed Internet," said J.R. "Bob" Wilson, general manager, Wes-Tex in a statement. Wilson said that the company was also able to plan, develop and deploy the network very quickly and at a low cost.

www.airspan.com

www.tmcnet.com/5044.1

Nokia Siemens Networks Gears Up for Commercial Rollout of TD-LTE in China

Nokia Siemens Networks is preparing for the commercial rollout of next generation Time Division Duplex Long Term Evolution technology in China. To facilitate the rollout, the company has expanded its R&D team in Hangzhou, China.

The company's Hangzhou R&D center plays a crucial role in driving innovation across various technologies including Global System for Mobile Communications (GSM); Enhanced Data rates for GSM Evolution, Wireless Code Division Multiple Access High-Speed Packet Access (WCDMA-HSPA), Long Term Evolution (LTE), Internet-High Speed Packet Access and Worldwide Interoperability for Microwave Access (WiMAX).

Hangzhou's R&D team also focuses on supporting China's home-grown TD-LTE technology through 2009.

www.nokiasiemensnetworks.com

www.tmcnet.com/5045.1

TEM's EteleSolv Eyes Wireless Expense Management

EteleSolv Inc. a telecom expense management software provider, is hailing the release of Aberdeen Group's benchmark report, "Reducing the Cost of Freedom: Wireless Expense Management." Sponsored partly by EteleSolv, the report focuses on enterprise use of wireless expense management technology solutions. Specifically, it looks at the solutions that enable reductions in wireless expenses through use of fewer devices.

Aberdeen demonstrates how most companies are able to reduce wireless voice and data costs easily by implementing a WEM solution. Such companies were able to experience data cost reduction by 32 percent while other companies not employing WEM solutions actually saw a 16 percent increase in data charges.

www.etelesolv.com

www.tmcnet.com/5046.1

Logica, Sun Demo 50 Million Payments in One Hour

Logica and Sun Microsystems reportedly demonstrated 50 million payments in one hour during benchmarking tests performed on Logica's new application, the Logica All Payments Solution, at Sun's Centre for Research in Innovation Management in Scotland.

LAPS was run on Sun's T-Series and the Sun Scalable Processor Architecture Enterprise M-Series servers with Sun's Solaris 10 operating system and the Oracle Database 10g. Logica and Sun Microsystems exactly replicated the payments scenario of a multinational bank and followed the non-negotiable European Union's dictates of Single Europe Payments Area and the Payments Services Directive to process outward bound SEPA credit transfer transactions to banks belonging to the Euro Banking Association.

www.logica.com

www.sun.com

www.tmcnet.com/5048.1

TEOCO, Netezza Deliver New Telecom Cost Management Appliance

TEOCO has announced it will now offer a complete, usage-based cost management appliance based on Netezza's scalable and simple data warehouse platform.

TEOCO is a provider of network cost optimization solutions to communications service providers worldwide. The alliance enables TEOCO to offer a complete, all-in-one appliance that helps carriers to access and analyze the data required to get to the bottom of cost issues. The companies point out that these cost issues are typically not visible at the summary levels offered by TEOCO's competitors. The Netezza data warehouse platform provides the underlying infrastructure for this new cost management appliance which allows for call detail records to be captured, loaded, and enriched. This helps in an in-depth comparison with the data captured and loaded from complex inter-carrier invoices.

The companies point out that it is imperative for the operators to have a 360 degree view of their switch-to bill-lifecycle in order to accurately identify the real cost savings within any network.

www.teoco.com

www.netezza.com

www.tmcnet.com/5051.1

Dr Pepper Snapple Group Saves Money By Using TeleNav Track

North American refreshment beverage company Dr Pepper Snapple Group, Inc said it would save $166,000 annually by holding employees accountable with GPS service. The company has also improved accountability and saved on labor and mileage costs through the usage of a cell phone-based GPS navigation and tracking service called TeleNav Track.

After using TeleNav Track on their GPS-enabled Sprint wireless phones, DPS saw immediate improvements. DPS has now been able to increase efficiency and is also able to provide quick, excellent service to its customers. Employees are now able to clock in and out directly using their cell phone and TeleNav Track notes the location and time automatically. It also helps in tracking mileage automatically and provides the management with a report based system to note the results.

www.telenav.com

www.drpeppersnapplegroup.com

www.tmcnet.com/5049.1

Verizon Helping Businesses with Wireless Spending

As a result of worsening economic conditions, businesses today are looking at all the ways they can cut costs. To aid their business customers by alleviating their worries over wireless spending, Verizon has announced a new Friends & Family for Business plan.

This latest solution from Verizon Wireless will not only help its business customers to gain better control of their wireless spending but will also offer improved flexibility and customization capabilities.

Commenting on the cost benefits the new plan will offer to business customers, Rob Miller, vice president of marketing for Verizon Wireless said, "The feature gives businesses the flexibility to create their own calling plan. If a project is complete and there is no longer a need to call a certain vendor, they can simply remove that vendor's name from the Friends & Family group and add a new contact - even if the number is to a landline or a person using another wireless carrier.

www.verizon.com

Talking with Jim Messer, CEO of Transverse

By: Richard "Zippy" Grigonis

Transverse (www.gotransverse.com), founded in 2007, has brought open source to the world of Billing Support Systems (BSS) and Operational Support Systems (OSS). Their Business Logic Execution Environment, or blee(p) is a fully integrated set of business management services that are grouped into business domain structures that can be easily extended via a plug-in framework, which allows a limitless number of business solutions to be assembled in days, not weeks or months.

Transverse offers their solution via an open source GPL license, which carries no license fees. Users wanting advanced functionality, professional support, documentation, training and product extensions, can contact Transverse when they are ready for a commercial relationship.

Yours Truly recently spoke with Transverse CEO Jim Messer.

JM: Transverse was founded when some BSS and OSS veterans got together and agreed that this industry was heading for a 'technology refresh,' given that we really haven't had one since the mid-1990s when client/server architectures first appeared. You can argue IPDRs [IP Detail Records] spurred a bit of a refresh around 2000, but for the most part there wasn't any real innovation taking place – a little bit on the Web Services side, and that was about it. The majority of the billing/customer care BSS platforms out there relied on technology 2 generations old. So we formed Transverse and embarked on our own initiative, developed with SOA [Service Oriented Architecture], Web Services and Java, and completely built – most importantly – on an open source foundation.

Open source is not just an interesting space but a logical one toward which we believe the industry is evolving. We launched Transverse in Stealth mode, created by a group of who we felt were the best architects in the BSS industry – that had worked at places like LHS, OpenWave and Intec. We wanted to ensure that the Total Cost of Ownership [TCO] was reflective of a model that operators could support and be agile in response to the marketplace, particularly regarding the advent of Web 2.0 offerings where business plans may change on the fly. They might not always succeed, but that's acceptable in the space as long as the failure occurs quickly and the operator has the ability to grab onto another business model that makes them more competitive. That wasn't possible in the current BSS infrastructure – indeed, it was implausible without an operator changing its fundamental architecture. In terms of being able to take these risks with new business models, it really boils down to two things: The cost of being agile in the marketplace, and the time associated with that. We focused on those. We found you really couldn't handle the cost or technology aspects without doing things on an open source foundation. And the TCO then really becomes compelling when going to the marketplace.

RG: Did you guys start from scratch?

JM: No, we examined best-of-breed open source projects such as well-established CRM/contact center packages such as Asterisk, business intelligence packages such as Pentaho, MySQL for the database, and so forth, where there was a very large R&D investment, on which we could capitalize without having to start that effort completely on our own. We take those best-of-breed open source projects and overlay our own open source and domain expertise to optimize them for telecom environments. When we go to market with such a reduced total cost of development for ourselves and TCO for our clients, it's quite difficult for legacy providers to compete with this business model. They could drop their prices to zero, but they can't change their cost model without fundamentally re-architecting their systems, because their business models, professional services and change management are allied right now with their proprietary platforms and so everything heavily depends on their existing codebase. You have to get away from vendor 'lock-in'. Leading vendors don't provide source code, so there's no transparency and no way to check on the quality of the code with the exception of acceptance tests and ongoing operations. Their contracting model typically voids your warranty for code support if you try to go around them. So you're trapped. We say, let's bring transparency to the marketplace and see how open source is of significant benefit to end users in the enterprise application space. Where market acceptance has brought open source in, at the end of the day the prices have dropped, and the technology has expanded in a positive direction.

It's not a question of 'if' but 'when' the carrier community embraces open source. At that point, I think you'll see not only their existing vendors dropping their prices, but a fundamental re-vamping of carriers, just as the enterprise has been affected by open source software. IT

Richard "Zippy" Grigonis is Executive Editor of TMC's IP Communications Group.

www.tmcnet.com/5053.1

OrecX Becomes Gold Member of Avaya DevConnect Program

OrecX, an open source Internet Protocol-enabled voice recording company, announced that it has been selected as a gold member for the Avaya DevConnect program.

Avaya DevConnect program aims at the development, compliance-testing and co-marketing of third-party technologies that are compatible with Avaya solutions. Major technology areas covered include IP telephony, contact centers and mobility applications.

OrecX, a provider of Oreka TR, reportedly the first open source call recording system, says that the membership in Avaya's developer community entitles them to offer their full-feature call recording solution to Avaya clients at great price. OrecX recently announced an all-in-one, plug-and-play call recording solution that combines Oreka TR application with a 1U, Linux-based rack- mounted server.

www.orecx.com

www.devconect.avaya.com

www.tmcnet.com/5054.1

Asterisk Creator in Orderly Partnership

Companies using Asterisk in the call center now have access to sophisticated statistical information thanks to a partnership between Digium, Inc. and Orderly Software. The two companies will collaborate on the provisioning of sophisticated call center services and management applications to the Asterisk community.

"We're thrilled to consolidate our relationship with Digium, as we use Asterisk in almost everything we do. This partnership will enable us to help even more of the Asterisk community by providing our best-of-breed call center solutions to a wider audience," said Matt King, managing director of Orderly Software.

"We've been using OrderlyStats for some time in our own call center and it has proved itself to our team under real-world conditions," added Jim Webster, director of technology partnerships, Digium.

www.digium.com

www.orderlyq.com

www.tmcnet.com/5055.1

Fonality Business Phone Systems for SMBs Host 750 Million Calls

Fonality announced high growth in the company's commercial and open source business units, with Fonality's open source project, trixbox CE, seeing 2.8 million downloads in 2008, which includes 336,000 SourceForge downloads and an additional 2.48 million downloads and upgrades from trixbox.org.

Commercially, Fonality's trixbox Pro and PBXtra systems reached 44,000 deployments in over 125 countries delivering over 750 million calls using the company's patent-pending hybrid-hosted architecture.

"At 750 million calls, Fonality continues to prove its scalability in telephony," said Chris Lyman, Fonality CEO. "Our customers continue to grow both in size and function: we serve call centers as routinely as we serve small businesses now."

www.fonality.com

www.tmcnet.com/3577.1

ZTE Unveils New Unified Open Environment Platform

ZTE has unveiled the Unified Open Environment (UOE) platform designed to support telecom operators in developing and offering new mobile services to keep up with competitors in the market. The new UOE platform enables telecom operators to take advantage of implementing in-house developed network services in a converged infrastructure, as well as partner with equipment vendors to develop unique value added services, such as mobile newspapers, mobile stock exchange, instant mobile news, video conferencing, voicemail and BlackBerry applications.

Wang Xiang, vice president and general manager of ZTE's VAS products, said that the new UOE solution enables the most efficient and flexible network infrastructure for the telecom industry and takes mobile operators to a new level of true network service convergence.

www.zte.com.cn

www.tmcnet.com/3576.1

Dialogic Joins Digium Interoperability Partner Program

Digium, the innovative force behind Asterisk, the world's most widely used open source telephony platform, recently made a joint announcement with Dialogic Corporation, an international provider of world-class products and technologies for media and signal processing, that Dialogic has officially joined the Digium Partner program and will soon become an Interoperability Partner.

This announcement marks the first step in certifying the Dialogic 1000 and 2000 Media Gateway Series for use by the Asterisk community.

To become a member of the Digium Interoperability Partner program, a company must offer products that integrate with Asterisk. Partner products work with Asterisk through a standards-based interface (such as SIP) and are certified by Digium for interoperability with Asterisk Business Edition.

www.dialogic.com

www.digium.com

Unified Communications and Presence Reach Out

By Richard "Zippy" Grigonis

Unified Communications (UC) and Presence continues to transform both large and small businesses by speeding up business processes and bringing together disparate forms of messaging and collaboration, even if an organization's employees happen to be mobile. UC can even call upon social networks to bolster its presence capabilities. In a sense, your whole company is now becoming an extended contact center, propelled by UC technology.

At Alcatel-Lucent, Peter Anderholm, Product Manager of Conferencing and Collaboration Products, says "We're promoting how UC is becoming dominant in our everyday life as well as changing everyday life and making it better. For example, one of our customers in North America is truly using presence, conferencing and collaboration to change the way students are taught. I've been with Alcatel since 2004 when it acquired eDial, a company that brought the presence server into the Alcatel enterprise product family. Back then presence had a big push. There was much talk of rich presence. But then things died down a bit. Now, however, I see a new resurgence in interest — people are starting to understand what presence can do and how it can benefit their business or specific workflow or vertical application."

"We've done quite a bit regarding presence and UC," says Anderholm. "We have our own native 'UC' application that shows presence from our telephone systems and IM systems. We can check your presence to see if you're on a conference call or a web collaboration session, and so forth. We can with our standard APIs do various forms of presence integration involving our UC client and the APIs of Facebook, Twitter or Yammer. We've also done near-field RFID presence, so you can now have a employee or student badge to 'feed' our UC client to show the geo-location or campus location of your contacts in the UC client or even a standard business app, which is great for verticals. We call this service Touchatag, formerly called tikitag. Touchatag makes it possible to create apps enabling the launch of online applications with a simple touch of an RFID enabled device, such as a mobile phone. So, we continue to explore ways of exploiting both our internal products and external 'Web 2.0' technologies. And speaking of Twitter and Yammer, using our SIP server we can feed presence or accept presence. It's also communications-enabling, so it's not just presence but it also involves click-to-call, click-to-see, click-to-conference. These, by the way, employ REST [Representational State Transfer] based APIs, which have been part of this platform since it was formulated years ago, long before REST become fashionable. SOAP [Simple Object Access Protocol] based Web Services are going out of fashion because they come with a lot of bloat and complexity."

"For example, if I'm on the phone in our UC application," says Anderholm, "that 'on the phone' status will show up in Twitter, from my account. And anybody who follows me on Twitter and who enables SMS notification for my social status or presence, will receive an SMS that reads, 'Peter is on the phone' or 'Peter is online'. We can do the same with Facebook and Twitter too. We also have a custom note field in our UC app so instead of typing into Twitter that I'm at the Boston airport, the UC app can automatically feed that information directly into Twitter. I'm told that Twitter doesn't yet allow presence info to be bidirectional, so we can feed Twitter presence info, but you cannot yet use Twitter to feed our application with presence info. However, I hear that Twitter will start supporting that sometime in the first half of 2009."

UC IT Through

CallTower, founded in 2002, has mastered the art of providing UC solutions as a hosted service, with high reliability, a single point of support, productivity-enhancing items and 24/7 service, all for a fixed monthly fee. CallTower's services are based on the UC hit parade of Cisco Unified Communications Man-

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Alcatel·Lucent

ager (CallManager) as the softswitch, Cisco IP Contact Center and Microsoft Exchange Server and Microsoft Office Communications Server (OCS) through the proprietary CallTower vXML VoiceCube voice messaging platform.

Recently, CallTower launched what's claimed to be the industry's first true hosted solution combining Microsoft OCS 2007 and Cisco CallManager along with a single interface and bill for telephony services, web and audio conferencing, unified messaging, voice-to-text, text-to-voice, Internet, presence, screen pops and more. CallTower's on-demand CallManager solution with a fully integrated OCS platform delivers an ROI without capex, expensive infrastructure and network upgrades.

Bob Barnes, Executive Vice President of Marketing and Business Development for CallTower, says, "We leverage the Microsoft OCS platform to deliver and leverage presence for web conferencing, quick-to-dial, screen pops, videoconferencing, and even conference room-to-conference room teleconferencing. We have our own audio conferencing solution and we integrate the MS Exchange with related things such as the BlackBerry, and deliver it to an average business customer base — which these days averages about 80 employees, I believe, in three locations. So it's slightly larger than the typical VoIP play or even the hosted Exchange play that's out there. The reason we're in the space and succeeding is because we're really the only provider offering the full breadth of UC solutions with the kind of name brand recognition that Cisco and Microsoft bring to the marketspace."

The Do-Anything Machine for UC

Getting the disparate forms of communications comprising UC to work and pass back-and-forth from the organization these days generally requires a single, versatile, gateway/switching device. Fortunately, NET Quintum, formerly Quintum Technologies, has developed their famous intelligent Tenor VoIP access switching and gateway solutions that are deployed in enterprise and service provider networks worldwide. The Quintum Tenor solution offers survivability to maintain live telephony communications in branch office locations, even if the IP PBX network fails. Tenors are designed to fit into virtually any network offering and compatibility across PBX and IP PBX environments and they have low TCO because Tenors require no PBX modifications, no additional equipment, and no provisioning expenses.

Moreover, the Unified Communications Proxy (UCP) enables the Tenor to provide "Any-to-any" connectivity between the UC cloud, the PSTN, TDM equipment and SIP VoIP equipment. Thus, the Tenor can switch SIP-to-SIP calls, TDM-to-TDM calls and SIP-to-TDM calls, facilitating integration into any existing voice network. This flexibility allows service providers to deploy VoIP to customer premises, regardless of whether the existing network supports SIP, TDM switching, or both.

A key feature the UCP brings to Microsoft Office Communications Server 2007 is that it can support multiple gateways off of one Microsoft mediation server, thus allowing enterprises to support branch offices with legacy PBXs, IP-PBXs, analog and modem-based endpoints, as well as UC clients, without needing to deploy a Mediation Server at every branch location. This constitutes a tremendous savings for enterprises. The UCP even supports fax capabilities in a Microsoft OCS environment, offering a "fax around" for Microsoft Office Communications Manager 2007 by interpreting and routing calls directed between the fax machines and the PSTN.

The UC Enabler

Covergence provides software solutions enabling organizations to transition from legacy voice to voice as a Web Service on their IP network. The Covergence Collaboration Gateway (CCG) delivers controlled, secure connectivity between Microsoft OCS 2007 or Microsoft LCS 2005 and IBM Lotus Sametime 6.5 or greater, allowing users from different organizations or even different companies to work together as if served by the same UC platform, with shared presence information, IM and other features. Additionally, Covergence now offers the Covergence Session Manager (CSM), which consolidates voice and data onto a single IP network and virtualizes multi-vendor PBXs into a cohesive and centrally managed service — without having to replace the existing voice infrastructure. The CSM sits in the network core and moves real-time policy enforcement; routing, control, monitoring and interoperability out of the individual PBXs and into a common SOA-based session layer. CSM's SOA interfaces eliminate direct point-to-point communications between the clients and servers, making it easier for organizations to reduce costs further through vendor consolidation and PBX centralization.

Covergence's Rod Hodgman, Vice President of Marketing, says, "We're not a UC provider, but a UC enabler. We focus on companies in the Global 1000 — large, multinational companies possessing hundreds or thousands of PBXs from multiple vendors and many of them are running proprietary protocols. Many of them are TDM, in fact. So our focus is to work with those customers to transform that environment and make voice, dialtone and presence become services and Web 2.0 interfaces on their network. Once they have that in place, they can do anything. It's a very powerful construct. They can quickly embed this legacy VoIP capability into their UC systems. If you look at both Microsoft and IBM and the way they go about integrating telephony, it's through the SIP protocol. That's a good thing to do, but it's insufficient. It doesn't help customers get H.323 systems or JTAPI interfaces on board, so our goal is to make things simple and easy for customers to take their existing legacy environment and plug that into the UC environment. It's a popular idea, because at the bottom level, it takes all of the individual components such as the PBXs, and combines them into an integrated resource pool so that it appears and can be managed as a single logical resource. Once you do that you begin enabling these customers to save money because they're able to increase their efficiency and utilization of the existing PBXs. They're also able to begin to re-engineer those PBXs and they can add, modify and delete

the platforms or capabilities within those platforms without disruption to the users above."

"On the Northbound interfaces that conceptualize lower level details, we provide a set of SIP interfaces allowing us to integrate any SIP device, handset or cellphone," says Hodgman. "We also provide Web 2.0 interfaces that allow us to put voice into a browser. So now we're talking about a zero-install client. If you're able to allow a customer to deploy basic telephony service in a browser rather than using a softphone or a hard phone, the Gartner Group and others have predicted that such a model will save anywhere from $50 to $200 per user annually on IT costs. It opens up the whole infrastructure, plugging it into a modern architecture, and makes it simple and easy to embed the existing voice telephony UC or create communications-enabled applications. We've even been able to insert voice capability into iGoogle widgets. For example, we have a click-to-talk widget that can be plugged into a browser and a Flash phone for a browser, so you can dial directly from your browser and communicate to anyone using the codecs embedded in Flash. So we can enable customers to use basic communications services at an extremely low price point. In an organization of 100,000 people, somewhere between 20 and 50 percent of them use the phone by just picking it up and dialing someone, conversing, then hanging up. Those people would experience a great solution by using our browser-based telephony solution."

UC See, UC Do

RADVISION furnishes products and technologies for unified visual communications over IP, 3G and emerging IMS/next-gen networks, enabling such things as high definition videoconferencing, converged video telephony services, and scalable desktop-based visual communications.

Bob Romano, Vice President of the Networking Business Unit focused on the enterprise market, says, "If you look at the integration of voice, data and video into a common application there's no question that all major vendors are promoting their flavor of UC. Whether you're coming from the application vendor side, or the network vendors, or the telephony vendors, they all recognize that they need a solution, because that's the way the world is going. From a video perspective, if you examine the media streams, it's really in that order of priority: integration into the voice environment, data and then video. Generally video in UC means 'desktop video' and although we see that there's a lot of interest and promotion of that, particularly by vendors such as Microsoft, the actual deployments of it are not yet ubiquitous, nor even widespread. There are pilots and trials, but the hard ROI for desktop video in UC is still hard to define. We find instead that customers are looking at it since Microsoft is promoting it. It's more like a 'selling apple' than an 'eating apple' right now. It has forced IBM to respond to it, and we have some plug-ins that work in the IBM environment that provide high-quality video that plugs directly into the Sametime messaging application, and we also work with Microsoft. From a video perspective, however, we're not seeing major deployment. Still, we do have a desktop application that's more focused at the videoconferencing world that ties together room-based videoconferencing, voice and video, but also data. It's a browser-based plug-in, with automatic firewall traversal. It's freely distributable client software. We've been quite successful with that."

There are pilots and trials, but the hard ROI for desktop video in UC is still hard to define. We find instead that customers are looking at it since Microsoft is promoting it. It's more like a 'selling apple' than an 'eating apple' right now.

"Customers interested in video in the desktop and in their UC applications are ones who are already using video in room systems and they understand the benefits of it," says Romano, "which I think caught Microsoft a bit by surprise with their OCS platform because when it first appeared it was, for all intents and purposes, proprietary. They were forced to come back to their vendors, Tandberg, Polycom and RADVISION, and ask them to build some interoperability bridges to standards-based devices. It should be very interesting to see who wins out in the presence world. Microsoft is making great inroads on that and gaining marketshare. IBM is not to be counted out, however, and they're investing about a billion dollars into their UC platform. And they have an almost fanatically loyal following. Cisco's probably credited with having many UC strategies in terms of which client they're going to end up standardizing on and how that's all going to sort out. After all, they have a telephony solution, WebEx, their CUPC [Cisco Unified Personal Communicator] unified communications client and then, at the high end, telepresence."

Amir Zmora, Vice President of Marketing for RADVISION's Technology Business Unit (TBU) says, "We hear three things from vendors who actually develop solutions for unified communications. First is video and high quality video. Second is something that's basically becoming mandatory, is presence and instant messaging. We see more advanced thinking in this respect in SIP such as MSRP [Message Session Relay Protocol] a protocol for transmitting a series of related instant messages in the context of a session. Third, and really surprising to me, is that people in their enterprises already

have legacy H.323 solutions. that they don't want to throw away, so they're looking for ways to connect SIP and H.323 and even to add to their legacy H.323 solutions the kind of advanced functionality you find today in SIP, such as presence. We are providing customers will all sorts of solutions to integrate these two protocols together and also add the more advanced functionalities to the 'old stuff'."

Keeping One UC App on the Premises

Zeacom devleops UC and contact center solutions for small-to-medium businesses (SMBs) with up to 250 call center agents or 2,500 employees. Through its offices in the U.S., Australia, New Zealand and the U.K., Zeacom serves some 2,500 customers across 25 countries. In 2008 their Zeacom Communications Center (ZCC) 5.1 software became compliant with key IP telephony solutions from Avaya. More recently, Zeacom teamed with the U.K. company 5i, the convergence specialist, to launch an ROI Calculator for the Zeacom Operator Console that 5i channel partners can use to demonstrate to business decision makers in IT procurement the cost efficiencies of their UC technology. The ROI Calculator compares the time it takes to perform typical communications tasks using traditional methods with the average savings when undertaking the same tasks with Zeacom's Operator Console.

Ernie Wallerstein, Zeacom's President of the Americas, says, "Unified communications is being pushed into the marketplace by two factors. One is the large enterprise providers such as Cisco, Avaya and now Microsoft, which is an interesting case because it's analogous to Cisco pushing IP telephony in 1999. It's the right concept and direction, but they're not quite there yet. It took Cisco three to five years to stabilize their IP offering. Similarly, Microsoft is bringing a lot of attention to UC but they're not quite able to deliver on it yet. The telephony aspects of UC isn't their strength, nor is it the strength of their traditional reseller and distribution channels. In any case, the first major factor pushing UC to the enterprise are these large companies. Then there are companies who are pushing UC to the small and mid-sized business [SMB] market. The marketplace understands that UC is a software applications-based solution. The company today that the average SMB approaches for UC is an interconnect – they're going to their traditional telephony provider. That's interesting, because the people they're approaching to ask about UC – the reseller community – aren't necessarily the people who have a real grasp of UC. That interconnect marketplace reseller community looks to companies such as Zeacom for expertise and for solutions."

"There's a lot of promotional noise abut UC on both the enterprise and SMB sides," says Wallerstein. "But when the Fortune 2000 and SMBs refer to UC, they're talking about the same technologies, but they're not talking about the same solution providers. In the enterprise, people will buy, say, eight applications from Avaya or five apps from Cisco. SMBs, however, want one provider that can handle all of the aspects of UC. There's a lot of demand at that level. But there's not enough people out there who can architect an UC solution for SMBs, unlike the enterprise realm, where there are many people who can architect a UC solution, but at that level they're delivering a solution that requires five or six different applications."

"Now, in our view, a percentage of UC, especially in the current economy, is going to be delivered via a hosted service-type solution," says Wallerstein. "But that percentage will be 15 percent or below. I always hear from analysts and companies that UC is going to migrate to the service provider world, but in the last five to ten years, other than Salesforce.com, I can't point to a lot of solutions where hosted has been a major play in the marketplace, though I think you're starting to see a little bit of it in the case of speech recognition, where you can now see some front-end services involving the automatic speech recognition of voicemail or whatever with humans backing it up if the translation to text isn't good enough. But when it comes to UC, the drivers for it – more efficiency out of your salesforce, better customer service, minimizing the amount of technical clutter – are core concerns. If I run a 500-employee company and I have 50 sales reps, I may be trying to figure out how to make those reps increase the revenue, or how I can continue my current revenue and drop down to 40 reps. To accomplish these things I'm looking at efficiency tools. I may be looking at Salesforce.com to make those people more efficient, but look at what's involved with the core communications to my customers: a call coming in from my most important customer and I'm away from my desk, but I have my cell phone so my UC solution should do a couple things. It should offer my most important customer options other than play a message that says I'm away from my desk, which isn't good enough for my best customer. It should identify the customer and then give him or her personal options, such as their own auto-attendant, that says, 'Hey there Richard, if you need to talk to me immediately, just press 1 to ring my cell phone. If it's something my assistant can help you with, press 2.' Or it could tell them I'm on vacation and they should press 3 to reach me at my house in the Hamptons. Now all of what I'm describing is too important to outsource, because its too 'core' to my business. So I actually see such advanced UC technology kept in-house instead of being delivered as a service."

"Because UC appears to be such a clutter of different applications – unified messaging, presence, mobility, conferencing, contact centers – people are intimidated, so they may in fact look at a service provider to deliver UC," says Wallerstein. "But companies such as Zeacom will tell them, 'Don't do that. You need to buy one app that can do everything you need for UC'." IT

Richard Grigonis is Executive Editor of TMC's IP Communications Group.

The following companies were mentioned in this article:

Alcatel-Lucent
www.alcatel-lucent.com

CallTower
www.calltower.com

Covergence
www.covergence.com

NET Quintum
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IP Infrastructure Enables Hampshire Hotels & Resorts to Deliver "Three-Screen" Guest Services

By Brendan McNamara, VP Brand Development and Communications, Hampshire Hotels & Resorts, LLC

For a business-class hotel, guest satisfaction is a critical revenue driver. Guests today live a mobile lifestyle and they expect to keep connected when on the road. In addition to providing a remote office and home away from home, hotels also face the interrelated challenges of generating new revenue and optimizing operations.

When Hampshire Hotels & Resorts decided to double the number of hotel properties in coming years, the hotel company implemented a plan to improve its voice and data infrastructure to take amenities to new heights and keep the hotel group ahead of its competitors. What the hotel group implemented is an IP infrastructure that keeps it ahead of competitors by offering guests content as they want it — via a VoIP phone, television screen or computer screen. This so-called "three-screen" ability is the ultimate in flexible infrastructure — bringing together the group's people, networks, processes and knowledge to deliver superior customer service.

"Guest satisfaction is vital. We want our guests to be impressed that they're staying with a hotel company that is using cutting edge technology," said Jay Stein, Chief Operating Officer, Hampshire Hotels & Resorts.

Hampshire Hotels & Resorts wanted to enhance its guest experience, raise its "repeat ratio" and achieve competitive differentiation. Additionally, the hotel company wanted to optimize operations while cutting costs and going green.

Hampshire Hotels & Resorts installed an integrated voice and data network from Alcatel-Lucent to update its infrastructure and deliver new customer services. The updated infrastructure's local area network (LAN) was designed with OmniSwitch 6800 switches in the core and stackable OmniStack 6200 Ethernet workgroup switches on the edge. The solution also includes a wired and wireless converged architecture and applications architecture. The growing list of hosted applications to enhance the user experience includes voice mail, managed security, VoIP telephony, power management system (PMS), content management, and IPTV (Internet Protocol Television) applications.

The infrastructure overhaul delivered an integrated information access system all over a common cabling infrastructure, allowing for more guest services with lower costs.

Voice communications are a critical business asset for hotels from the initial reservation through the entire guest stay. However, it is no secret that the guests' use of traditional landline phones in the hotel has declined over the years. For Hampshire Hotels & Resorts, each phone switch used to make the hotel group about $240,000 per year, now the hotel group does not make any money from these switches. However, the phone is a necessity for emergency reasons and is not something that the hotel group can do away with completely. With its updated technologies, the hotel group has revitalized the use of telephone communications and guests can experience solutions that enhance business and security operations.

updated technologies, the hotel group has revitalized the use of telephone communications and guests can experience solutions that enhance business and security operations.

Today's guests are living a mobile lifestyle, with access to technologies such as mobile phones and laptop computers. While these constantly evolving technologies present hotels with new challenges, hotels can leverage the demands of the mobile guest as a significant profit opportunity.

According to a recent report by Yankee Group, the consumer demand for broadband connectivity experiences will drive a $1 trillion market worldwide in the next five years. Yankee explains that businesses should make transformations now to stay ahead of competition and provide consumers with what they want and need. The Yankee Group study also believes that the emergence of the "Anywhere Consumer" will be one of the most significant trends in the next decade. These are exactly the type of people that Hampshire Hotels & Resorts expects will be their future guests.

The hotel group has deployed a variety of IP, TDM and XML-application phones to tie together guests and its back-office operations. Using the OmniPCX Enterprise platform, each hotel is able to centralize all telephony applications, and the phone system and also to create a seamless VoIP network across all Hampshire Hotels & Resorts properties from the U.S. to India and Thailand.

With wireless and IP telephony as well as advanced collaboration tools, guests and staff can stay connected to the information they need. For example, the hotel can put the standard hotel directory or room service menu on the phone or television to allow guests to make requests quickly and easily.

Hampshire Hotels & Resorts implemented IP Touch phones that include display screens that are preprogrammed with graphic menus and offer a range of customized services including language preference. When guests dial the Concierge or other staff member, they see a photo of that person on the phone's LCD display, enabling them to recognize the employee if they see them later during their visit.

The IP Touch phones are also linked to video cameras, enabling guests to monitor children playing in an adjoining room or see who is at the door. An additional emergency feature provides audio and text notification to be sent immediately via the hotel's wireless network to guest and employee devices. These advanced features allow guests a higher level of safety and comfort in their home away from home.

For business guests in need of creating a mobile office, Hampshire implemented a wide range of solutions for business mobility. Business guests have access to Skype-ready, a telecommunications solution that allows for cost-effective international calls. Additionally guests can use the Bluetooth-enabled VoIP handsets, to support their need to be mobile.

In addition to the IP-enabled network, Hampshire Hotels & Resorts implemented advanced contact center that enables its staff to handle the needs of multiple properties with personalized guest attention and detailed knowledge about each property's availability and facilities. When guests call a property, a centralized team member can view availability and book a room for that location with all of the correct information about the unique features and amenities of that hotel. The guest feels like they've called someone local to that property. As the advanced contact center technologies allow for a streamlined communications process, the hotel group can also experience significant cost savings with a smaller, more efficient staff.

Hampshire Hotels & Resorts implemented IP Touch phones that include display screens that are preprogrammed with graphic menus and offer a range of customized services including language preference

These solutions benefit the employees of Hampshire Hotels & Resorts as they have access to real-time contact with staff and to information. The solutions can improve response times from the front office to food and beverage services, even over its largest properties.

"Alcatel-Lucent is providing the expertise and technology to really transform the operations and communications systems at Hampshire Hotels & Resorts," Stein said.

With its new infrastructure, Hampshire Hotels & Resorts will enhance the ways its guests access the world, allowing for a seamless transition from the home or office. This allows the hotel group to deliver an outstanding guest experience by connecting people and highly personalized information with a sense of security and simplicity.

"We're building a system that will heighten guest satisfaction. If guests have a fantastic experience, our repeat ratio goes up, said Brendan McNamara, VP Brand Development and Communications, Hampshire Hotels & Resorts. "So we're working to offer the 'Wow!' factors that really make a difference for guests while also being easy to use." IT

A Note on SIP

By Richard "Zippy" Grigonis

SIP (the Session Initiation Protocol) is a multimedia call control protocol, perhaps the most successful and popular protocols after IP itself. SIP, a text protocol, competes with its binary code predecessor, H.323, which is actually a suite of protocols that define the framework of such elements as terminals, gateways, gatekeepers, MCUs (Multipoint Control Units) and feature servers. H.323 is thus an "umbrella" technology that even specifies all subsidiary media codecs and how they are transported as packets encapsulated in RTP (Real-time Protocol) or RTCP (Real-Time Control Protocol). H.323 calls upon Q.931 for call setup, H.225 for call signaling, and H.245 for exchanging terminal capabilities and the creation of media channels. SIP, however, is a much simpler protocol.

SIP deals with other protocols on a sort of "need-to-know" basis: For example, like H.323, SIP can work with RTP, but does not mandate its use. As its name implies SIP deals in conferencing "sessions" between two or more participants, with control over creating, modifying and terminating or "tearing down" those communications sessions. In that respect SIP also takes the place of what Q.931 and H.225 do in the H.323 suite. Unlike H.323, SIP is independent from its underlying protocols (UDP or TCP) and is even independent of the underlying network in terms of high availability.

Various companies have devised SIP stacks for SIP-enable devices. GAO Research, for example, offers integrated solutions suitable for any IP Communications application. They offer both H.323 and SIP Voice/Video-over-IP stacks, and their all-in-one packaged solutions include associated audio and video codecs, and telephony modules.

In particular, GAO's SIP protocol stack implementation complies with IETF RFC2543 (March 1999), and is modified as per the latest updates of the standard to correctly manage the fundamental connection between the call-originating and call-terminating parties. Moreover, GAO's interesting, multi-layered API makes it easy to build simple applications as well as complex implementations.

Interestingly, GAO offers three Voice/Vide-over-IP Integrated Solutions: H.323-only, SIP-only, and the H.323 + SIP solution. The modular platform based on the SIP protocol stack provides an integrated solution which uses SIP call control and management, a set of media codecs, and additional telephony services including T.38 fax relay capabilities. The SIP solution does not specify the use of RTP/RTCP as required for H.323 protocol. However, in the case of using both the H.323 and SIP stack, an integrated solution can use either H.323 or SIP for call control and management. When requiring H.323-only or SIP-only applications, the H.323 or SIP call control modules that aren't used can be removed to reduce the memory footprint. SIP advanced services can be used in parallel with both SIP or H.323 audio/video conferencing.

As for actual applications that rely on SIP, we encountered one just as this issue was going to press: Avaya just announced (March 30, 2009) the launch of their Avaya Aura, a new architecture that integrates communications across multi-vendor, multi-location and multi-modal businesses. Avaya Aura radically simplifies complex communications networks, reduces infrastructure costs and quickly delivers voice, video, messaging, presence, web applications and more, to employees anywhere. Avaya Aura will be available globally in May 2009.

This new architecture is propelled by the SIP-based Aura Session Manager, which centralizes communications control and application integration. Avaya's Aura Session Manager coordinates various communications applications and systems by decoupling the apps from the network. Services can therefore now be deployed to users depending on what they need rather than by where they work or the capabilities of the system to which they are connected. Session Manager thus reduces complexity and paves the way for the implementation of broader unified communications strategies.

In terms of multi-vendor use, SIP helps integrates multichannel communications across multiple locations and other suppliers' solutions. The Avaya Intelligent Customer Routing is an application that transfers customers and their essential information to the right agent or expert using the quickest and most efficient route possible.

In case your technical people somehow are flummoxed by all of this, both the Avaya Aura and the Avaya Intelligent Customer Routing tap into Avaya's Avaya new Strategic Communications Consulting practice, which is adept at helping enterprises develop their communications using the Avaya's most advanced expertise, tools and capabili-

ties. In short, Avaya's total approach can solve business issues by maximizing technologies, such as unified SIP-based architectures.

To be specific, Avaya Aura offers the ability to create new applications and quickly extend them to users anywhere; map applications to individual employee profiles, making the appropriate features globally available regardless of the location, system or device to which they are connected; reduce costs through centrally managed, enterprise-wide dial plans and on-net calling, global least-cost routing and PSTN access from the most cost-effective location; eliminate local application servers and optimize software licensing across the full breadth of the enterprise rather than for a single location; and massively scale to 250,000 business users and 25,000 locations.

Avaya's Communication Manager, their flagship voice and video telephony software, becomes a business feature server in this scenario, allowing Avaya's PBX platform to be exposed as SIP features and services coordinated from Session Manager. (Additionally, Presence Services, formerly known as Intelligent Presence Services, takes a more central role within the communications platform, expanding the ability to federate presence from multiple sources and vendors for a more accurate view of an employee or work group availability.)

For companies with branch locations, Avaya Aura Branch Edition provides the capabilities of Avaya Aura as a SIP-based replacement for key systems in small locations. This enables companies to go from standalone stores and branches (or small contact centers) to a full, SIP-connected enterprise. In turn, Avaya Aura delivers boosts productivity in terms of providing the ability to create new applications and quickly extend them to workers anywhere. It can map applications to individual employee profiles, making the appropriate features globally available regardless of the location, system or device to which employees are connected. There are also some cost savings to boot, since the system is based on centrally managed, enterprise-wide dial plans and on-net calling, global least cost routing, and PSTN access from the most cost-effective location. It also eliminates local application servers and optimizes software licensing across the enterprise, rather than for a single location.

Any way you look at it, SIP is here to stay. It's becoming the fundamental call control/signaling protocol that facilitates interoperability between SIP phones, IP PBXs, etc. and is even serves as the underlying protocol to the upcoming IP Multimedia Subsystem, a worldwide common service architecture for both wireline and wireless communications networks. IT

The following companies were mentioned in this article:

Avaya Lucent
www.avaya.com

GAO Research
www.gaoresearch.com

Location-Based Services – Here, There and Everywhere

By Richard "Zippy" Grigonis

Sitting at the intersection of personalized services and mobile communications lies Location-Based Services (LBS), a technology whose time has come. Handset processing power and related technologies have matured. Over 1,000 apps are available for the iPhone alone. We'll all soon wonder how we ever got along without LBS.

ALOQA, founded in Germany in 2007, markets the ALOQA platform for Location-Based Services, which enables the simple interchange of location information between LBS participants such as the target person, the user, the LBS provider and the content provider. It supports proactivity and push services, recognizing spatial events automatically and making them available to other service providers. Events of this kind can pertain to individual persons, such as their leaving or entering zones, or several users, such as recognizing the distance between two people. It supports an entire range of position-finding processes such as Cell ID, GPS, WLAN and GSM fingerprinting. It also makes a seamless transition between these technologies possible via hybrid positioning strategies.

ALOQA's CEO, Dr. Georg Treu, says, "The LBS market is moving along. There are both opportunities and challenges. LBS has been around for quite some time. They did not initially succeed because of several problems. One was that the technology was not ready. For example, positioning has been networked-based thus far. The operator located the mobile phone and then some service was executed. The related cost model was also not adequate, Applications could not run on the phone, or you didn't have enough phones to make the service a sound financial proposition. These problems are being solved. We have intelligent devices such as smartphones now that have GPS or other techniques so they can locate themselves. We see such things appearing as the iPhone, the Google Android, the Blackberry, and in Europe there are Symbian-based devices. These have all that you need to run LBS."

"Many LBS apps are starting to appear, but most of these apps move the known usage paradigm from the PC to the mobile phone," says Treu. "You can sit and use a PC all day long, unlike mobile phones, because a mobile is usually in your pocket, so you don't run around and use applications or search for friends all the time; instead you're accustomed to your phone being a device that notifies you. The BlackBerry, for example, was a big success because it pushed email or text messaging to you and alerted you. That's where we see the trend and

challenge of the future, to enable push-based, location-based services. So your phone rings or vibrates and something appears that's really relevant for you. That's why our ALOQA TraX API can do push notification for any third-party application. Normally a mobile application has to open a connection to a central server and poll for updates with no way to push a message to a mobile client except for dedicated devices like a BlackBerry. The only way to send a message from one mobile client to another was to send the message to a central server and make all clients periodically request updates from the messaging server, resulting in extra data traffic, delayed delivery to the client and additional server load. Our ALOQA TraX can do push notification that sends messages directly to other clients. No additional server is needed, although it can accommodate one if you already have a server-based system. TraX can push data to mobiles even if your app is not location-based."

Keeping Tabs on Road Warriors

Cbeyond is a voice and broadband Internet provider that exclusively serves small businesses with everything from customized packages encompassing local, long distance and the Internet, to complete customer support. Cbeyond's Mobile Workforce Manager can reduce the costs of field-based operations by, among other things, tracking and recording the locations, hours worked and jobs performed by mobile employees.

Steve Zimba, Cbeyond's Vice President of Marketing, says, "Our mobile business in general has been growing rapidly, with more

and more small business customers signing on. Many of their employees are adopting mobile phones to a major degree. We're aggressively moving to offer a line of hosted business applications. The Mobile Workforce Manager is the first of these. We chose it because many of our more mobile-based customers told us they have many mobile field service people, salespeople, landscapers, plumbers, electricians, and so forth. The business owners said it was great that they could give out mobile phones and contact mobile employees via voice, texting or email, but it would be great if they could get some productivity applications on the same mobile phones. To them, the mobile phone is becoming as much a handheld computer as a communications device. So we evaluated our options and came across a new strategic partner, Zora, whose platform enables many of the core functions you'd use to manage a mobile workforce. Our small business customers can buy our mobile service, email and SMS, which gives them a core communications platform, and now we can come back behind that and give them a number of productivity-enhancing applications for those same workers."

Bryan Melton, Product Manager for Cbeyond's Mobile Workforce, says, "Many of our small business customers have trouble locating their mobile workers, and there were cases of 'fudged' timesheets. Our Workforce Manager is great at tracking mobile employees through our web-based portal. It allows mapping – essentially, the business owner can sit at his desk and see 'dots on a map' in real time. We also provide geo-fencing, limiting employees to a specific geographic location by tracking their whereabouts. Mobile workers can also now clock-in and out via their mobile devices, essentially making them electronic timesheets. Owners can also provide job scheduling/dispatching to their mobile workforce, so they're saving on fuel costs and mileage by dispatching jobs to the nearest worker, such as sending the nearest plumber to an emergency call. With our application you can be as efficient as possible with your mobile resources. It also generates detailed reports, and can do 'bread crumb trails' which is a history of your mobile workforce – where they've been and what they've been doing all day. Our app has two components: the phone software that's an over-the-air download and which can operate outside of the coverage area, and the control panel, the Add-Office Web Portal. That's how we link the entire application together. And the service is just $20 a month, per mobile device, which would be any of our four GPS enabled smartphones – three BlackBerry devices and the Motorola Q9C."

Car 54 Where are You?

KORE Telematics is a multi-market MVNO (Mobile Virtual Network Operator) that has a major presence in AVL (Automatic Vehicle Location), a major segment of the M2M or "Machine-to-Machine" market (KORE says that as much as 45 percent of all M2M connections in North America are in the AVL segment). Their applications have widespread penetration in long-haul trucking and auto rental fleets. They realize that new LBS apps are more than just simple "where are we?" services – they're becoming more integrated applications that support logistics services.

Edward Bursk, KORE's CMO, says, "We have customers involved in services that are based on, or are augmented by, location information. KORE Telematics was founded with the idea that the next wave of wireless would all be about machine-to-machine; in other words, industrial networking applications, and machine communications which really goes beyond just B2B, such as B2C, and some of that is very much in play when you start to talk about location-based services. So, we're a network services provider and we have Tier-1 relationships with many carriers worldwide. In the U.S. we deal with AT&T for GSM and Verizon for CDMA services. We're connected right into their back-end systems. We have access to their radio network and we provide our services to companies that are doing these sorts of machine networking applications. We go to market with over 550 solutions developer partners who specifically focus on the market segments they support, to deliver M2M communications."

All Roads Lead to LBS

Obviously, the more kinds of inputs an LBS system can accept, the greater its accuracy and utility. That's what makes Skyhook Wireless' XPS so interesting, since it's said to be the world's first true hybrid positioning system, combining as it does the benefits of GPS, cell tower triangulation and even WiFi Positioning to fix a device's location in less than a second to within a range of 10 to 20 meters, whether indoors or outdoors, in the country or downtown. Skyhook deals with the plethora of WiFi nodes via extensive WiFi hotspot mapping. A handset loaded with Skyhook's thin client can detect which WiFi hotspot it's connected to by interacting with the Skyhook Wireless server, which then computes the X, Y coordinate or street address of the handset's current location. This methodology can be particularly useful when the user roaming about with the handset must suddenly dial 911. Moreover, Skyhook also offers Loki, a cross-platform browser plugin that uses Skyhook Wireless's WiFi Positioning System to enable third-party websites to integrate auto-location into their site by running a few lines of Javascript.

Ted Morgan, Founder and CEO of Skyhook Wireless, says, "The promise of LBS has been around for years. We can now confidently say that it has arrived. The kind of usage and volume on the iPhone alone is extraordinary. Over 1,000 apps are now in the Apple App store that utilize location, and our technology in particular. A year ago there were maybe two or three apps across the carriers, relating to getting driving directions and maybe a local search or 'kid tracker'. But now there's been an explosion in the number of ideas and apps, and they're becoming popular. Our system alone processes locations over 100 million times a day."

Recently Skyhook Wireless's XPS location system has found its way into apps running on Google's Android phone, thanks to the developer community. IT

Richard Grigonis is Executive Editor of TMC's IP Communications Group.

The following companies were mentioned in this article:

Aloqa
www.aloqa.com

Cbeyond
www.cbeyond.com

KORE Telematics
www.koretelematics.com

Skyhook Wireless
www.skyhookwireless.com

Effective Marketing of VoIP Services

By Richard "Zippy" Grigonis

Unlike the "good old days" when you almost solely dealt with the Bell System monopoly for phone service, today's VoIP services are subject to more dramatic competition and their successful marketing tend to rely on direct sales, or a channel of VARs, MSOs service providers and agents, or a combination of both. Thus, promoting IP Communications services that save money and provide greater functionality over old TDM services more resembles the marketing of any other product or service, which means that providers must take into account the time-honored factors of Product, Price, Distribution, and Promotion. No service is so popular that a provider can escape the usual business problems of dealing with customer acquisition and retention initiatives including brand management, demand generation, direct and online marketing, advertising, promotions, marketing communications and public relations.

In contrast to the advanced communications environment providers can offer their customers, hunting for ideal channel partners is more of an art than a science. Similarly, marketing communications that speaks to the concerns of many types of smaller businesses can be more of an exercise in psychology than number-crunching.

Some time ago, a Level 3 study revealed that the top five reasons for not switching to VoIP include the following:

- Already satisfied with current service;
- Never received a special offer to switch;
- Don't know the cost of the new service;
- Not familiar with who sells the service; and
- Concerns with the quality/reliability of VoIP.

Offers that can actually spur people to adopt VoIP were determined to involve such things as receiving something free (an interval of free service, extended discount or a free gift) with the purchase of a long-term VoIP service plan.

Of course, since the small business IP communications market tends to be highly fragmented, it helps if a provider can offer a wide range of services and plans to potential customers to begin with. One company that does offer a huge assortment of voice and video Internet-based telephony services and plans for business and residential customers is 8x8, Inc., who market their wares under the Packet8 brand name. Originally introduced in November 2002 for residential subscribers, the Packet8 VoIP phone service was quickly followed by 8x8's Packet8 videophone service, then the Packet8 Virtual Office hosted business phone system for small-to-medium sized businesses (SMBs), the Packet8 Complete Contact Center call center solution, the Packet8 MobileTalk mobile international calling service and, most recently, Packet8 Virtual Trunking and Hosted Key System business phone services.

8x8's most famous offering is undoubtedly the Packet8 Virtual Office solution, currently used by over 12,000 U.S. businesses. It eliminates the need for traditional business phone systems by delivering all telephony services over managed or unmanaged Internet connections. Subscribers experience an inexpensive, friendly alternative to traditional PBX systems or Centrex class services, a virtual PBX deliverable anywhere you can tap into high-speed Internet. Since the service arrives via an office's existing broadband Internet connection, there's no need for additional phone lines or digital subscriber lines for extensions, in contrast to traditional Centrex or PBX products. Users have access to automated attendants, conference bridges, extension-to-extension dialing and ring groups, in addition to various other business class features transplanted from the world of dedicated PBX equipment.

Other Packet8 business phone services include the fully integrated Packet8 Complete Contact Center for businesses with call center operations of less than 100 seats, Packet8 Virtual Trunking service for larger enterprises who wish to reap the cost benefits of VoIP phone service while retaining previously acquired on-premise equipment and Packet8 Hosted Key System service for companies whose size or structure dictate the sharing of multiple phone lines.

In 2007 8x8 debuted the Packet8 MobileTalk service which can seamlessly connects overseas calls from the mobile phone to the Packet8 digital VoIP network, enabling cell phone users to reduce their international phone bills while still able to experience the convenience of mobile calling. Users dial calls directly/natively from their mobile handset, contact list or

How can **mobile solutions** help us increase revenue?

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speed dial directory without any additional keystrokes that you encounter with calling card and other reduced rate international calling services. Once the destination number is dialed or selected, the Packet8 MobileTalk software application identifies the international prefix being called and redirects the call to a local Packet8 network access number.

Even Packet8 residential Internet phone services are quite expansive. You can chose a direct-dial phone number from any of the rate centers offered by the service, and then use an 8x8-supplied terminal adapter to connect your existing phone to a broadband Internet connection. All Packet8 residential accounts come with voicemail, caller ID, call waiting, call waiting caller ID, call forwarding, hold, line-alternate, 3-way conferencing, web and voice-prompt access to account controls, and online billing. Aside from their digital voice solutions, 8x8 offers videophones and video telephony software that connects to a customer's broadband Internet connection to deliver all of the voice mentioned above, as well as unlimited video calls to any other Packet8 videophone customer worldwide.

Putting a Good Face on It

Channel partners can often be encouraged to enter a market if they have the opportunity to quickly re-brand and the resell somebody else's service with minimal upfront effort and expense, bringing them a level of distinction for a high-margin, low-maintenance recurring revenue stream that's free of operational surprises or challenges. As it happens New Global Telecom, Inc. (NGT) offers a complete, simple-to-deploy, Private Label turnkey solution enabling the sale of VoIP services in 30 days or less.

NGT, by the way, is a major U.S. provider of hosted IP Communication solutions. NGT's channel-ready solutions enables major VARs, MSOs, service providers and agents to provide nationwide, managed IP communication services. NGT's Network Performance Platform is designed to deliver predictable end-user quality, and NGT's service include a full range of telephony features, nationwide phone service, unified communications, worldwide audio/web conferencing, desktop fax services, E911 service, training and other sales and marketing support.

Recently, NGT announced that their NGT Hosted Digital Voice service is now available for its Agent Partner Program. The hosted VoIP solution is sold per line and includes more features than typical small business phone systems including simultaneous ring, remote office, and call and feature control from within Microsoft Outlook, Internet Explorer or Firefox. The service is sold in conjunction with Polycom VoIP phones.

Trading Places

Perhaps the most unconventional approach to garnering customers involves offering to make them part of the channel – a sort of "telephonic Amway". This is the story being the Flat Planet Phone Company (FPPC) and its Flat Planet Phone System, which enables anyone to "open their own phone company in less than an hour" for only $199.00.

As Flat Planet says, "We do the Back Office - You Sell". You sign up for The Flat Planet Phone service for $199 a year and you're up and running in a short time. Rate plans are easily customizable, so you can design a program that will fit your customers needs.

There services include their most popular offering, Hosted PBX, which can serve small businesses (5 to 100 users) on a pay-as-you-use basis with no capex. FPPC gives you the coice of two Hosted PBX packages, The Complete Hosted PBX and the Ala Carte PBX. The Complete package encompasses all the features you'd find in a modern PBX , phone numbers and minutes in one package with a fixed flat monthly fee. The Ala Carte package includes all these features too, but doesn't include phone numbers and minutes. The flexible Ala Carte allows you to go through a sort of Chinese menu and select the features of your package. You not only choose which features to include in your service, but whether to charge for them.

FPPC says that, in this way you can sell services at a lower-than-the-market price and still make a 100 percent markup. You can your customers can use any SIP (Session Initiation Protocol) compatible IP phone. FPPC's system is web-based and you can provide DIDs (Direct Inward Dialing) from over 40 countries and sell worldwide.

Back in the 1990s many communications entrepreneurs offered calling cards, since businesses were intrigued with the idea of issuing such cards to their employees for making long distance calls when they were out of the office, particularly when they were placing calls from a hotel room or private pay phone at marked up rates, or calling back to the office collect.

The fact is, about 25 percent of all long distance calls are still made with some kind of calling card. It's not surprising then, that FPPC also enables its customers to set up Calling Cards and Calling Shops (pinless renewable calling cards or open multiple call shops). You can easily open accounts or have customers sign on automatically. A full billing and invoicing solution is built in to the system. You decide what and how to charge your customers.

The Flat Planet Phone System also can provide Mobile to VoIP connectivity, Disposable Numbers, Virtual IVR and many more sub-services. Flat Planet partners receive their own branded website and your own marketing tools so that you can offer the Flat Planet services under your own brand name.

Whatever Works

A great IP Communications marketing strategy for providers is thus a blend of technology, channel partners, salesmanship, positioning and perhaps some out-of-the box thinking. IT

Richard Grigonis is Executive Editor of TMC's IP Communications Group.

The following companies were mentioned in this article:

8x8
www.8x8.com

Flat Planet Phone Company
www.flatplanetphone.com

New Global Telecom
www.gnt.com

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Enterprise Mobility Lives Up to Its Name

By Richard "Zippy" Grigonis

The term "enterprise mobility" implies the ability for a communications system to connect to people and control assets from any location. Enterprise mobility is currently made possible by a mélange of wireless networks, middleware, mobile applications, dual mode handset devices, and security and management software. The future of enterprise mobility, however will involve the integration of Unified Communications (UC) with mobile and back-office applications in a seamless, harmonious and holistic communications platform that boosts productivity and blatantly spells out a clear return on investment. Some of this technology will spill over into the consumer world, too.

AT&T's Igor Glubochansky, Director, Industry Solutions, says, "We focus not only on enterprise mobility in general, but also applying enterprise mobility concepts and services to specific vertical industries. Certainly this is where we see things going in many ways, with companies realizing that they've made a big investment in enterprise systems, whether it's ERP or CRM, or other applications that they use to run their business processes. Now, with the rise of the mobile workforce, we need to increase velocity and decision-making in the face of economic pressures and the consumerization of IT, where users are bringing mobile devices into the enterprise and the workforce continues to be connected at any given point in time at the point of need. They must have the same access to enterprise data and communication tools as they do in the office. From this many interesting trends emerge. Certainly there's the need to have the same voice and collaboration technologies available on-the-go as you have in the enterprise. This is where you see projects to extend IP PBX features to mobile phones, such as the ability to conference and collaborate in other ways."

"At the same time, IT is saying, 'I have these ERP systems, and how do I give mobile workers access to them at the point of need, when they are actually working with customers at the frontline out of the office and/or on the road?'," says Glubochansky. "We may never have previously imagined doing so much work out of the office, but this is in fact where much work is being done these days. A few interesting developments in this area are as follows: I'll start with UC and collaboration. Certainly solutions to extend PBX capabilities to mobile devices have existed for a while, and this area is still maturing. We at AT&T have launched a solution about two years ago, that takes this idea to the next level for enterprise use. It's called Video Share. It's an IMS [IP Multimedia Subsystem]-based 3G service that enables wireless customers in the U.S. to use their phones to share live video and audio. One-way, live streaming video feeds can now be seen by both users during a two-way conversation. You start with a normal wireless phone call, then you press a button to add the live video. Once a Video Share call has been initiated, customers can switch the direction of the video stream during the same phone call. Fortunately, we now have devices that can handle voice, video and data simultaneously. While you're having a conference call, you're able to share a video stream, with the effect of 'See what I see while I'm talking to you,' whether you're at a construction site showing something to an expert in the back office, or you're a merchandiser in a retail environment showing to your manager how you set up a retail display. Video Share has many use cases: Field services, insurance, and so forth, where you need instantaneous, live communication with more than just voice. And note the 3G data transport technology we have these days, such as HSDPA and other things based on the GSM standards. So we have a pretty unique capability when it comes to dealing with high-quality voice, video and data at the same time. It's an interesting trend that was brought about by the technology itself and businesses are recognizing its value and we basically have a roadmap involving it."

Glubochansky adds, "The worst moment in a CIO's life is when a business executive such as a VP of sales or director of operations is calling on an IT department with a simple question, 'Can I have Application X on my mobile devices for my salespeople, technicians or whoever?' The answer usually is, 'Well, we can have it ready in about three years.' The development of mobile applications is difficult because you have many different factors complicating it. The development of applications for an ordinary PC or laptop in a normal

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Small business VoIP adoption is growing, largely because of the cost benefits, but the fact is that hosted VoIP services for small business, like Packet8's Virtual Office, provide much more than cost savings. The greater versatility of hosted VoIP system allows businesses to customize their telecommunications packages to meet their unique needs, but without requiring large up-front expenditures for equipment,installation, maintenance, or IT staff. For the latest news and information on VoIP services specifically designed for the small business market, visit the Small Business VoIP community on TMCnet, sponsored by Packet8. Packet8 Virtual Office is an affordable, robust and easy-to-manage phone solution with all the premium PBX features and functionality of a traditional telecom system.

On the Small Business VoIP Community, you'll find:

- Free consultations
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- Technology briefs

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environment is hard enough. But mobility adds additional challenges. You have environments with multiple devices and operating systems. Multiple platforms at the back-end, too. Carriers with varying types of connectivity – fast networks, slow networks, places with and without coverage. Some home grown systems, ERP applications, and CRM may have security questions – not challenges *per se,* because there are many different ways to address it. Ultimately, when you think about the mobile worker, you must make sure that the user experience is appropriate and contextually relevant for them, which is a big issue. There are different screen sizes out there on mobile devices, but you need to have exactly what you need to perform a transaction or do your job."

"With all this in mind, we created a solution called AT&T Mobile Enterprise Applications [AMEA]," says Glubochansky. "It offers hosted and managed mobile integration solutions and app consulting services for companies wanting to extend their business-critical information to mobile employees. It's basically the first mobile middleware and application development platform to easily and consistently extend back-end applications to mobile devices. It's powered by the Antenna Mobility Platform [AMP] developed by Antenna Software and includes AT&T's applications consulting, deployment and hosting services so that we can extend back-end apps such as Oracle, SAP, and home-grown systems, and we can even integrate location-based services into the same environment and extend those apps into multiple device platforms, be it iPhone, Windows Mobile, BlackBerry or any other future platform. With AMEA, we can provide things such as help desks, as well as infuse functionality in specific applications, such as merchandising applications for consumer goods, or facilities maintenance for retail or hospitality. There are many examples. The platform simplifies and enables enterprise IT departments to deploy and manage applications at a completely different level."

"On the small business side of 50 or 100 employees," says Glubochansky, "where they really don't have an ERP system, we strive to deliver end-to-end solutions to them involving hosted apps such as our teaming up with Xora Inc. to offer the Xora GPS TimeTrack workforce management app. Xora GPS TimeTrack uses Global Positioning System [GPS] technology for smartphones to give businesses timesheet data collection, job/work-order management, payroll integration and location tracking capabilities using AT&T-powered devices. It can enhance business processes for mobile workers, particularly blue and gray collar workers."

Dual-Mode FMC

Once upon a time, "dual mode handset" simply meant mobile handsets compatible with both GSM and CDMA cellular networks. Today, however, in the evolving world of FMC (Fixed-Mobile Convergence), "dual mode" generally means mobile phones containing both cellular and non-cellular radios such as WiFi or DECT (Digital Enhanced Cordless Telecommunications). Ideally, a call begun on, say, a cellular network can be seamless handed off to become a call on an organization's internal WiFi or DECT network, using such a "dual mode" phone.

Recently Avaya announced that they had partnered with DiVitas Networks to offer dual mode mobile UC. Avaya continues to offer their cellular-based FMC offerings: oneX-Mobile UC and oneX-Telephony, though they appear to be favoring outside technologies such as DiVitas', which supports WiFi/cellular handsets (various Nokia E- and N-Series smarphones and some Windows Mobile devices) to the point where you can enjoy single number reach and single voicemail boxes, along with an integration of Avaya's Modular Messaging with the DiVitas dual mode client and the deskphone voicemail system so that you can receive visual voicemail and downloadable voicemail messages to the handset. The solution works with any WLAN, at the enterprise level (Cisco, Aruba, Meru, etc.), SMB/Branch level (Linksys, Netgear, etc.) and public hotspots including home WiFi. By Q4 2009, there should also be DiVitas integration with the Avaya Intelligent Presence Server to enhance the presence capabilities DiVitas already has.

Phil Klotzkin, Senior Product Manager, Unified Communications, Avaya, says, "DiVitas and Avaya have partnered to offer an enhanced solution, compared to what DiVitas offers with other PBX makers and also compared to what Avaya certifies with other dual mode vendors. DiVitas and Avaya's cooperation leads to a platform having extra features not available to any other combination of players out there. If you look at Avaya's DevConnect partner program, you'll see other dual mode companies that are certified to work with the Avaya Communication Manager, which is fine, but our relationship with DiVitas also includes the integration of our Modular Messaging, which is our premier voicemail platform used by over 5 million users globally. From the mobile handset you can see how many messages you have and select which one to listen to, delete, or whatever."

The Avaya/DiVitas partnership suggests that many clever third-party startups will help larger vendors bring about the huge integration and transformation necessary to perfect enterprise mobility in future mobile unified communications environments. IT

Richard Grigonis is Executive Editor of TMC's IP Communications Group.

The following companies were mentioned in this article:

AT&T
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Avaya
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Securing Enterprise Communications

By Richard "Zippy" Grigonis

It can sometimes appear that networks are actually becoming more complicated, and there are more of them every day. In such an environment, literally any kind of organization finds itself worrying about maintaining control over signaling, media, routing policies, and above all, security in all its forms.

After all, adopting a full suite of today's IP communications applications demands that an organization make changes to its firewall/NAT (Network Address Translation) device, IP PBX, private IP addresses, numbering plan, and perhaps other components and their software. New questions arise as to how user and caller privacy can be maintained end-to-end, both in terms of the privacy of the caller/callee and the media of the communications session itself.

Session Border Controllers (SBCs) appeared early on in the history of commercial VoIP, since they enabled voice calls to penetrate firewalls. But SBCs, which are generally installed at network borders (between peering service provider networks, or between the service provider network and enterprise/residential networks) also can enforce security, Quality of Service (QoS) and can serve as an admission control mechanism over IP communications sessions. Indeed, some sort of border control functionality is always involved in security, such as firewall/NAT traversal (local and remote), security policy enforcement based on fine-grained UC policies, and threat protection functionality to prevent denial of service, spoofing, and stealth attacks.

One of the more famous makers of SBCs is Acme Packet, with its 635 customers in 92 countries, including 89 of the world's top 100 service providers. Their Net-Net family of SBCs, multiservice security gateways and session routing proxies supports multiple applications in service provider, large enterprise and contact center networks—from VoIP trunking to hosted enterprise and residential services to fixed-mobile convergence. They satisfy critical security, service assurance and regulatory requirements in wireline, cable and wireless networks; and support multiple protocols—SIP (Session Initiation Protocol), H.323, MGCP (Media Gateway Control Protocol), NCS (Network-based Call Signaling) and H.248 — and multiple border points — involving access, interconnect, and data centers.

Acme Packet's Vice President of Marketing and Product Management, Seamus Hourihan, says, "In our enterprise initiative, which can include contact centers and U.S. federal government projects, SIP trunking is driving many applications. That's what we call Border Point Number One in today's SBC world. There are three other network borders that either need protection or will need it in the future. The second is the Internet border where we support remote workers. These could be people who travel all the time, people who are nomadic at some level, people who work from home, and in some cases even corporate remote offices. This is clearly an untrusted network and there are special requirements. The third border point is the internal border to your private network, which involves your IP PBX or your unified communications servers, that provide call and session control. This third border is the border between that application/service infrastructure and the internal users. In particular, in many financial accounts, the IT/networking group is usually so security conscious that they don't trust anybody, even though what you're doing is internal to their private network. The fourth border is the 'hosted services border', which is the border to a service provider that may be offering services that you as an enterprise use, such as audioconferencing, or a WebEx or Raindance, or videoconferencing. It could be your external interface to your Salesforce.com server infrastructure, where you're voice enabling that with such things as 'click to call', or it could be a hosted contact center where your center's resources are external to your internal network."

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"As I said, most of the activity is driven by the SIP trunking border," says Hourihan, "and secondarily by the Internet, and then the private network. Security itself has many dimensions. Security is like insurance – you have to assess what the risks are and what exactly what you want to protect. Not every company is the same. If you're a retail banking company with a contact center, or a brokerage services company that has a virtual contact center that taps into local Fidelity offices, there may come a time when you lose your ability to handle incoming calls or make outbound calls. In such cases you're in real trouble, because those are revenue-generating activities. In contact, if a manufacturer such as Acme Packet were to lose communications capability for time interval, it would be annoying, but not devastating."

"So, when talking about security, the biggest impact from a threat perspective is losing the ability to receive or send calls, or create sessions as a result of attacks that can occur when you connect to the outside

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world via your SIP trunking border. Problems can also occur because of misconfigured equipment, either in your private network or your trunking partner. Then there are overloads. When an enterprise buys an IP PBX or a set of servers to host unified communications, they don't buy the largest available telecom service to connect to them – even if they did, no service has infinite capacity from a signaling perspective. People buy what they think they need. But in the world of IP it's possible to find oneself in overload conditions."

Acme Packet's Director of Product Marketing, Jonathan Zarkower, adds, "Let's assume for example, that we had an IP PBX here at Acme Packet, and it was running on a low-end server platform. Let's also assume that our headquarters building loses power. When the power returns, every SIP phone in the building would re-register simultaneously, generating an extreme load condition on the IP PBX. Unless that was protected appropriately with an SBC or sized with capacity to handle that, you would have a situation where that could basically experience a continuous outage for a long period of time. Transiting from that back to full operation can have security consequences."

...the Sipera IPCS family of security appliances offers real-time UC security that addresses issues associated with SIP trunk deployments...

Securing SIP Trunks

It's interesting that Acme Packet would list SIP trunking as the primary network border point of concern today, since its finally becoming a popular way to achieve cost-effective communications, thanks to the ability of SIP trunks to avoid the PSTN and its costly TDM (Time-Division Multiplexing) trunks and gateways. Organizations of all sizes can use SIP trunks to route calls over a network operator's IP backbone and a single IP connection for all communications.

Another company, Sipera Systems, has a sharp focus on SIP trunking security and how an enterprise can deploy a comprehensive, real-time unified communications security solution that offers wide-ranging threat protection, strict policy enforcement, robust access control, and privacy, all in a single security appliance. Indeed, the Sipera IPCS family of security appliances offers real-time UC security that addresses issues associated with SIP trunk deployments. The Sipera IPCS appliances are built with Sipera's VIPER engine technology; they can secure SIP trunks by serving as the demarcation point for the enterprise VoIP and UC network and enforcing fine-grained security policies. The IPCS appliances also protect against SIP and RTP-based threats by blocking them at the enterprise perimeter and maintaining the privacy of the internal network, caller/user IDs, and communications. However, the Sipera IPCS can still do firewall/NAT traversal to simplify SIP trunk deployment. In fact, a single Sipera IPCS security appliance can be deployed at the customer premise between the internal and external firewalls, providing network security, enforcing security policies, and handling other SIP trunk deployment issues for the enterprise network.

The Sipera IPCS product acts as a trusted host in the DMZ (Demilitarized Zone), an area outside the corporate firewall where one or more computers can be found acting as proxy servers in that they can intercept traffic and broker requests for the internal LAN, adding an extra layer of protection for computers behind the firewall. IP signaling traffic to the enterprise is received by the external firewall and can be sent to a Sipera IPCS, which processes the signaling information. If the SIP signaling traffic is encrypted, the Sipera IPCS security device decrypts all TLS-encrypted traffic and looks for anomalous behavior before forwarding the packets through the internal firewall to the appropriate IP PBX to establish the requested call session.

Once a valid call has been set-up, RTP packets are allowed to flow through the external firewall to the Sipera IPCS product, which decrypts the SRTP traffic (if required) and looks for anomalous behavior in the media before passing on the RTP stream to the intended recipient.

How Secure is "Secure"?

We now live in a world of freely available open source telephony code, not to mention mobile employees who have brought about the projection of IP communications beyond the main office and to softclients, WiFi/dual-mode phones, remote IP phones, and web phones. Enterprise networks thus become more complicated and are more susceptible to security breaches and a plethora of threats including Denial of Service (DoS)/Distributed Denial of Service (DDoS), Stealth DoS, spoofing and VoIP spam. Even so, by bringing the latest security technologies (i.e., intrusion prevention and detection) to bear on the problem and by enforcing the best possible practices, VoIP, video, IM and various other IP communications applications can continue to send time-critical, business-sensitive information across today's networks with only moderate fears regarding potential security problems. IT

Richard Grigonis is Executive Editor of TMC's IP Communications Group.

The following companies were mentioned in this article:

Acme Packet
www.acmepacket.com

Sipera Systems
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Integrated Marketplace

Future-Proofing Your Network Environment

Successfully future-proofing your network environment includes achieving cost and functional efficiencies, particularly in today's economy. A balanced network needs to provide compatibility, expandability and flexibility to support a vast number of new and emerging Ethernet devices with various power requirements. The most effective and practical solution is "power-on-demand" midspan technology.

Originally, PoE switches were being deployed to power low-wattage endpoints such as VoIP phones, wireless access points and entry-level IP security cameras. Today, many of these devices have evolved into more advanced solutions with specific power requirements. To handle these higher-power devices, the old approach was to endure a "forklift upgrade" and buy new PoE switches at a considerable cost to meet these higher power requirements. But it's actually more efficient and less costly to separate data and power devices, keeping a best-in-class business switch for IP needs and supplementing it with best-in-class midspan technology to power the endpoints. This achieves full power on every port, gains support for both the legacy PoE standard (IEEE802.3af) and the higher-power (IEEE802.3at) standard, while providing greater flexibility for 75% less than the cost of replacing a business-class switch.

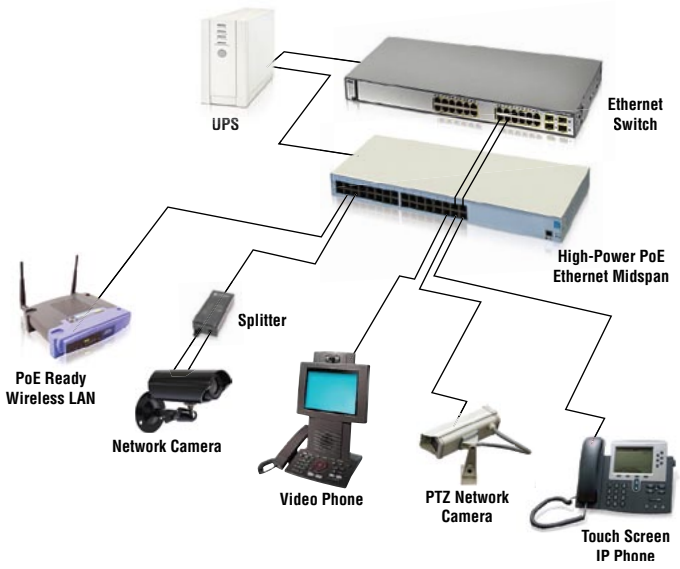
Today, most PoE-enabled switches rely on power management to share available power across the switch ports. Switch designers made the assumption that no one needed the full 15.4 watts per port specified in the IEEE 802.3af standard. The standard also specifies the maximum power consumed by a powered device at 12.95 watts to compensate for line loss.

Not Enough Power for Ports

If a bank's 24-port L2+, 195-watt, PoE-enabled switch uses 40 watts to power the switch; there are 155 watts of power left to use across the 24 open ports. If the bank deploys 10 IP cameras using 7 watts each, the switch provides 70 watts to power the cameras with 85 watts remaining to share across the open 14 PoE ports. When the bank expands by deploying 8 more cameras with pan and tilt capability, the new cameras require 13 watts each for a total of 104 watts (only 85 watts available). Even though you have enough available ports, the switch cannot power all 18 cameras. Based on the old "forklift upgrade" premise, this would require the purchase of another L2+ 24-port PoE switch. But a $500 midspan can provide more functionality with greater flexibility for even further expansion. Why spend more to get less?

The Preferred Choice: Power-on-Demand Midspans

The practicality of letting a switch do network switching while utilizing a midspan to provide power-on-demand is obvious when considering devices beyond basic cameras. In the case of powering full-function outdoor security cameras, the number of ports is no longer the issue. If each camera requires 12W of power, it's almost certain that a PoE-enabled, 195W switch will run out of available power before it runs out of ports.



Power management works when distributing different loads of power to specific ports on a PoE switch, but is pointless if there is not enough power for all the ports. Rather than utilizing power management in a switch, the answer is a 400W midspan that can cost-effectively deliver 15.4 watts of power in every port and provides for instant network expansion. If a 400W midspan sells for under $500, why pay $2,500 to $5,000 for a switch, only to get 24 ports and 195 watts with no additional switching benefits?

Not All Midspans Are Created Equal

When the time comes to future-proof your network, all midspans are not the same.

- **Select a best-in-class midspan that was designed and manufactured by a proven power-supply company that understands power.**
- **For better quality and cost control, select a midspan manufacturer that manufactures its own product rather than outsourcing across the globe.**
- **For the best pricing structure, select a manufacturer that designs, manufactures and tests its products in-house rather than relying on a third party manufacturer.**
- **Select midspans designed around an open silicon platform, allowing them to operate with multiple-vendor PoE chips.**

A midspan that offers full power per port is the best choice for future-proofing a network, because no matter what the end-device requirements, the power is available. As more devices are supported by enhanced standards, midspans provide options, flexibility and cost savings. **It's time to talk to the leader in advancing PoE technology—Phihong, the name behind Midspans.com**.

ADVANCING PoE TECHNOLOGY

Polycom: Enabling Collaboration

By Greg Galitzine

Over the past several weeks I have spent a fair amount of time on the road, attending trade shows and visiting customers from sea to shining sea. I've been in Orlando, FL and San Jose, CA, Chicago and Las Vegas, Dallas and New York. One of the few constants on this recent travel spree has been the opportunity to meet with the most interesting companies in our industry, and in this one particular case, meeting with one company multiple times, across multiple industries.

I'm talking about Polycom, the well-known producer and provider of solutions that enable people to communicate and collaborate using their telepresence, video, and voice solutions.

For one reason or another I've met with Polycom several times over these most recent trips, whether in the context of seeing their latest devices, or in the context of looking at the company's solutions through the prism of a vertical market like healthcare. The thread that ties all this together is the company's focus on enabling people to work together across vast distances and its push further into video collaboration.

For starters, Polycom introduced a slick new device, a business media phone dubbed the Polycom VVX 1500 (Figure 1). This phone brings together the full range of Polycom's expertise, from personal video conferencing, to fully-featured voice over IP (VoIP) with Polycom's HD Voice technology. The VVX 1500 features an open API or application programming interface, which is designed to allow Polycom's solutions partners to create innovative business applications, which can be delivered using the phone's microbrowser.

Figure 1

Figure 2

The VVX 1500 features a full-color touch screen interface designed to enrich the user experience and simplify tasks associated with the device.

Speaking about the VVX 1500, Keith Nissen, principal analyst at In-Stat described it as, "…the first business media phone that enables customers to work more efficiently and effectively than ever before by tying together voice and visual communication with critical business processes."

As with any Polycom initiative, there is always a "green" story to tell. The VVX 1500 enables high-definition, face-to-face collaboration without requiring travel, which is just one green benefit. The VVX 1500 was designed for lower power consumption, using power over Ethernet (PoE), and the company says the device requires less than half the power of similar competing products. The phone also features smart-motion technology, which enables the screen to go into power-save mode when no one is in the office.

I mentioned healthcare earlier and it should be noted that Polycom is no stranger to this market, be it through their video collaboration solutions which are enabling telemedicine applications or their Polycom Spectralink wireless (WiFi) handsets that are being used to enable hospital workers from doctors and nurses to administrators and staff to be more productive by being more connected.

Polycom also announced a new telepresence solution designed specifically for the healthcare market. The Polycom Practitioner Cart HDX series (Figure 2) enables medical professionals to provide patients access to care regardless where they are located. Featuring the full range of HD resolutions, including 1080p and 720p at 30 frames per second (fps) and broadcast quality 720p at 60 fps the new offering from Polycom is resonating with medical professionals.

Australia's Loddon Mallee Health Alliance (LMHA) has deployed the solution and its CIO, Bruce Winzar is thrilled with the results so far.

"Being able to bring a Melbourne-based specialist to the bedsides of critically ill patients in our regional hospitals over video helps LMHA to efficiently and effectively achieve the best healthcare outcomes for those patients – maximizing our resources as a provider, and delivering precious relief to the patients and their families in what can be very stressful circumstances," said Winzar in a recent statement. "Using Polycom's telehealth solution, delivered over a high-speed broadband network, LMHA is able to extend the same healthcare opportunities to rural patients that their counterparts in the city have access to."

By using the Polycom Practitioner Cart HDX doctors can quickly and effectively make decisions on the right treatment plan, without forcing critically ill patients to travel great distances to be assessed by a specialist in person. The ability to bring together leading specialists from all over the world to consult on a case is another benefit.

The bottom line is that whether it is for traditional business productivity or for potentially life-saving applications such as telemedicine, Polycom's video collaboration solutions are being used in diverse applications to achieve similar results. By bringing people together to solve critical challenges, while saving the time and money associated with travel, Polycom continues to help organizations succeed. IT

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