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INTERNET TELEPHONY®

VOLUME 12/NUMBER 9 SEPTEMBER 2009

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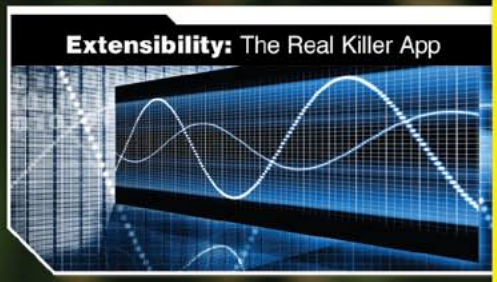

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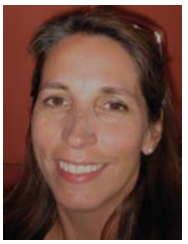

A Great Comeback Story

You could say I'm a microcosm of the communications sector. I've experienced a layoff and struggled amidst the troubled economy, but, because I had a plan, money in the bank and a good support system I survived. Now – like many in the communications space – I'm making a comeback and looking forward to better times ahead.

After five months of looking for the right opportunity, I have joined TMC as executive editor for the IP Communications Group. The responsibilities of my new post include managing the day-to-day editorial operations of Internet Telephony Magazine, Next Generation Networks Magazine and Unified Communications Magazine.

Many of you know me from my work as a telecommunications trade industry journalist. I look forward to continue working with you in my new capacity. And I'm anxious to contribute the experience and contacts I've gained during my 18-year telecom reporting career to the already considerable assets of TMC.

As you probably already know, TMC is a successful, 37-year-young company that continues to invest in its staff so it can bring readers news, views and feature-length educational pieces both online and in print. TMC also presents ITEXPO, the industry's leading IP communications trade show, in addition to other top-notch events.

That said, at first I wondered if this upbeat assessment for the future was simply due to my good fortune in joining the TMC staff. But, while it's not all blue skies ahead, the headlines of the past several weeks certainly seem to support the view that we are on the road to recovery.

From a macro economic view, the annual rate of decline in gross domestic product was smaller than expected in the second quarter, the housing market has shown some signs of recovery, the labor market appears to be stabilizing, Goldman Sachs and JPMorgan Chase have reported huge profits, and the Dow made it past 9000.

As for the tech sector, as a Washington Post column in early August noted: "If U.S. stocks have been hot recently, technology shares have been blistering." The piece mentioned that key examples driving this surge included terrific iPhone sales, which fueled a 15 percent increase in Apple's quarterly profit, and Intel Corp.'s unexpectedly strong results in light of strong chip demand.

Even Alcatel-Lucent, which has been struggling since its two parts merged three years ago; Comcast Corp., which has had significant financial challenges in the past couple years; and Cisco Systems, which posted a 46 percent drop in quarterly profit, are singing what in these times could be considered a happy tune.

Posting its first quarterly profit since the combination in 2006, ALU's chief executive was recently quoted as saying he expects the company to return to "normal" profitability by 2011 after breaking even this year. Comcast, meanwhile, saw second quarter earnings rise 53 percent and CEO Brian Roberts said he doesn't expect the slowdown to last.

But, what really convinced me things are improving was some commentary from Cisco's John Chambers, who has taken no pains to sugar-coat the extent of the economic downturn and its impact on the communications marketplace. Chambers now says it appears things are starting to level out. The head of the tech bellwether said he sees signs the economy has reached a "tipping point" this quarter and has promised to return Cisco to double-digit growth.

I look forward to experiencing the upside of this next cycle with all of you. **IT**

The Browser is the Computer

Years ago Sun CEO Scott McNealy said the Network is the Computer – Google hopes he's right

Apple can do no wrong - it never could. The company has always had zealous fans who considered Apple products to be like their own superficial entry into some sort of consumer electronics cult. I lived this firsthand when I was in MIS and I decided to deploy PC-based desktop publishing in the eighties. Talk about upsetting your art department. Partially as a result of these Apple loyalists, combined with Cupertino's inferior position in the market, the company has been a media darling. It is so crazy, in fact, that Steve Jobs has crossed over the line as a celebrity and is even tracked by gossip sites like TMZ.

But this status may be coming to an end since Apple decided it would become a censor and limit applications that can get into the iTunes App Store. Well, that isn't entirely accurate, you see Apple not only censors what can get into the App Store and, quite often, applications that were approved earlier are pulled, sometimes after only a few hours. One of the more popular apps approved and pulled in fact was Google Voice, which seems to have been the straw that broke the back of Apple's positive PR camel, and resulted in a resounding outcry from the blogosphere.

But, while application stores are all the rage, and Nokia, Microsoft, and the rest of the free world try to build app stores, Google has taken a different direction in its public relations, proclaiming the browser is more important than the app stores. The company argues that Web-based applications are the future of the mobile space, not operating-specific software.

"Many, many applications can be delivered through the browser, and what that does for our costs is stunning," said Vic Gundotra, Google's engineering vice president and developer evangelist, according to a Financial Times report. "We believe the Web has won and, over the next several years, the browser will become the platform that matters and certainly that's where Google is investing."

Google is hedging its bet, though, as it has its own app store, but I believe, at this juncture, that most non-Apple app stores are likely to be short-lived, and Google may be right about the power of the browser.

On a recent trip to Northern California, I met with one vendor who described an application they were developing for the iPhone. I immediately asked how they are getting around many of the iPhone limitations. As it turns out, the app is not really an app; rather, the company's back-end solution works with the Safari browser on the iPhone.

For me, this was the "a-ha moment," as the browser on the iPhone is great and allows developer to build some very robust and interesting solutions. The lack of Flash support is a major drawback, but that is a discussion for another day.

After that meeting, I got to thinking about what the value of the App Store censors are in the first place. If you have an open browser, you are able to visit porn sites, malicious sites and anything else you choose. This leads us to the question of why the App Store even has restrictions on applications with questionable content. It is perplexing, considering the browser isn't censored.

Since my return from Silicon Valley I have heard more and more talk of developers releasing browser-based versions of their solutions. While this won't work for all apps, it is a great way to get past Apple censors for now.

It is worth mentioning Google Voice will likely have a browser version soon and, when it does, we will get to see for ourselves the limitations of browser-based apps versus those written for native platforms. And as this docudrama plays out I am sure Scott McNealy is watching closely, popcorn in hand. IT

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INTERNET TELEPHONY® magazine (ISSN: 1098-0008) is published monthly by Technology Marketing Corporation, One Technology Plaza, Norwalk, CT 06854 U.S.A. Annual print subscriptions: free, U.S. qualifying readers; $29.00 U.S. nonqualifying, $39.00 Canada, $60.00, foreign qualifying and nonqualifying. Periodical postage paid at Norwalk, CT and at additional mailing offices. Postmaster: Send address changes to: INTERNET TELEPHONY®, Technology Marketing Corporation, One Technology Plaza, Norwalk, CT 06854 USA.

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Contents

Volume 12/Number 9 September 2009

Columns

Cover Story

Feature Articles

40

50

54

Departments

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WiMAX, High-Speed Internet Debut in Isolated Navajo Nation

By Erin E. Harrison

In the 21st century, it's easy to take for granted the conveniences of modern society – running water, electricity, phone lines, and perhaps even more pervasive, the Internet. Not only are these fixtures expected everywhere we go, but we want faster results, more bells and whistles and cheaper service.

For some communities in this country, the reality is that access to many of these amenities is almost two hours away and is simply not a part of everyday life. Sorraine Hot, 36, is a single mother of four who lives on a Navajo reservation in Huersano, N.M. She travels roughly an hour-and-a-half to get to her job as a customer service representative at Sacred Wind Communications, a privately owned telecommunications company that was established to improve services to rural areas within the state.

In an interview with TMCnet, she tells the story of a Navajo woman who had a heart attack and urgently needed medical attention. Her son, who was in a wheelchair, had to wheel himself to the local trading post just to get to a phone.

With WiMax connection now available, Hot hopes that eventually those in her town of approximately 5,000 – and ultimately the entire Navajo Nation – will have affordable access to phone lines and Internet services, and stories of such disparity will no longer be told. There is a small propagation – currently about 2,700 customers – that have tapped into telecom service following a partnership between Sacred Wind and Fujitsu Network Communications.

The Richardson, Texas-based optical and wireless networking provider and Sacred Wind Communications recently announced the rollout of rural wireless broadband to bring telephone and Internet access to thousands of families in New Mexico's Navajo Nation.

The Navajo Nation, which encompasses 27,000 square miles of rural territory in Utah, Arizona and New Mexico, is the largest federally recognized tribe in the United States.

"Everything is so isolated, [students] have to travel an hour and a half just to get to the library to do their research," Hot said. Often times, it isn't convenient for parents to travel so far, and because the Navajo are "proud people," she continued, they would come to school and claim to have done work they were not able to do because of such restricted access to the appropriate resources.

Sorraine Hot of Huersano, N.M., teaches a Navajo man how to navigate the Internet.

Hot previously worked for a non-profit organization, the Huersano Computer Lab, and taught Navajo people – ranging in age from five to 70 years old – the fundamentals of the Internet, such as sending a rudimentary e-mail or more sophisticated features like a Web cam to communicate with family members who live off of the reservation.

Most of the Navajo who live there, Hot explained, are economically disadvantaged. Because of the remoteness and ruggedness of the land, the Navajo Nation lacks the basic infrastructure that most living in the U.S. take for granted.

Sacred Wind purchased from Qwest Corporation its local telephone facilities serving portions of Navajo lands and nearby Navajo lands in the northwestern, Four Corners and Canoncito areas of the state. John Badal, Sacred Wind's CEO, served as president of Qwest New Mexico in the early 2000s.

Focused mainly on introducing basic telephone services to the many thousands of unserved homes on Navajo lands, Sacred Wind also has the intent and mission of providing high-speed Internet services, to Navajo, non-Navajo residents, governmental entities and businesses in their territory. "Sacred Winds" are a spiritual force in Navajo folklore and tradition that gave life to all beings and things in nature. They are also the communications between man and divinity.

Because many Navajo live in very remote areas with extremely rugged terrain, laying copper cable throughout that vast area in order to service a relatively small number of people who cannot afford to pay high telecommunications fees was economically out of the question. It could have cost $50,000 per customer,

and taken 45 years to reach 70 percent of potential customers, according to a Fujitsu Network Communications case study.

Sacred Wind actually evaluated 11 different fixed WiMAX providers, and then chose Fujitsu Network Communications because they felt the technology and associated support would help drive their mission. After joining forces with Fujitsu, Sacred Wind quickly determined that fixed WiMAX would be the model solution to the problem, because of its simplicity of deployment, affordability and features such as nonline-of-sight technology, company officials said.

According to Hot, Sacred Wind charges customers $34.95 up to $79.95 per month depending on speed for their phone and Internet services, costs she said are "pretty affordable" for residents there, many of whom work in construction and oil fields. Those on government "lifeline" assistance are entitled to a significant discount for phone service.

"Sacred Wind's mission in making broadband services available to rural communities and our work and support in providing RF planning, installation and systems integration is a winning combination," said Jim Orr, principal network architect at Fujitsu Network Communications.

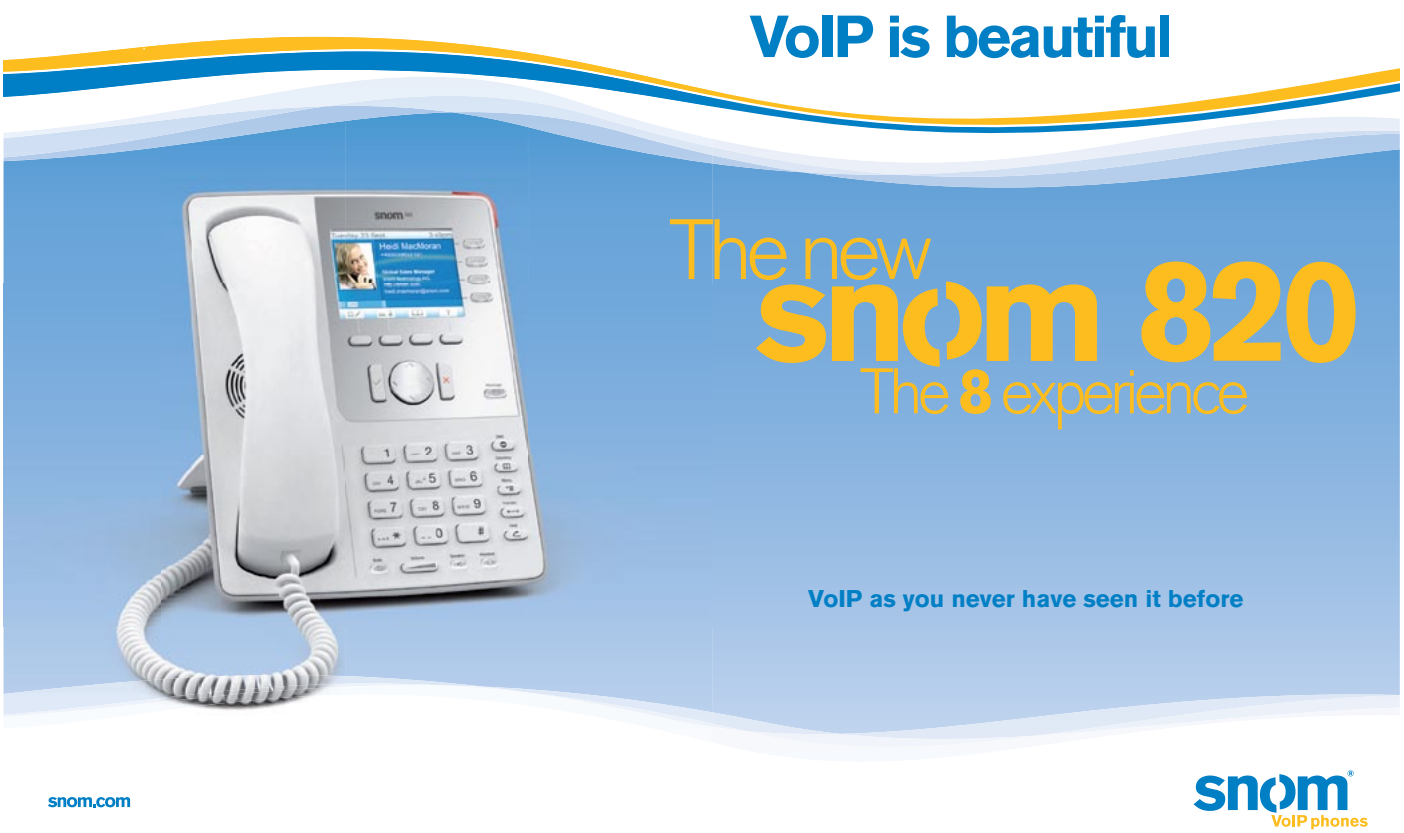
In July, the Obama Administration revealed the availability of $4 billion in American Recovery and Reinvestment Act loans and grants to help bring broadband service to so-called "unserved and underserved" communities across America. "Unserved" areas are defined as including at least one full census block, where at least 90 percent of households do not have access to terrestrial broadband.

"Underserved" areas are defined as including at least one full census block, where no more than 50 percent of the households have access to terrestrial broadband, or no provider advertises speeds of 3 Mbps or more or the rate of subscribership is 40 percent or less. Applicants can qualify on any single one of these criteria.

This is the first round of Recovery Act funding aimed at expanding broadband access to help bridge the technological divide and create jobs building out Internet infrastructure.

"Today, accessible rural broadband is increasingly important as a means of ensuring access to services and social inclusion for those living in remote areas," Orr said. "Delivery of these services can transform jobs, communities and lives in rural areas. We don't take that task lightly." IT

Erin E. Harrison is senior editor of Technology Marketing Corporation.



Next Wave Redux

By Brough Turner

Interactive Mobile Multimedia Needs IP and Circuits

Mobile Internet access can dramatically improve the Web experience, as mobile handsets are highly personal, interactive devices. It's not just telephony, SMS, location and Web access, but applications that leverage the mobile handset's camera (e.g. to capture QR codes, barcodes or live video). And it's evolving – mobile phones in Japan already incorporate short range sensors, for m-commerce and other interactive purposes. Expect these new interactive capabilities in the EU and US shortly. However, developing applications that fully leverage mobile device capabilities involves extra complexity, extra work and some access to legacy telecom technology.

The first problem is handset diversity. Mobile handsets have different screen sizes, limited browser capabilities and wide variations in how browser capabilities can be extended, plus mobile bandwidth is limited and may vary dramatically during a session. Fortunately, Internet multimedia companies are launching products and services that identify a user's mobile device and transcode, scale and/or rate-adapt multimedia content to match. The second set of issues concern interactivity and here traditional telecom plays a role.

Consider click-to-call – not widely used on a PC and still not a telephone for most people, but quite natural for mobile devices. But developers must pay attention to details. For example, the telephone number must be explicit text, not text embedded within a graphic element, as typical handset logic can't read embedded text. More importantly, user interaction requires SMS and USSD in USSD-capable markets. Mobile users prefer text messaging to friends, apps and advertisers, but text messaging takes Web developers into telecom's messy world. Each mobile operator has different rules on what is permissible over SMS – like lists of forbidden words – with different tariffs for short codes and different rules for use of SMS and USSD services. Finally, mobile operators offer premium rate billing arrangements. Because mobile phone users are accustomed to paying for products and services, this is a powerful tool for the Web developer – but one associated with the mobile device's phone number, not its IP address. Thus the final complexity – the need to associate a mobile device's IP address and phone number, as any truly interactive application will use both identities.

As these obstacles are overcome and that most personal of devices, the mobile phone, gains affordable open Internet access, interactive rich media applications will explode. IT

Brough Turner is chief strategy officer of Dialogic (www.dialogic.com).

Enterprise View

By Max Schroeder

A Reseller Educational Series: Gold Mining

In 1970, the father of a personal friend purchased a ranch in the Northwest U.S. There was a gold mine on the property that was abandoned because only low-grade ore remained. The father began referring to himself as a retired gold miner. In the mid- to late-1970s when gold jumped from $35 an ounce to several hundred dollars an ounce, he immediately came out of retirement.

Resellers and vendors alike own a lot of abandoned mines. They are actually old leads, prospects that went cold and companies that did not have budget approval. This past summer my company outfitted a summer employee with "gold-mining equipment." The success of this project was based on a simple premise – rather than limiting lead generation to the development of new leads – mine the ones you already own.

Ask yourself this question: "How many times have I gotten a call from a former prospect that was now ready to buy?" Budgets change, priorities change and most important, Internet telephony continues to evolve technically and become more affordable. A proposed solution that did not have an acceptable ROI three years ago may look great today. Plus, many new products that complement IT are being introduced daily. A good example is Dialogic's FoIP technology. In 2006, it was in its infancy; now it is a major factor in the market.

We began our project by asking our sales team to review their files and forward the information to our summer marketing researcher, Rob. Several email templates were created to address various scenarios and Rob began the process by personalizing the templates and sending them out individually. For example, one template addressed those that did not purchase due to budget considerations. Another template, more general, addressed technology advances in unified communications, workflow and related topics. By addressing different topics, we were able to send several emails to the same prospect over time; the more topics, the more potential "hot buttons."

Remember the famous phrase, "There's gold in them thar files." IT

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

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By David Brandon

Overcoming the Human Challenges of Implementing VoIP in Call Centers

Implementing VoIP in your call center may be the most difficult part of transitioning your company to VoIP. The reason, surprisingly, is not technology, but people. While the benefits of VoIP in the call center are unmistakable, you must overcome three human challenges in order for VoIP implementation to be a success.

Information Flight
Employee turnover complicates the consistency and accuracy of a call center team. As leaders change and teams shift, background knowledge can be lost and the advancement of a VoIP project can stall. To avoid this situation, it is important that projects are prioritized, tracked and recorded. Historic information, timelines and objectives should not be lost to staff turnover.

Resistance to Change
For many within your organization, transitioning to a new system means time-consuming training and workplace disruption. Not only are many people uncomfortable with the idea of change, but they also have true concerns about the time required to learn a new system. To overcome this challenge, a team of dedicated migration professionals – representing all sides of the call center, network and telecommunications organizations – should be engaged. Each manager brings different perspectives and expertise. An open dialogue among these experts will make for a clean transition. Being inclusive will also help to stimulate buy-in and reduce conflict.

Fear of Showing the Uglies
The first step to VoIP migration is a call center assessment, and the network should be the focus of this review. Because the network supports VoIP in the number of calls and throughput, it is vital to know up front whether the network's bandwidth, quality of service, trunking and voicemail capacity is sufficient. Many managers, both call center and network, are uncomfortable with assessments because they expose the ugly underbelly of their organizations. To conquer this fear, it is best to employ a neutral third party. An IT consultant can provide an honest evaluation of the inconsistencies in call flow and call center procedures and help to make important and impartial decisions.

Implementing VoIP in your call center can be difficult but not impossible. Taking a few steps to consider the human issues related to VoIP migration will save you invaluable time and money. IT

David Brandon is a senior technical consultant in the networking practice at Forsythe Technology. He has extensive expertise in contact center design, installation and integration, advanced telephony design and general networking architecture. Brandon brings more than 10 years of experience as an in-house network architect and systems manager as well as a technical consultant.

By Michael Stanford

The Evolution of the Phone Call

It is a universally acknowledged truth that adding a node to a network increases the value of previously existing nodes. This is often called Metcalfe's Law.

There are about six billion people in the world, with four billion cell phone accounts and two billion wireline phone accounts. By this measure, the PSTN is already about as valuable as it can get. But, as the Internet rolls towards its own ubiquity, it is making inroads into real-time voice communication. The Internet is an ecosystem where evolution happens fast: species branch frequently and diverge rapidly. The current profusion of voice communication mechanisms is a symptom of that divergence. All the major PC chat programs – Skype, Google Talk, Yahoo Messenger, MSN Messenger, AIM, ICQ – have real-time voice features, based on a variety of technologies. All the major game consoles, including PSP, Xbox, Wii have real-time voice features. Adobe has built real-time communications into the latest versions of Flash and Air, based on proprietary protocols.

These networks are not interoperable, so each is dwarfed by the size of the PSTN. On the other hand, all these telephone alternatives are free, and many of them have both video and superior audio quality to the PSTN. So, in these times of niche marketing and the long tail, it is tempting to wonder if Metcalfe's Law may run into some exceptions.

I don't think it will be repealed, though. There will be value to being able to call my eight-year-old on his Nintendo DSi from my iPhone, and to being able to make a virtual call from a Second Life avatar to a real-world person. An interesting program, called Nimbuzz, approaches the issue of interoperability by aggregating all the PC chat clients behind a single user interface, even allowing group calls to be bridged between different services.

This is an example of a force that balances the divergent pressure of Internet innovation: the convergent force of the computer, which continues to digest entire categories of electronic devices, including, ultimately, the telephone. IT

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

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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 Hosted VoIP 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 Hosted VoIP phone service.

VoIP Services For SMB & Residential

hosted-voip.tmcnet.com

By Tom Keating

Grandstream GXE5024 and GXE5028

In today's increasingly cost-conscious economy, SMBs are looking for feature-rich IP PBXs at the lowest cost. Many SMBs are willing to sacrifice some advanced telephony features to just get the basics, including call transfer, three-way conferencing, auto-attendant and voicemail. Advanced features, such as call queues or call recording, are nice features to have, but many SMBs aren't willing to pay for higher-end IP PBXs with this functionality.

Fortunately, Grandstream's GXE5024 and GXE5028 products not only have the basics, they also have some advanced functionality such as call queues – and at a reasonable price of just $899 for the GXE5024 and $1,399 for the GXE5028. Grandstream sent me a GXE5024 for a test drive.

First, the only difference between the GXE5024 and the GXE5028 is the number of analog PSTN FXO ports: four ports versus eight ports. They both also sport two FXS ports for connecting analog phones, fax machines, etc.

Hooking up the GXE5024 was a snap. What's convenient is that it sports a PoE port on the LAN interface, so you can skip the use of the included AC adapter if you want. I logged into the default IP address, 192.168.10.1 for the GXE5024. It provides a quick set-up wizard, which is pre-configured with basic call settings that enable you to quickly configure your GXE.

I tried both the wizard and non-wizard method and both are pretty straightforward. From the Web interface, I clicked the Auto Provision link, which kicks off auto-detection of any Grandstream phones I connect to the same LAN segment. I simply had to select a "starting extension" and "ending extension" to set my extension range.

Next, I figured I'd try some third-party phones to see if the auto-provisioning worked with them as well. I attempted an Aastra 57i and a Polycom IP-650 phone, but neither seemed to auto-provision. The phones did discover the TFTP boot server on the GXE5024, but they weren't able to assign an extension or any SIP settings. Although the auto-provisioning didn't work, I was able to manually add the phones with no trouble.

After configuring some extensions, the next step was adding some trunks. The GXE5024 supports four analog lines, so I configured it to use a four-port Teltone analog simulator very easily. In addition, I was able to assign extensions 790 and 791 to the two analog FXS ports, which can be used for analog phones and credit card or fax machines. I also configured a SIP trunk using one of the promotional trial SIP trunk providers built into the Grandstream auto-provisioning Web tool.

For unified messaging, it supports a voicemail-to-email feature with the ability to set the proper SMTP settings for proper email routing. Additionally, it also supports fax-to-email and can also automatically detect fax tones and route it to a user's fax mailbox.

The GXE502X supports two or four password protected conference bridges that allow up to 12 or 20 simultaneous participants from PSTN trunks, SIP trunks or internal extensions. You can dial the conference bridge extension to join, or even invite other participants by entering in their extension from the Web interface. Administrators can also mute/unmute conference participants from the Web interface as well as kick them out.

Important to most SMBs is support for hunt/ring groups. The GXE502x series supports parallel ringing, as well as serial or round-robin ringing. Adding various auto-attendant menus such as business hours, after hours, and holidays was pretty straightforward. One of the most powerful features of the GXE502x is the ability to define call queues so calls are answered in the order they were received and assigned to agents with the best skills. Having advanced queues and skills-based routing in such a low-cost IP-PBX is unheard of, so I tip my cap to Grandstream.

One really cool feature is that the GXE will allow admins to capture all the packet traffic coming in and out of either the LAN or WAN Ethernet interface of the GXE. This is very helpful to debug certain configuration issues and do SIP troubleshooting.

The GXE502x supports peering with other IP PBX systems. While this may not be critical for SMBs, as companies do grow, they can deploy multiple GXE502x devices if they so desire and have a unified extension dialing plan that routes calls over IP. Further, larger organizations might deploy the GXE502x at branch office locations and peer back to their main corporate headquarters' IP PBX. IT

Tom Keating is vice president, chief technology officer and executive technology editor/SEO director of Technology Marketing Corporation.

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E911 Watch

By Nick Maier

Big Savings with FCE…But Don't Forget About E911!

With typical ROIs of 12 to 24 months, many enterprises are moving forward with IP telephony projects to flatten, consolidate and extend FCE voice networks and capture the cost savings inherent in IP architectures. But, in the move to an all-IP network, don't forget to anticipate E911, a vital and, in many states, required voice application.

Historically, E911 has been a local event. You'd open a PS-ALI account with the local LEC, put location records (ALI) in the LEC's database, and send all 911 calls over an ISDN-PRI trunk routed to the local 911 call center (PSAP).

Today, E911 has evolved to support modern FCE voice architectures. A 911 call can be sent over an IP trunk to an E911 service, which can route the call to any PSAP in the USA or Canada. With FCE, all voice traffic is consolidated in enterprise data centers, making it easy to send all 911 calls to a central E911 service for processing.

This new breed of hosted E911 service doesn't require capital investments for hardware and is billed as a monthly expense based on the number of emergency calling numbers (ELINs) and location records stored at the provider.

Read more about FCE and E911 on TMCNet's E911 Channel. IT

Nick Maier is SVP of RedSky Technologies (www.redskyE911.com)

Ask the SIP Trunk Expert

By Steven Johnson

Simplifying SIP Trunk Installations

SIP trunks are a simple way to not only deploy VoIP, but also to begin adoption of unified communications and all its attendant benefits quickly. For VARs and end-users alike, SIP trunk deployments need to happen in a fast and streamlined manner.

Far from complicated and challenging, SIP trunks can be deployed with a minimal amount of time and headache. The key to a smooth installation is a well-planned network and the selection of components that are certified as interoperable. Interoperability also maximizes the security of your SIP traffic – a critical point.

Here's what you need to know for a successful SIP trunk installation:

SIP trunking service provider – There are many service providers today offering SIP trunk solutions. A traditional voice telephony service provider typically offers one or more T1/E1 trunks to the enterprise for fulfilling its needs for voice communication outside its own premises. With SIP trunking, service providers deliver call capacity in much smaller increments and have the ability to expand and contract the trunks very quickly. The SIP trunking service provider is responsible for placing the calls onto the PSTN, which often can reduce long distance charges significantly.

SIP-enabled PBX – Many IP-PBXs are designed to handle SIP. This is a necessity, as SIP trunks – like all real-time communication such as VoIP – are based on the protocol. Leading IP-PBXs provide the features that enterprises require. Many PBX vendors also perform rigorous interoperability testing with other vendors and ITSPs, which helps to strengthen security for your SIP communications and eliminate interoperability issues.

An edge device that can handle the traversal of SIP traffic – The enterprise edge component serves many critical purposes, including solving the NAT traversal issues that are common with SIP, maintaining security of the PBX and the resolution of interoperability issues between the ITSP and IP-PBX.

We, and our partners, will demonstrate the ease of SIP trunk installation at the upcoming ITEXPO in Los Angeles during Ingate's free SIP Trunk Seminar Series. Stop by room 502A to watch us deploy a SIP Trunk solution in 20 minutes or less. IT

Steven Johnson is president of Ingate Systems.

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By Mike Sheridan

Software-Based Solutions: Easing UC Deployments

My bank recently wanted to fax me a document. That got me thinking about the decline of fax machines and, for that matter, all box-based communications products. Whether a PBX, a voice mail system, or fax machine, the productivity gains from hardware-based products have always been appreciated by office workers. But a new era is here, an era resulting from IT budget reductions. This new era demands a software-based approach that truly unifies communications.

What makes software-based UC better than hardware-based UC? The answer is a combination of lower cost and less complexity. Proprietary hardware, like the PBX, is only available from a single vendor, which allows that company to dictate pricing. Secondly, by its very nature, hardware cannot be treated virtually, requiring expensive physical footprints. Furthermore, management complexity is much higher with hardware, where each product has its own administration, reporting and logic.

With software-based UC, commercial off-the-shelf (COTS) hardware holds prices down, since many competitors are all working to innovate and deliver the best cost. With software UC, this is now extended to the phone, which typically takes advantage of low-cost softphones. Complexity is significantly reduced, thanks to reliance on standards for integration of other software components. Moreover, software-based UC solutions can be virtually deployed across the globe.

Finally, with software-powered UC, applications can be more efficiently embedded into business processes. For instance, when a retail company's product inventory falls below a certain level, an ERP software system can automatically look at the presence of company employees and initiate a call or IM to notify the appropriate person. Then, the system can automatically inform the appropriate salesperson to contact the customer with the change in status.

By bringing together email, instant messaging, conferencing, and contact center applications, all powered by presence, companies are overcoming challenges associated with siloed and hardware-intensive architectures.

Sure, my bank may still feel the need for the occasional fax, but that noisy box in the corner is going the way of the typewriter – all to the advantage of lower cost and more productivity. IT

Mike Sheridan is executive vice president of worldwide sales, Aspect. Visit Aspect at www.aspect.com and follow Mike on twitter.com/MikeOnUC.

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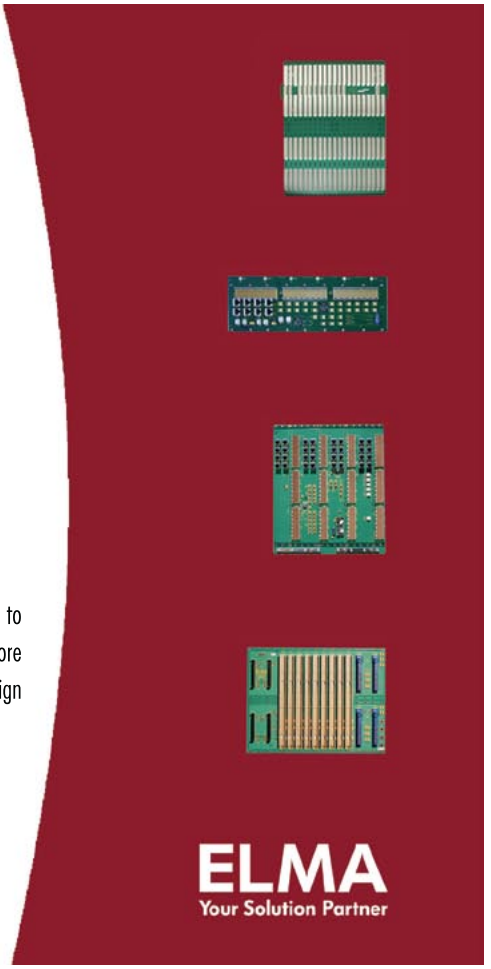

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By Don Witt

Provider Solutions: Retail or SMB? CLECs & LECs Need Both

The VoIP provider market has been evolving over the last decade and has three very clear channels: retail/residential end users, business users and peer-to-peer.

Residential
Companies like Vonage have been in the forefront of the residential market for years. Their name is almost synonymous with residential VoIP service. They also try to target businesses, but their mainstay is residential.

Business Users
Ring Central and 8x8 have been focusing on the hosted business market from 15 to 100 users. Competition in this market segment is increasing as this is where a majority of the business.

The large on-premises market has been the target of Cisco, Avaya, Nortel and others.

Peer-to-Peer
Skype is the best known for their peer-to-peer technology. They are able to provide good quality based on their IPBC Codec. They make money when people try to dial to the PSTN.

Wanabes
Telcos that are starting up, individuals starting a provider operation, and companies that plan to start their own provider service will pick one of these VoIP channels. Once the channel has been chosen, then they can start looking for a company that can deliver technology to provide service to the channel selected.

Residential Solutions
Residential solutions seem to have grown from open source. We find that Asterisk and FreeSWITCH are in this area. While not designed for residential, Asterisk has its limitations. FreeSWITCH, having been designed as a switch, fits this market very well, scales well and is fast.

Business Solutions
Those companies that are looking to provide business solutions can purchase the technology from the following: Broadsoft, Alcatel-Lucent, Cisco Systems, Sonus Networks, MetaSwitch. These are typically expensive solutions that lock you into their price structure well into the future. An alternate to the above is FreeSWITCH which provides a basic PBX or an Asterisk implementation.

CLEC & LEC Needs
CLECs and LECs that have not migrated to VoIP find themselves in a difficult situation. Their customer base includes businesses and residential customers. How do they address both market segments when the available solutions tend to only address one market segment?

CLEC & LEC Solution
It's clear that they can purchase equipment from different vendors to address their needs, but that may not be the best solution to minimize support costs. Can they use open source and do it themselves? A number of companies have tried this and have found it puts them into a different business. They become a technology developer instead of a service provider. This tendency is generally accentuated when the price quotes of the commercial solutions are received. There is a big difference between network engineers and development engineers. Many companies do not recognize this and have paid the price when the internally developed solution does not work or because it continues to take costly development time by the developing engineer who is the only one that knows how the product was developed. They may have save a few dollars in the short run, but paid the price in the long run.

Another Solution
Ring Carrier now offers a product that provides a solution to both market segments equally well. Based on open source, Ring Carrier can provide very cost-effective full featured iPBX solution and a very scalable residential solution that is has a provider interface for both.

The provider interface allows the administrator to create a new iPBX for a business in a matter of seconds. Each business server can support more than 50 iPBXs on each server reducing the LEC and CLEC CAPEX significantly. The same can be done for a new residential server. The residential solution can scale to 100s of thousands of users easily. The interface allows the administrator to easily manage colocation facilities in multiple locations as well as the redundant facilities.

The iPBX enterprise manager has their own interface as well as the iPBX end user. This holds true for the residential solution. The provider will manage the creation of the end user account and the residential user has their own interface.

There is an application interface available that allows the creation of the iPBX and the residential user process to be automated.

Summary
Ring Carrier provides a package that delivers the technology to the business and residential market with the features that the CLEC and LEC customers have been looking for at a price that does not break the bank. IT

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

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Telarus and AireSpring: Guiding Telecom Agents Through Carrier, Service Provider Options

By Erin E. Harrison

Draper, Utah-based Telarus provides telecom agents with the ability to offer highly competitive pricing with unprecedented access to 40 telecommunications carriers, including such major players as ACC Business, AireSpring, AT&T, Covad, Level 3, NuVox, Qwest and XO.

Telarus' Patrick Oborn, vice president of marketing

Telarus, a full-service "master agency," offers a broad array of connectivity options and services including T1, NxT1, DS3, OC3, OC12, OC48, MPLS, VPN, Ethernet, POTS, voice T1, local T1, local PRI, conference calling, FREE411 advertising access, VoIP, SIP trunking and managed security. It has 300 full-time agents and 5,000 lead generator agents, as well as 26 full-time employees. Its carrier partners cover the U.S. as well as parts of Canada and Europe.

In a recent interview with Patrick Oborn, vice president of marketing and co-founder at Telarus, he explained how the company leverages technology to help its agents close the deal.

How does your company use technology to assist its agents?

"Telarus helps its agents sell by creating technology to help generate Internet leads as well as technology that cuts down the sales cycle by calculating real-time quotes for commercial high-speed Internet and voice services.

How does this impact your carrier partners?

"What we make sure of is that every carrier can compete, even new ones, even small ones. In fact we've had several 'no name' carriers come into our system and just do an absolutely outstanding job with agents with response time, with the cut to provisioning process, billing and paying commissions on time."

In 2003, Telarus authored and patented the first "real-time" commercial telecom pricing software. Tell us about it.

"We wrote and patented software that enables agents through our back office to run quotes, and our quoting system is electronic and goes out and queries systems at AireSpring, AT&T and Qwest and brings back all the pricing for all of the different options for that particular service type at that customer's particular location. It does everything from data T1s to OC3.

"We have NPLS research tools. We even have a Google map with Ethernet fiber routes so that if any agent is out there – and the typical master agent will need a quote for a customer -- a human being will go into all these systems and then get back to the agent with the quote. Our system will query all 40 vendors every single time, so there is never a vendor that gets left off. It creates a very transparent marketplace that enables carriers like AireSpring to really compete for the business of our subagents.

"[But] a lot of times the special things the customer wants can't be done through an automated system, so we rely on a electronic lead-based system similarto Facebook. [Through this system the agents] look for a quote, and someone from AireSpring, for example, will write on their wall and post prices for a two-year or three-year term, and the agent can go back and propose that to the customer."

Tell us more about the lead-generation aspect of all this.

"The company also has a marketing division that creates Web sites that generate leads for businesses looking for telecom services, which are delivered to Telarus agents. So not only do our agents get access to all the tools for their own customers that they're consulting for, they actually get leads from the Web site.

"Our system divides the commission and gives some of the commission to the lead generator, the affiliate, and then a reduced commission to the agent. We pay them 75 percent of regular commission. They not only get tools, they get opportunities."

Are these tools available to all of your agents?

"There is a minimum threshold. If an agent doesn't do at least $5,000 in volume per year, they are invited to participate in our referral program in which a lot of the access to the detailed

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research tools is removed, and they are placed with one of our larger agents, a Telarus master agent."

I understand that Telarus has increased sales by 50 percent with AireSpring and that Telarus was AireSpring's No. 2 agent in the country last year.

"We want to help agents make sales, and help them meet more customers and help them be more efficient and help them make them make more sales because [we've] got the carriers they need that have the best price points. That's really where AireSpring fits in. Their price points are exceptional.

"AireSpring is really moving up the ladder. When we first got involved with them, they were pure resellers, and their main value was knowing the lowest cost routing. Now they are starting to take that and 'hybridize' their own network and spending a lot of money on building out portions of their network – really lowering their operating costs. That's enabling them to compete on price where a lot of other folks in the same reseller space can't touch AireSpring."

For more information on AireSpring, visit their channel at http://www.tmcnet.com/channels/sip/

Erin E. Harrison is senior editor of TMC.

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By Peter Radizeski

Where's the Blue Ocean?

In the book, *Blue Ocean Strategy*, the authors, Chan Kim and Renée Mauborgne explain that a Red Ocean is a hypercompetitive market. In telecom, that would be the consumer triple play and cellular phones. The Integrated T1 is sold by numerous CLECs with very little differentiation. The same is coming from the SIP Trunk. Selling on price on makes the ocean red – along with balance sheets.

Where's the blue ocean? Today, in telecom, that would be in niches like colocation, conferencing, electricity/power, and SaaS. There aren't many people selling these services, which leaves the door open for someone to become an expert. (Granted, there are experts in the field, like Chris Palermo's agency, GCN, that specializes in colocation projects).

As well as you know voice now, you will need to comprehend data. Everything is going IP and voice will just be another application running on the pipe. We are already seeing cloud-based services, like IVR from Ifbyphone and others, that used to be strictly on-premises (and expensive) hardware solutions, now available on-demand from the SaaS vendors.

The other blue ocean is business continuity design. We have been witness, this year, to data centers having outages, even from the mighty Amazon and Google. Fiber cuts are taking out whole sections of cities. As more services and data move to the cloud, redundancy will need to be designed and maintained, not by the carrier but by the customer. A multi-homing approach to backbone and data centers will be essential to mission critical data systems. Backup plans will need to be in place.

The final blue sea is security. Again, with more and more services moving to the cloud, data integrity and security will be paramount. This week, Twitter had over 300 documents stolen, including high-level internal discussion notes that were published on Techcrunch. This is not an uncommon occurrence. According to Verizon Business' 2009 breach report, "Last year, 295 million records were compromised and there were 90 confirmed breaches."

While it many be bloody red in some sectors of the telecom ocean, there are plenty of areas to become a niche expert and reign in a blue ocean. IT

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

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By Erin E. Harrison

www.tmcnet.com/15157.1

Smart Grid Deployments on the Rise

The energy industry is reporting an increased demand for green technologies, particularly improved efficiencies that conserve power for utility customers.

In fact, Wake Forest, N.C.-based PowerSecure International's smart grid-enabled interactive distributed generation systems saw a deployment increase of 21 percent in the first six months of 2009 compared to the same period last year. Company officials said they deployed 3,995 times to generate load management efficiencies on behalf of utilities and their customers during the first half of 2009.

The company's smart grid systems provide improved efficiencies in several ways, PowerSecure officials said, including: reducing the cost of electricity during peak power periods; protecting against power losses and avoiding costly interruptions and spoilage; minimizing energy transmission losses; and improving the efficiency of the electricity grid.

Chris Hutter, PowerSecure's chief financial offer, attributes the increased level of productivity due to the company's ability to accurately predict peak electricity demand and provide standby power as needed.

"The cost of electricity is extremely high during peak power times, and our systems are highly effective at making electricity more efficient – we proactively forecast when peak demand is going to occur, and deploy our systems at optimal times to deliver efficiencies to utilities and their customers," Hutter said. "Additionally, our systems serve the dual purpose of providing standby power in case of power loss around the clock."

The company's monitoring center can forecast high-cost peak electricity demand, and deploys more efficient IDG power at optimal times for optimal durations, providing bottom-line benefits by reducing electricity costs, Hutter added.

"It demonstrates that there is a growing demand for smart technologies that make energy more efficient – and the strong bottom line results our IDG systems are delivering on behalf of utilities and their customers," he said. "Our technology is proving its value everyday in the marketplace."

U.S. Energy Secretary Steven Chu recently announced the delivery of more than $47 million in funding under the American Recovery and Reinvestment Act for eight projects to further smart grid demonstration projects in seven states.

In addition more efficient energies, the environment benefits from reduced carbon emissions because PowerSecure's IDG can be dispatched more efficiently than traditional spinning reserve power sources to meet peak power demands, company officials said.

As part of its efforts to inform Congress, energy stakeholders, and the public about smart grid efforts, the Department of Energy released the first "Smart Grid System Report," which examines the status of smart grid deployments nationwide and any regulatory or government barriers to continued deployment. The report finds that while many smart grid capabilities are just beginning to emerge, the adoption of various technologies – such as smart metering, automated substation controls and distributed generation – is growing significantly.

Clearly, smart grids hold a critical key to improving electrical system efficiency and environmental footprint while making systems more reliable, with fewer outages. For more on the latest smart grid technology, visit TMCnet's newly launched Smart Grids site at smart-grid.tmcnet.com. IT

Erin E. Harrison is senior editor of Technology Marketing Corporation.

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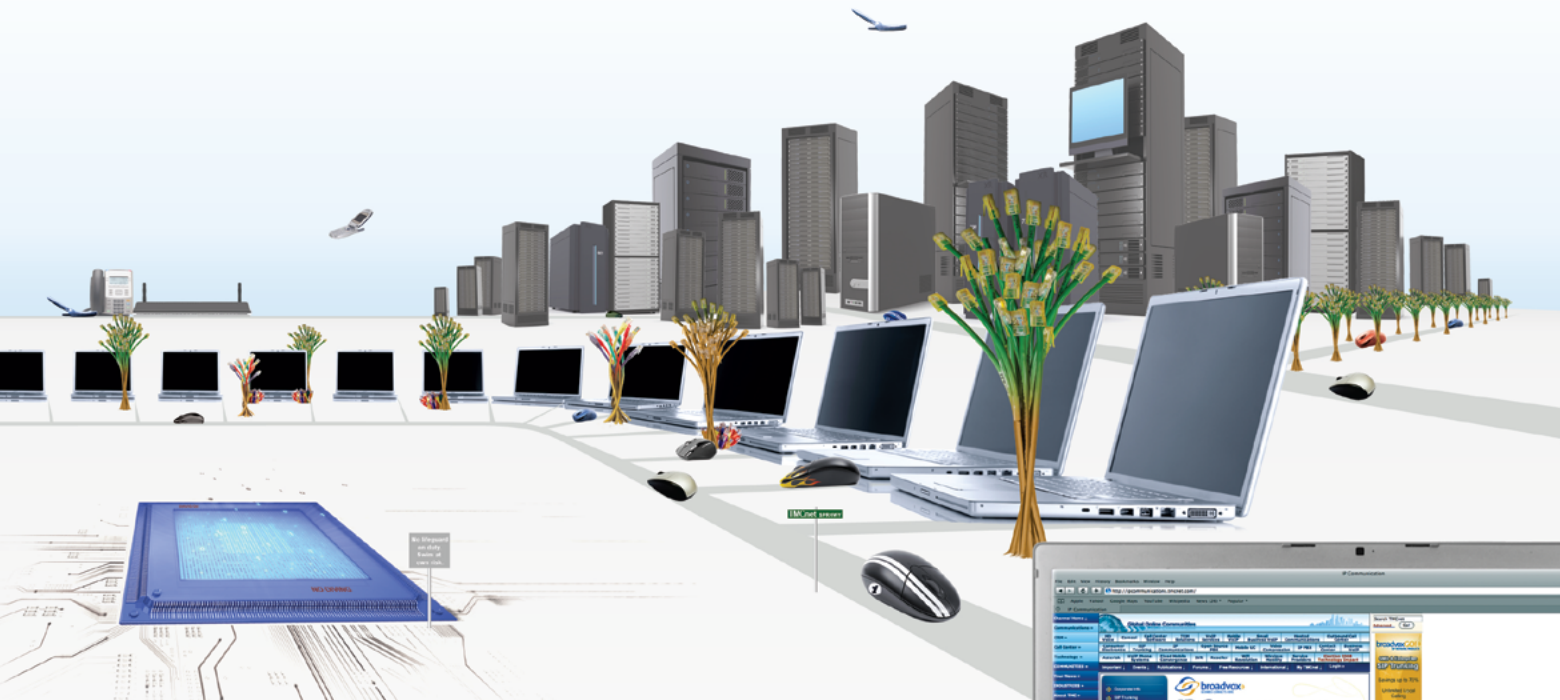

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LG Integrates with Broadcom's Bluetooth Technology

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Broadcom has stated that LG Electronics' new digital television product line is now shipped with its Bluetooth technology. Broadcom technology is expected to enable DTVs to interplay with cell phones and wireless headsets. Broadcom has stated that with its Bluetooth technology, LGE can offer viewers advanced audio streaming and digital media sharing features through the existing ecosystem of Bluetooth devices itself. Cell phones connected to DTVs via Broadcom Bluetooth can also be used to remote control the TV and its QWERTY keyboard used as an input device for TV-based widgets and electronics commerce applications.

www.broadcom.com

www.lge.com

Nuance and IBM to Offer Speech Technologies

http://tmcnet.com/15103.1

Nuance Communications and IBM have announced an agreement they say will help further accelerate innovation in speech recognition solutions for enterprises, consumers and partners worldwide. As part of this agreement, Nuance has been chosen as IBM's Preferred Business Partner for speech technologies and related professional services and will complement IBM's Industry Solutions portfolio. Frank Kern, IBM senior vice president, global business services said, "As businesses and governments aim to operate more intelligently and efficiently, the full impact of speech technology is just emerging." By associating with Nuance and its extensive array of complementary products and services, IBM is accelerating the opportunity to deliver exciting innovations to clients in key industries, Kern added.

www.nuance.com

www.ibm.com

Knoa Offers Global End-User Monitoring Solution

http://tmcnet.com/15104.1

Knoa Software, a provider of end-user experience and performance management software, announced the availability of Knoa Global End-User Monitor. Knoa Global End-User Monitor helps organizations monitor end-user experience and interaction for all desktop and Web-based applications running on users' desktops. It collects comprehensive, global metrics on software utilization, application health, application response times, user behavior and experience and desktop performance.

The solution can collect a broad range of metrics from various applications that a company runs without any configuration, instrumentation, scripting, templates or cartridges. Knoa's Experience and Performance Management offers metrics coverage across an entire application, not just a sample of data points and transactions and is only commercially available end-user monitoring solution. Knoa EPM provides out-of-box monitoring coverage of end-user behavior and experience for enterprise applications like SAP, Oracle E-Business Suite, Oracle Siebel CRM, JD Edwards, PeopleSoft Enterprise Suite and Amdocs. The in-depth coverage of EPM and the broad coverage of GEM, provide companies with a complete set of capabilities required to optimize end-user experience, productivity and performance.

www.knoa.com

Verizon Business Expands Portfolio of Solutions

http://tmcnet.com/15108.1

Verizon Business is expanding its portfolio of solutions that help large businesses and government agencies reduce the complexity of managing, monitoring and maintaining enterprise-wide unified communications and collaboration. According to the company officials, the company is adding management of several applications to its Cisco Unified Communications System Release 7.0 portfolio. Officials pointed out that the new applications, which include presence, contact center and messaging, are available immediately to customers in the U.S. and many European countries, and will be available early next year in the Asia-Pacific region.

www.verizon.com

www.cisco.com

PrismOne Selects Sipera Systems' Solution

http://tmcnet.com/15105.1

PrismOne Group, Inc., an Internet telephony service provider for businesses, has selected Sipera Systems' UC-Sec security appliances to protect enterprises supporting teleworkers' unified communications applications. Sipera Systems is a major player in real-time UC security solutions.

PrismOne officials said that the company offers advanced UC features and application services for businesses, including those with remote offices and other mobile UC requirements that encompass WiFi Dual-Mode, VoIP and other handsets. Officials say the Sipera addition is both "essential and ideal," contributing to the company's escalating appeal in this growing market sector. Sipera's UC-Sec security appliance is deployed by PrismOne to provide encryption, access control, security policy enforcement, authentication and threat mitigation for unified communication services.

www.prismone.net

www.sipera.com

EthicsPoint Unveils Hotline Reporting and Case Management Solutions

http://tmcnet.com/15106.1

EthicsPoint, a provider of hotline and anti-fraud reporting and case management services, has released the updated versions of its Issue and Event Manager Professional and Enterprise solutions. The new version features improved and enhanced user interface offering streamline access to hotline information and improved data analysis capabilities, providing compliance, HR, audit, security and other business stakeholders with greater visibility into business and operational risks.

www.ethicspoint.com

Danube Releases ScrumWorks Pro 4

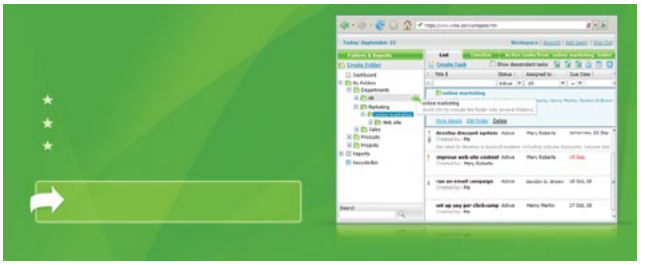
http://tmcnet.com/15107.1

Danube Technologies, Inc., a company specializing in project management tools and training for the "Scrum" methodology, has released the new version of its enterprise capable tool, ScrumWorks Pro 4. Danube's ScrumWorks Pro is Enterprise Scrum Software for project management and collaboration. ScrumWorks Pro 4 is said to bring epics for feature decomposition and release planning as well as programs for high-level coordination and tracking across multiple projects.

www.danube.com

Wrike Launches Project Management App for Yahoo Users

http://tmcnet.com/15111.1



Given the current state of the economy, the call for greater efficiency in the workplace is at an all-time high. On-demand online project management company Wrike unveiled a free application for My Yahoo users that is reported to allow them to work on tasks and projects together in real time. Wrike's Simple Projects is the first My Yahoo app that lets users keep track of changes made in projects by their friends, company officials said. Wrike Simple Projects allegedly lets anyone who has a personal My Yahoo page create and assign tasks, organize tasks into projects, invite people to work on projects together and keep track of changes.

www.wrike.com

www.yahoo.com

Verizon Wireless Helps Manage Mobile Workforce

http://tmcnet.com/15116.1

Field Force Manager, a turnkey wireless solution from Verizon Wireless, has been helping business customers improve productivity, reduce operational costs and increase revenue. Verizon has announced a number of enhancements to Field Force Manager version 3.1. Now, mobile users can send a daily report via e-mail to supervisors that summarize key business metrics for payroll, travel, jobs completed and policy violations. Administrators can also manage employee timecards from the Web portal, edit their hours as necessary and view a complete history of changes as well as make automated phone to paycheck process more convenient. Field Force Manager also uses an enhanced text-based turn-by-turn directions that provide a wide variety of route calculations, from the fastest route possible to a route that minimizes the use of freeways. The offering is on a wide variety of handsets, including the clamshell MOTOVU204, the rugged Push to Talk-capable G'zOne Boulder and the BlackBerry Curve 8330 smartphone.

www.verizon.com

NSI, Smoothstone Team-Up to Implement Converged Communications

http://tmcnet.com/15113.1

Damon Motor Coach, a designer and manufacturer of mobile homes, announced that Smoothstone and Network Solutions Inc. together are providing converged communications to the company by leveraging SIP Trunking technology. Damon Motor Coach approached their technology partner, Network Solutions Inc. for up gradation. NSI helped the company to replace the network hardware architecture as well as recommended the company to implement a managed, IP-based unified communications solution from their trusted partner, Smoothstone IP Communications.

www.networksolutions.com

www.smoothstone.com

Cox Business Selects Alcatel-Lucent's IP/MPLS Solution

http://tmcnet.com/15115.1

Alcatel-Lucent announced that Cox Business has selected Alcatel-Lucent's IP service router products and services to support Ethernet-based solutions for its business and carriers. Alcatel-Lucent's Internet Protocol/Multiprotocol Label Switching solution simplifies network operations and makes it easier for Cox Business to enhance its data services suite. According to industry research and analysis firm Vertical Systems Group, Cox Business is the fourth largest provider of business Ethernet services in the U.S. based on customer ports. The Alcatel-Lucent solution allows Cox Business to deliver enhanced business services over a common service routing edge based on the Alcatel-Lucent 7750 Service Router, which gives Cox Business a cost-optimized, reliable, feature-rich service delivery infrastructure that can address managed data service market.

www.alcatel-lucent.com

www.coxbusiness.com

Digium Taps Teledynamic Communications as IP-PBX Services Reseller

http://tmcnet.com/15114.1

Digium, a provider of PBX VoIP-capable phone systems for small- to medium-sized businesses, has reached a deal with a provider of business telephone systems to represent its Switchvox IP-PBX services. The company has partnered with Teledynamic Communications, Inc. to give San Francisco area businesses access to robust IP-PBX services at a value-based price. The partnership reflects the growing popularity of open source software by small- and medium-sized businesses. A recent report from Eastern Management Group found that open source PBX services comprise of 18 percent of the overall PBX market share, surpassing major PBX manufacturers, including Cisco and Avaya.

www.digium.com

www.teledynamic.com

www.cisco.com

www.avaya.com

Hospice Partners On Call Picks 1Vault Networks to Safeguard Server Infrastructure

http://tmcnet.com/15112.1

Hospice Partners On Call has reportedly selected 1Vault Networks, a state-of-the-art, Category 5 hurricane-rated data colocation facility, to safeguard its server infrastructure and guarantee call center continuity. Hospice Partners On Call will relocate its back-up data servers to the secure 1Vault facility. Hospice Partners On Call, an extension of Spectrum Health Inc., is a tele-health service that delivers professional after-hours response to patients, families and medical staff. Mario Strohm, vice president of sales for 1Vault Networks, said that 1Vault will not only offer Hospice disaster recovery and redundant power, but also cost effective cooling, power and Internet services.

www.1vault.net

www.hpoc.com

Wireless LAN Market Sales to Rise from 2010 to 2013

http://tmcnet.com/15143.1

A recently published report from Dell'Oro Group notes that overall wireless LAN market sales during 2009 are on track and will come in approximately 10 percent below 2008 sales figure. The Dell' Oro Group Five-Year Forecast Report provides a complete overview of the Wireless LAN industry and covers the service provider, enterprise, SOHO and external client devices markets. At present, the wireless LAN market is witnessing improved sales to household users. In fact, the household segment is the largest segment of the WLAN market and is performing better than sales to enterprise users.

Harris Stratex Networks Signs Contract with ICOMM

http://tmcnet.com/15144.1

Harris Stratex Networks, Inc., a provider of wireless solutions that enable the evolution of next-generation fixed and mobile broadband networks, has signed a contract with ICOMM, one of India's major groups in the field of telecom, power transmission and distribution EPC, solar and infrastructure, to supply, install, commission and maintain an IEEE 802.16e mobile WiMAX network for Bharat Sanchar Nigam Ltd. Harris officials said that under the multi-year contract, the company will supply its StarMAX WiMAX solution to extend BSNL's public wireless access network to provide high-speed wireless mobility services to enterprise and retail customers in urban areas across the southern Indian state of Kerala.

www.harrisstratex.com

www.icommindia.com

Globalive Wireless Selects SmartTrust's Solutions

http://tmcnet.com/15145.1

Globalive Wireless, a subsidiary of Globalive Holdings, reportedly selected solutions from SmartTrust to build an "extremely sophisticated," yet user-friendly wireless network. SmartTrust a developer of mobile device management and SIM management software for mobile operators. The company will supply Globalive with a common and SIM independent platform for managing next-generation handsets, a customized roaming product, and a turnkey solution for launching value-added services.

www.globalive.com

Verizon Wireless Apps Turn Mobile Phones into Personal Trainer

http://tmcnet.com/15146.1

Verizon Wireless is giving customers a relatively inexpensive way to say fit and healthy – through its wireless phone applications. The wireless telecom company is out with four applications to help cell phone users stay healthy and in shape without having to go to a gym. The apps are part of Verizon's recently announced plan to join the Joint Innovation Lab to help accelerate the uptake of innovative mobile technologies on a mass-market scale. The mobile apps are designed to enhance the mobile Internet experience on a variety of smartphones, and also mid- and low-cost handsets on multiple operating systems. Each widget is available for a monthly subscription, Verizon Wireless officials said.

www.verizon.com

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SIP Trunk Deployments, Issues, Solutions

Wednesday, September 2

8:30am	Legacy PBX/PSTN and SIP Trunking • Business Strategy: How to Sell SIP Trunking to Legacy PSTN/PBX Customers • Technical Strategy: Secure SIP Trunking in Legacy PSTN/PBX Environments
11:00am	SIP Trunking and Security
1:00pm	SIP Forum SIPconnect Compliance Workshop

SIP Trunk Boot Camp

Thursday, September 3

8:30am	SIP Trunk 'Basic Training' with Ingate

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Asterisk Gets 400 Million New Users

By Erik Linask

Traditionally something of a niche phenomenon, open source PBXs have seen a significant surge over the past few years and it has become much more mainstream and more competitive with traditional communications systems. According to The Eastern Management Group, open source PBXs claimed 18 percent of the North American market in 2008, a 40 percent growth from the previous year.

There are several reasons. Open source is becoming less mysterious as its user base grows and word of its reliability and stability spreads anecdotally. The economy also has certainly played a major role, considering an open source PBX can cost 40 percent less than traditional alternatives.

But, perhaps the most important driver of growth is the ongoing development of features and add-ons from the open source community. The very nature of open source – particularly Asterisk, the gold standard to which all other open source solutions are compared – is to encourage development of new capabilities that can be bolted onto an Asterisk PBX to harness the full power of IP communications.

When you talk about the power of IP Communications and its rapid growth worldwide, one of the first names that comes to mind is Skype, which now boasts more than 405 million registered users, with some 12 million of them online at any given time. Despite those figures, and although there have been a few products designed to bring Skype more effectively into the business environment, the key limitation has been that Skype has never been very effectively integrated into the business communications network – until now.

Digium has bridged the divide between Skype and the PBX with its launch of Skype for Asterisk, a connector module that allows businesses to connect their desktop phones to Skype through an Asterisk PBX. Not only does this make Skype calling easier in a business environment, it also allows Skype calls to be connected to IVR systems, ACDs, and any other telephony applications that are part of the PBX platform.

Skype for Asterisk, which Digium co-developed with Skype, is the first Skype-sanctioned connector to a full-fledged PBX system. The add-on to an Asterisk PBX lets businesses register as many Skype accounts as they need, allowing users to receive calls from Skype accounts, right on their IP deskphones. With a bit of additional configuration, users can also place outbound calls to Skype accounts through their Asterisk PBX.

"Anybody can call you over Skype, and when it hits Asterisk, it becomes just another Asterisk call," explained Steve Sokol, Product Manager of Software at Digium. "For outgoing calls, the call would come from a SIP deskphone to Asterisk, and Asterisk would recognize the extension is pointed to a Skype username, and it would simply send the call directly there."

One of the concerns of IT departments has been security, especially regarding the file transfer capabilities that are part of Skype. The calls themselves don't present much of a threat, since they are encrypted and run directly from endpoint to endpoint. For IT managers who are concerned about the potential loss of sensitive proprietary information when users have Skype installed on the desktop, Skype for Asterisk circumvents the threat because it is installed on the Asterisk server, not on the desktop. It's part of the IT infrastructure and entirely under the control of the IT department.

As for its scalability, it's a commercial product and is meant to perform as such.

"It goes as far as what you want to buy licenses for," says Sokol. "There are some physical limitations eventually; if you have hundreds of thousands of calls, you'll probably overwhelm the processing power of the computer it's running on, because Skype is encrypted and Skype data has to be decrypted as it comes in."

There's an obvious synergy between Skype – a free VoIP calling platform – and Asterisk – a low cost, reliable alternative to proprietary systems, which makes this partnership a no-brainer. Skype also has grown more rapidly than even Niklas Zennstrom could possibly have imagined, and Digium's bet is that it will continue to grow, as more capabilities are built into its application, which Digium will also look to add to Skype for Asterisk. Skype's IM capabilities, for instance, will likely also become a part of the product.

"We've discussed the possibility of extending this to support video, so you could have a SIP-based or other desktop video phone system and that would be able to transfer to Skype video and vice versa," said Sokol. "That's going to require some additional work on both sides, but we have high hopes for it. We're looking forward to a long relationship with Skype and continuing to expand what's available for Skype users and developers. "

For now, the case is simple: If you want to make free Skype calls through your PBX, install Asterisk and away you go. IT

Erik Linask is group editorial director of TMC.

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Masters of the Telecom Game

By Erik Linask

Anyone who has ever enjoyed the game of chess knows well that to be successful, you need to be able to not only outplay your opponent, but outthink him or her as well. That means having the ability to think several moves ahead and sometimes it works out as planned, while other times it doesn't.

This strategy is not unlike that which makes for a successful, growing business, where management is charged with predicting what the next moves will be for customers as well as competitors. It also means taking certain risks, hoping they pay off – using the pawns on the chess board, so to speak. When properly played, pawns can provide a fierce attack on an opponent's strategy, but if the moves don't work out, you risk losing only a pawn.

This same strategy is what PAETEC's Chairman and CEO, Arunas Chesonis, professes has helped PAETEC grow over the years, even now, in the midst of a major economic downturn that has seen many businesses – including many in the telecom space – suffer, and even fold entirely. PAETEC's approach has been to offer as broad portfolio of services as possible, allowing it to not only grow its business with existing customers, but engage new customers with a variety of propositions.

"You're never sure which is the path of least resistance into a prospective customer," Chesonis said. "You just have to have a broad enough portfolio, so that any time in the life of their company, you have something that can help them."

PAETEC's expansive offerings include telecom services, equipment, data center hosting, last mile fiber, last mile fixed wireless, business continuity, security and more. Such a breadth of offerings allows the company to bundle services as required by any individual customer, and is what drove its acquisition of PBX manufacturer Allworx back in 2007.

A large portion of PAETEC's customer base has a number of small satellite locations, in addition to one or more main sites, and the challenge with many large enterprise communications systems and their providers today is that they tend to focus most, if not all of their energy on servicing the larger sites, leaving the smaller locations to fend for themselves. The problem, of course, is such a strategy does little to promote a unified corporate infrastructure and business operations.

This is where the Allworx acquisition comes into play. It allows Paetec to offer these smaller pieces of large corporations an enterprise-grade communications solution that can easily be integrated into the corporate infrastructure and services set, all of which it can get through Paetec. It also allows Paetec to get much more creative with financing, since customers are looking to buy more of its products and services. And that's really the strategy that epitomizes Paetec – the goal is to be able to offer prospective customers as few or as many pieces of their telecom needs as the customer wants, but to at least get a foot in the door.

But, with the economy a major factor in play, along with existing contractual obligations, especially on the network services side, the challenge is finding a way into a customer. In most cases, large telecom services contracts – especially with PAETEC's two key competitors, AT&T and Verizon – come with minimum spend guarantees that preclude them from moving to an alternative provider, like PAETEC, at least until their contracts expire. With budgets as tight as they are, many customers are likely even struggling to meet those minimum spend thresholds, making it even more difficult for a company like PAETEC to make inroads.

"So, you're trying to work around the fringe and around different areas of the IT organization, trying to find out where you can get to know them and how you can help them," explained Chesonis. "Can you build them a business continuity system? Can you offer them a backup MPLS network instead using ISDN dial-up as a back-up? Can you provide them enhanced toll-free services or ACD and call center services that they might not even have been considering earlier, because they have a small, 30-person customer service center in one of their locations? Can you do something on the equipment side that can help them, because they can't afford the real high-end equipment, but have systems that are reaching end-of-life?"

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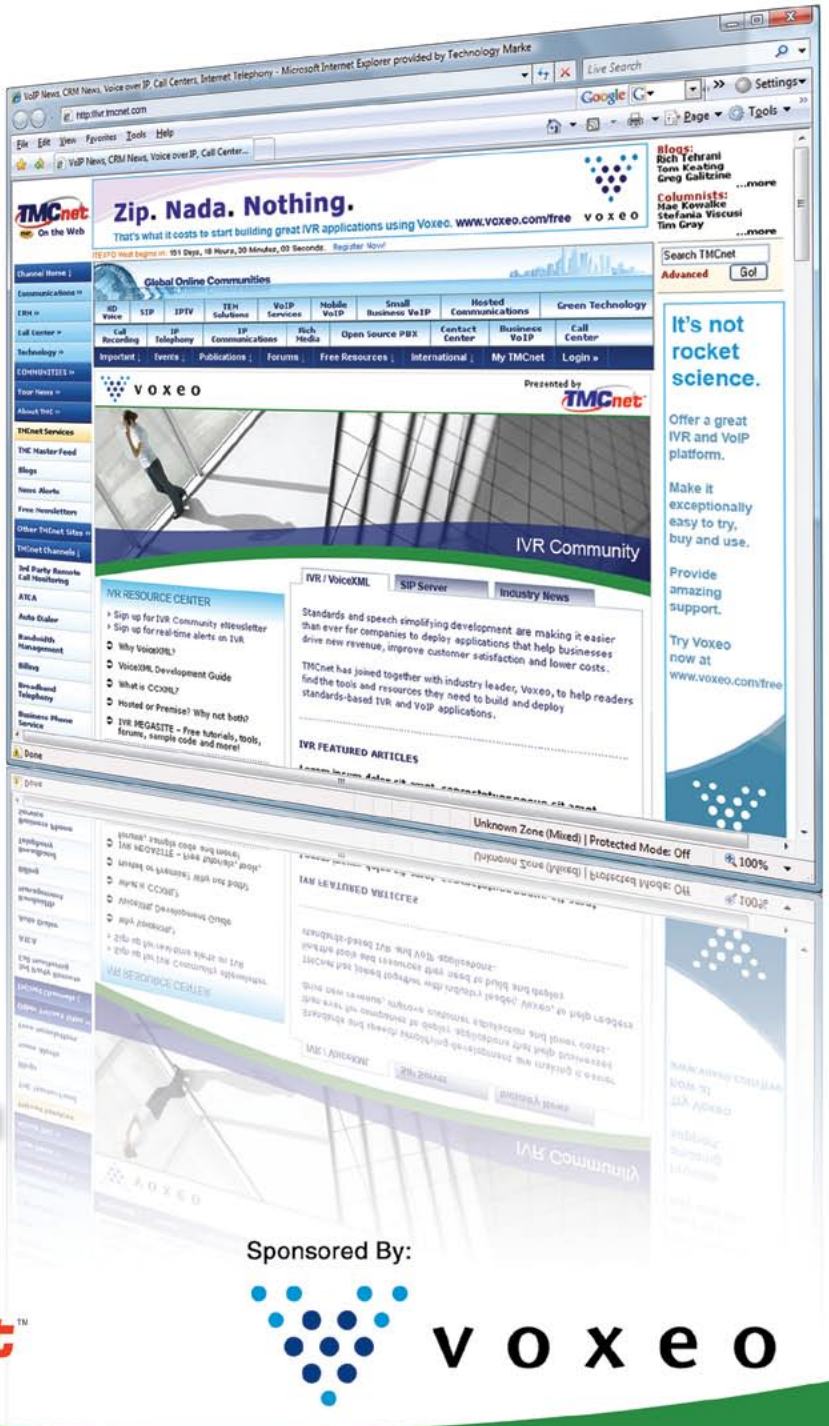

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Again, this is where the strategy of building a business model focused on breadth of offering, including the Allworx solution, proves itself. Knowing the forces that are playing against it, PAETEC looks to leverage its wide product set to find a way to help a business is a way that doesn't impact its existing AT&T or Verizon obligations.

Though it takes years to develop – PAETEC has made 15 acquisitions in 11 years – the approach pays out in spades. By getting to understand a prospective customer, and by coming up with creative ways of helping them build their own business, PAETEC can work its way into the inner circle of decision makers, such that when their contracts expire with their current providers, they are already considering ways to work with PAETEC in some greater capacity. If nothing else, market turbulence has created a need for companies, large enterprises, in particular, to diversify their service provider strategies.

"Once you get a little piece of a customer's business, you can prove yourself and then, we like to call it the little PAETEC quicksand," described Chesonis. "Once we're in, we're going to get you stuck forever by doing a good job and then trying to sell you more products and services."

Now, don't mistake this strategy for a market takeover play. PAETEC has about a two percent share of the business with its typical customer, yet, it generates $1.6 billion in revenues. Projecting over the next five to 10 years, if PAETEC can win a single percentage point of market share with its network side businesses that would amount to $800 million in additional revenues, a 5 to 8 percent growth rate. That's what PAETEC's strategy is built for.

"We're not looking to take over the world and put AT&T and Verizon out of business," qualifies Chesonis. "We just want a little piece."

Don't be misled, though. As diverse as PAETEC's own portfolio is, Chesonis also recognizes that in order to be successful, he must be willing to work with other key market players. In fact, even though the company can offer a complete hardware and network services solution, the bulk of its business comes through partnerships, including a referral program with VARs and interconnects companies, as well as its indirect channel, which includes Cisco VARs, Avaya dealers, and Mitel or ShoreTel resellers, among others.

With its own PBX business in place, it would be easy to fall into the trap of shutting out other vendors. But, Cisco, Avaya, and Mitel combined for more than a quarter of the PBX market in 2008 (Nortel and NEC made up another quarter or so), according to The Eastern Management Group. Given those figures, a business model that disassociates Paetec, at its core a network provider, from other vendors, would be tantamount to laying down its king in defeat.

Of course, having its own product set to offer allows PAETEC to go after that competitive client base when it sees an opening.

"Just because someone else has a relationship with a customer doesn't mean we're not going to build our own relationship with that client," noted Chesonis. "If people are not really being your partner, you want to have a way to go after that same customer base."

But, knowing it is competing with two of the world's largest service providers, as well as the biggest hardware providers, and understanding the challenges is faces – as the adage goes, nobody gets fired from buying from AT&T or Verizon. They might not exactly what they need, but they won't lose their jobs.

So, it circles back to an innovative and diverse service offering, and though Chesonis won't divulge all of PAETEC's secrets, he acknowledges that a big part of it is being able to find success in specific vertical markets, like financial services, healthcare, hospitality, and higher education, where PAETEC tends to get a disproportionate amount of business in many cases. It's a function of getting to know the customers, their industries, and their specific businesses, and, more importantly, according the Chesonis, knowing who to talk to within these vertical markets.

For instance, with its fixed wireless program, PAETEC can build anything from a 10Mb to Gigabit Ethernet last-mile system for customers, and already has about 200 deployments in the market. It plays well into PAETEC's strategy of looking for alternative solutions with which to add value to its customers. They may not be able to buy landline service from PAETEC, but they need a reliable, resilient back-up solution to conform to HIPAA or other industry-specific or state of local regulations. Chesonis says his customers attest that PAETEC's wireless backbones are as reliable as fiber networks.

"It isn't that our products are so much different," he says. "It's that we know what the issues are, we know how to approach decision makers, and we know why our products are important to their organizations."

In vertical markets, there is also a tremendous benefit in past successes, since customers tend to be much more comfortable knowing you have a solid understanding of their industry. For instance, it makes it much easier to sell into a university when they know you have hundreds of other university customers under your belt. That also makes them more likely to use PAETEC as a one-stop shop, rather than dividing their business among several carriers.

So, the big question is, why? Why would PAETEC diverge from what was a proven model to embark on a mission that could result in as many failures as successes?

It was a calculated gamble. Initially, PAETEC expected 80 percent of its revenues to come from demarcation point out –

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all the voice, data, international, toll-free and other network services that go from the customer premises out into the network. But, the idea occurred to them that, if they could generate 20 percent from the demarc in, they would not only be able to collect from different budget pools, but also create a much stickier service bundle because it would create an outsourcing effect with their different components of their internal networks and infrastructures.

"We always had that 80/20 rule in place and that's why we, in the early days, bought the communication management software company PINNACLE in 2000, that's why we became a Cisco VAR in 2000, that's why we bought an Avaya interconnect in 1999," explained Chesonis.

"A lot of people were confused when we started buying those other companies, but now they get it. It's very powerful when you can be working with a Cisco reseller, but you've been a Cisco reseller yourself for 10 years and know what they're going through. It builds a much better relationship with your partners when you can help them grow their business, which isn't possible with a traditional network provider model."

In fact, with all of its network and on-premises products and solutions, about the only business PAETEC has not gone after is the mobile wireless market. It's largely because not having that service to offer hasn't impacted its ability to win business, because many wireless provides were facing challenges in the market, and, perhaps most importantly, the enterprise space has yet to look to bundle fixed and mobile services in a meaningful way. That said, the market is changing, and PAETEC has its eyes on the wireless market as well.

"With our national footprint and large customer base, our distribution systems, our IT capabilities, and with the ability to integrate wireless and wireline networks in IP environment, you can expect to see that from us in the not too distant future," said Chesonis.

But that's just in the telecom space. With PAETEC's history of challenging traditional models, it shouldn't be surprising to learn it has also made a foray into the energy business by acquiring a small utility brokerage. It makes sense, if you consider the growing focus on energy utilization, and when you understand that PAETEC already has barter arrangements with energy companies, exchanging capacity in their power networks for PAETEC's acquired fiber capacity. PAETEC also has several arrangements in place where it has funded a variety of alternative energy solutions in exchange for long-term telecom contracts.

With its understanding of the energy business through its existing customers and partnerships in the utility space, and with its tradition of straying from the norm with some of its business interests, this move shouldn't be overly surprising, especially factoring in the growing interest in green technology and energy conservation.

In fact, Chesonis argues that it actually makes more sense than most people realize. Most businesses have very little understanding of how much they are spending on energy across their organizations, despite the fact that, aside from payroll, real estate costs, IT and telecom, and energy are the three largest budget line items. So the fact that there is so little information available around energy usage, especially in distributed enterprises, where usage crosses state lines and energy company territories, presents an opportunity for a telecom vendor willing to make the move and combine telecom with power, especially with energy costs expected to continue to rise for the next 20 to 30 years.

"For someone like PAETEC, who has a very large IT infrastructure, a large customer base, sales offices around the country, trusted relationships with people and the financial strength to be able to deal with the energy companies and other providers, it's not that crazy that you'd see us wanting to get into this kind of business to help make our telecom offering that much more unique," explained Chesonis.

He acknowledges this venture is not a significant source of revenue now, and it may not be for some time. But he has made the bet that it will in five or 10 years.

More important, not only has PAETEC made technology and other service moves for the future, it also has taken measures to ensure its financial stability over the next decade and beyond. With the economy as it is, many companies are struggling with keeping themselves out of bankruptcy or restructuring and are forced to devise short-term strategies to simply stay in business. Hundreds of billions of dollars in loans are going to come due and need to be restructured in the next three to five years, and with the economy and the financial industry as weak as it is, there's no telling who will come out of that restructuring period unscathed.

PAETEC, which was first started through investments from friends and family, not banks and venture capitalists, has taken steps – including restructuring its existing debt – to ensure that, even if its revenue remains flat, it will be able to pay down that debt almost entirely over the next eight years from its free cash flow.

"We just wanted to get ahead of it and do it now," said Chesonis. "You just want to make sure you're thinking long term ahead of the curve and that's what we've always tried to do as a company."

When you look at each of the strategic moves PAETEC has made over the past 11 years, individually, many of them don't make a whole lot of sense. Some of them do, like the acquisitions of US LEC, McLeodUSA, and even Allworx, but others, like getting into energy, may not. But each one is part of a bigger picture that Chesonis sees, merely moves on his telecom chess board, all leading to the ultimate outcome.

Check and mate. IT

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IP in the Contact Center: The Time is Now

By Erik Linask

The migration to VoIP platforms, despite current economic conditions, is still strong. In fact, depending on which vendor you ask, quite a few say they are benefitting from the economic downturn, as more and more focus is placed on reducing operational costs in the enterprise. Cost savings has always been the hallmark of IP-based communications, and when CIO's and other key decision makers evaluate the associated business process enhancements that come with IP platforms, it becomes almost a no-brainer, especially with some of the creative financing offers for on-premise systems and low-cost hosted alternatives available today.

That same trend is extending from the enterprise into the contact center, with more and more contact centers looking to consolidate their systems into a single location from which they can serve their main centers and at-home agents. Given the trend towards IP and the lack of new TDM switches being deployed, that hardly comes as a surprise.

What is, perhaps, surprising, according to CyberTech's marketing manager Ed Kawecki, is that the migration process in contact center environments has been so smooth.

"The advantage, of course, is being able to consolidate multiple sites into a single location to give you a lot more flexibility," he said. "It's gone better than expected."

Carol Kline, CIO at TeleTech, which handles some 3.5 million customer transactions each day on its global IP platform, goes a step further: "The concerns people had seven years ago aren't there anymore. Yet, there are still a lot of companies that haven't made the migration, and it's kind of surprising."

The Geography of IP

That notwithstanding, the migration from TDM to IP infrastructures overall has been remarkable, and is a testament to the stability of IP networks and the innovation that has gone into developing new applications to enrich the contact center agents' capabilities – including the deployment of at-home agents, which has the secondary effect of increasing the net income, since agents' commuting costs are cut to nothing.

"In major cities, the average commute is 18 to 25 miles each way, costing agents several hundred dollars a month to go to work, so there's a different kind of ROI, which helps keep agents highly motivated," suggests Greg Sherry, senior director of marketing and business development at Verint.

But, the true benefit comes from the ability to leverage VoIP and IP technology to deliver better applications and services quickly and more reliably and, as in the pure enterprise space, it's the ability to deliver those applications over the network that is helping drive interest in the contact center, and it matters little whether it's a pure hosted service, a SaaS model, or an on-premises solution. The benefits of IP are equally applicable.

"It's broadband that's enabling our model and the applications, with call center being one of the applications being delivered over broadband, is enabled by the fact that broadband is good enough now to do telephony," explained Mansour Salame, CEO and co-founder of Contactual. "In some cases telephony over broadband is actually better quality that over the PSTN. And home agents, that wasn't even an idea when you were talking about the legacy environment."

In addition to pure cost savings, by leveraging IP communications, contact centers are able to overcome some of the challenges with traditional call center models. First, they are no longer limited by geography. Agents can be located in the same site, another center across the Atlantic, at a small remote facility, or at home, but they can still have access to the same systems and the same customer data as all other agents. In addition, they have the ability to adapt quickly to customer needs and technological innovations because applications can be quickly and easily upgraded and added in an IP infrastructure – just like businesses and home users alike can quickly upgrade to a new version of MS Office.

"Before IP, the economics were not possible in a traditional telephony network," said Salame. "This is why people used to buy their own call centers. Now, we're able to deliver their functionality right out of the network without any CAPEX or any upfront project implementation budget. IP telephony enables you to leverage the Internet as a delivery mechanism to end users, and once you have that network between the

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As for the viability of an IP-enabled contact center, Kline says TeleTech runs about two billion minutes of VoIP annually on its platform. The company made the transition over the past five years, having invested about $250 million into virtualizing and centralizing its infrastructure to be able to support its delivery channel around the globe.

TeleTech uses it for its own contact center, and for its hosted customers, which include some of the biggest names in telecom, including AT&T, Verizon, Comcast, Time Warner, O2, Orange, Vodafone, and Telstra, among others. In fact, when calls flow in for the 2010 U.S. census, they will come across the TeleTech platform to agents. Those agents will be from TeleTech and other companies, but they will all be on TeleTech's system, running on a Cisco IP platform (TeleTech uses primarily Avaya and Cisco for its IP technology).

"We have four 'giga-pops' around the globe, primarily placed where we aggregate our traffic, and we have an at-home offering where we can take it to your house using the same infrastructure that we use to send calls to the Philippines, to South Africa, to Argentina, or to somebody's house here in the U.S.," said Kline.

Whether a pure hosted contact center or and enterprise center, IP technology frees users from being tied to on-premises hardware in a traditional outsourced call center or distributed organization. Now, by flattening the network and consolidating hardware in a single site, agents can be deployed anywhere, using a softphone or a hard IP phone. In, fact, all agents need is an RJ-45 jack to connect to the network, and they are able to offer any contact center services available in a central office.

The Agent Desktop

Certainly, there are many IP phones that are more than adequate for a contact center environment, but many centers are tending towards softphones – software-based telephony interfaces the reside on the agent's PC desktop. A softphone is less cumbersome, doesn't require any additional cabling or power, and agents need to access information on their PC desktops in order to effectively service customers, so it makes sense – not to mention the reduced CAPEX by not having to buy hundreds or thousands of hardphones, which would only be connected via an automatic lifter to the PC anyway.

"The communication flows go through the computer anyway, so if you can have it all centrally located on the PC desktop it's a much better overall experience for the user because you can tie various systems together," said Todd Carothers, vice president of product management at CounterPath. "We're starting to see that trend more and more and a large portion of our leads are call center-based."

The desktop model also make the agent much more accessible via the different communications methods enabled by IP networks and Web 2.0 technology, like click to chat, click to call, email, and even video calling, which is still an significant outlier, though TeleTech does have a product that could be used as a video agent.

"At the end of the day, it's a lot easier to do things graphically and take advantage of the larger screen size," noted Carothers. "We see people taking advantage of the real estate on the screen, and other SIP-based applications that can feed into our client that support the call center environment."

Adoption of video communication in the enterprise and consumer space is still, at best, slow, outside of video conferencing to help mitigate the cost of travel, interest is growing, thanks to collaboration technology like telepresence. PC's certainly are powerful enough to handle video, the cost of broadband is steadily decreasing, and the applications are already being developed and can be integrated into contact center software easily, so it is presumably only a matter of time before video become a part of the contact center in some way.

The most likely wide-scale implementation is to accommodate the hearing impaired, who will be able to leverage live video agents in a two-way video call to use sign language to communicate with the agents. The video contact center could well be a key differentiator for wireless providers, who will then be able to market cell phones to the hearing impaired community by offering them more than text messaging capabilities.

The Multi-Vendor Contact Center

Of course, with all the new applications being developed for the contact center – it's widely acknowledged that we are living in a best of breed world, where most businesses have adopted a multi-vendor approach to their technology, including call center applications.

Of course, that's where the work comes in for the softphone developers, like CounterPath, which puts considerable time and effort into ensuring interoperability with various applications.

"A diverse server strategy offers a variety of functions that roll up into our client," said Carothers. "With our softphone, customers can have a multi-vendor offering on the server side, and we bring it all together under the client hood."

For the user, what this interoperability work really accomplishes is working out any bugs before actual deployment, limiting the need for troubleshooting and simplifying management, and also speeding deployment time.

A multi-vendor strategy becomes more prevalent as the size of an enterprise or contact center increases, which means integration and interoperability become paramount to ensuring overall operational efficiency. For call flows and voice quality, ensuring that all applications and hardware are optimized requires and end-to-end analysis of the network, from the caller to the contact center desktop.

As new technologies and new applications, including VoIP, are added to networks, the task of service quality assurance requires addressing interoperability between applications, and making

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sure new technology that is introduced as discrete pieces of the network are all optimized to allow voice calls to get through to the agent, to the IVR, to the CTI platform, and to the CRM system.

"Even though VoIP and the SIP protocol have been around for almost a decade, the fact is that the major players implement them a little differently, so contact centers that have multivendor implementations have a risk of running into interoperability problems," explained Joe Dumont, manager of the Advanced Solution Group at Empirix. "That's exactly where we're positioned, to be able to handle testing scenarios around multi-vendor implementations.""

As new and increasingly complex applications are added to contact center platforms, issues like application sequencing become an ongoing issue. Centers must be confident their incoming calls will be directed to the appropriate applications in order for the entire operation to function properly. Imagine is a call that is supposed to go into a self-service IVR system goes into a live agent queue, and vice versa.

"The concern about voice quality in the IP world is a huge one and it's what vendors tend to be worrying about most," noted Tim Moynihan, vice president of marketing at Empirix. "How do I assure this call is going to go through at great quality and if voice becomes just another application on a media platform, how do all the applications sequence and interrelate and interoperate as expected?"

To help solve these sequencing and interoperability issues quickly, especially in today's challenging economic environment, Empirix, which is known for its Hammer line of load test equipment, has introduced a new model that is basically a blend of its existing Hammer products, delivered as a service through a combination of products and people. It is designed to provide a cost effective and efficient test solution for very complex contact center environments, like utility companies, which are required to comply with local and state regulations for handling call loads in emergency situations.

The model is one that marries nicely with evolving contact center environments because it provides not only the appropriate equipment, but also expert staff on site to work with test engineers, combined with Empirix' managed service for a complete test solution. It also provides flexibility in invoicing, because it focuses on working within contact centers' operational budgets, as opposed to requiring high up-front capital investment.

This new testing as a service model from Empirix follows the growing trend towards providing services while minimizing capital expense. It also incorporates new features, including two-way voice call testing, interoperability and testing of new applications, and multimedia testing – all of which are critical to next generation contact centers, both inbound and outbound.

"In these economic times in particular, we feel this is a better way to get testing done," said Moynihan,

The Big Picture

When all the technology and applications and business models have been sifted through, it all boils down to the one constant in the contact center world: a need to provide a first-class experience for the customer on which any business is dependent upon for its livelihood. That's what IP-based contact centers are designed to provide – increased operational efficiencies that allow agents, regardless of where they are physically located, to all leverage the same technology to provide efficient customer service.

"Right now, it's starting at the desktop," said Carothers, though he sees growing interest in extending the same capabilities into the mobile environment, especially in cases where customers require the expertise of a specific agent to handle technical issues or for consistency of the relationship.

Furthermore, the beauty of IP is that it delivers the same benefits to the smallest contact centers as it does the largest – both in terms of cost and an ability to increase service quality. Naturally, every business is much more cost conscious today than it was five years ago, and there are a number of skeptics who are reluctant to transition to IP. But, in a downturn, there is always an opportunity.

The biggest driver right now, according to Sherry, is that while businesses may not be able to add customers very easily, and they may not be actively engaged with expensive marketing firms, but they will focus on existing customer retention.

"The prevalent thinking is, 'I want to keep those customers and I want to keep them satisfied,'" he said. "That doesn't go away and companies will still make investments if you can show them that."

But, because cost is such a major factor today, and because IP networks have become highly resilient and reliable, the hosted model has a tremendous upside. There is no expensive, specialized hardware required, there are no more special power supply requirements – there's just the application.

"Once you have everything on IP, it doesn't matter if it's running your office or in our network," notes Salame. "Actually, our network is more resilient than what most companies can provide, especially when you go to home agents and the like."

"It's working out really well," said Kawecki. "The only thing holding it back is some people saying, 'What I have works, and I'm just not going to change it until it reaches its end of life.'"

But, the maintenance on those companies' existing TDM switches can be exorbitant, which is likely to drive even them to all-IP environments sooner, rather than later, particularly if they consider how cost effective an IP contact center can be, even in deployment. Salame believes, with the Contactual model, he could maintain the 7.5 million or so existing contact center seats for something near $5 billion annually, compared to the $25-30 billion is costs now.

The IP contact center has a proven ROI, and if you consider a hosted model, where deployment can be accomplished in hours as opposed to days, weeks, or months, customers can actually begin using their new systems before they even pay their first bill. It's like getting a return without investment. IT

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The Decade of VoIP

By Erin E. Harrison

It seems like almost yesterday that we were all bringing in the new millennium, and worrying that the world would come to an end as the clock struck midnight. With the first decade of the 21st century nearly over, I thought I would reflect on the decade. To help me along the way, I spoke with Philippe Babin, the general manager for Media5 Corporation, an industry leader in the development of VoIP solutions and services.

EH: I am calling this the decade of VoIP, but really there were many times when they were calling for the death of VoIP.

PB: True, throughout the last 10 years it seemed that more times than not critics were counting VoIP out.

EH: Did you ever doubt that VoIP would work?

PB: There are always uncertainties, however we truly believed in our direction and this new technology called VoIP – after all we have been developing VoIP products from its onset. Early in the decade, VoIP was in its infancy, with challenges surrounding voice quality, reliability, interoperability and security. The industry also faced the challenges created by the dot-com meltdown, which had significant impacts on both investment in technology as well as communications infrastructure.

There was also reluctance amongst the major service providers to promote VoIP. Early on it was an argument about voice quality, but over time it became more about protection of their revenue base, even as developers brought new solutions to the market, offering better and better voice quality and reliability.

Finally, a major hurdle for VoIP has been the public's understanding of what exactly VoIP was, its benefits and value to enterprises, service providers and consumers. A key challenge has been getting out the message that VoIP provides wonderful opportunities, and is certainly not just a technology to use on a computer. But I am glad to say that VoIP now is a fundamental component of our modern telecommunication systems.

EH: We are now ready to turn the corner on a new decade. What does the future hold for VoIP?

PB: VoIP will be a significant catalyst for change in the way that service providers, enterprises and consumers use communications. VoIP takes on different names and forms: be it IMS (IP Multimedia Subsystems) for service providers looking to voice, video, wireless and IP systems around SIP or unified communications in the enterprise world. We have not reached market saturation anywhere in the world. The current economic slowdown has had little effect on the VoIP market. A recent report showed that in the enterprise segment, VoIP users had continued to rise to over 28 percent in 2008 and it is expected to be over 50 percent by 2012.

Challenged by the new generation of "over Internet" services providers, traditional telcos around the world are considering the use of IMS or UC system to differentiate themselves. Should it be over wireless, WiMax, copper lines or fiber optics, to protect their market segment or expand into new regions.

Beyond this, we believe that as VoIP and SIP evolve, users will expect broader capabilities. We feel that security and survivability will become ever-more important capabilities in enhanced VoIP solutions. Our plan is to ensure that our solutions are leaders in these areas. With our Media5Boss solutions on one side, but also our easy to customize software and hardware platforms, we enable the service providers to thoroughly differentiate themselves by offering well proven technologies.

This year we released the Media5Boss-Branch, an advanced, all-in-one suite of cost-effective solutions designed to offer security and survivability in multi-site, branch office environments. We are convinced that these offerings will meet the needs of organizations looking to deploy security and survivability into their overall telecommunications infrastructure.

We are also seeing some exciting developments in the area of mobility. Offices today are anywhere and everywhere. We have recently introduced several interesting mobility solutions to provide enhanced and integrated communications for an enterprise's mobile worker.

Media5Boss-Mobility, a powerful all-in-one solution for secure fixed mobile convergence.

Media5-Fone, a SIP Client (softphone) that runs on the Apple iPhone.

As well as the Mobility SDK, a software development kit, allowing service providers to easily create their customized, secure SIP-based applications that can run directly on the iPhone.

While there are challenges ahead, we are excited by the opportunities that the next decade will provide, and we are already at work on the next wave of solutions. IT

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By Irv Shapiro

The Telecom Industry Evolves: From 'Old' and 'New,' to App-Focused Telcos

Over the past 20 years the telecommunications industry has undergone two fundamental transitions: first, from "old telco" to "new telco" and now, to application-focused telcos.

As Martin Fransman, professor of economics at the University of Edinburgh wrote:

"The demise of the Old Telecoms Industry began in the mid-1980s when, due to different combinations of political-economic circumstances, the monopoly of telecoms was ended in Japan, the U.K. and the U.S."

This classic economic telecommunications model often requires years of customer usage before these providers break even.

Fransman continues. "In the 1990s a new set of influences, that had begun 30 years earlier in an initially unrelated set of activities, brought about fundamental forces that further transformed the telecoms industry into the Infocommunications Industry. These influences came from the Internet based on its triad of core technologies: packet-switching, Internet Protocol (IP), and the World Wide Web."

As a result of these industry wide sweeping changes, the standard definitions of telecommunications companies no longer apply. I would like to propose a new set of definitions, classifying telecommunications companies as facilities based (FACTEL), virtual (VIRTEL), or application-focused (APPTEL).

FACTELs include all companies with cables either in the ground or on poles, or significant physical and distributed infrastructure. This would include traditional ILECs, CLECs that rent facilities from ILECs, cable operators, and facilities based mobile operators. All have spent millions or billions of dollars on capital spending for infrastructure, and primarily recoup their investment by charging for dial tone.

This classic economic telecommunications model often requires years of customer usage before these providers break even. As the rate of change in telecommunications increases and the diversity of competition expands these models will come under increasing economic pressure.

Much of this economic pressure is generated by VIRTELs, which house their entire infrastructure in centralized, in the network, data centers and utilize IP circuits to support hosted VOIP solutions. Since these solutions work over existing Internet links, a VIRTEL does not need to buy nor build a cable or last mile infrastructure. This gives them an economic advantage and is the reason why VIRTELs such as Skype and Vonage are able to deliver dial tone at highly competitive prices or perhaps for free. The 'free' approach has not yet been proven to be profitable, calling into question the viability of the business model.

Finally, APPTELs leverage universal telephone access to deliver advanced applications to any telephone. For example Google Voice is based on Google's ability to terminate or place a telephone call to any traditional telephone number.

Although Google does host a sophisticated call routing infrastructure to deliver calls, it is similar to VIRTELs in that it does not incur last-mile or cabling-based costs. In fact, an APPTELis able to deliver calls to telephones provisioned by FACTELs and VIRTELs.

While FACTELs and VIRTELs compete for a customer's dial-tone dollars, APPTELs charge for applications with much less competition and are easily able to differentiate their service offerings.

A crystal clear case in point is Salesforce.com. It's an example of a comparable economic model to the APPTEL business approach. Salesforce does not provide Internet connectivity yet it utilizes the Internet to deliver its services.

The Salesforce application works equally well over any Internet connection. Because it is an application Salesforce is able to value price their solution while the Internet ISPs compete in a tightly defined price band for connectivity dollars.

This very same dynamic applies to one group of the telco industry, APPTELs. APPTELs are able to value price solutions with measurable business benefits while dial-tone providers compete for increasingly scarce dollars.

With the addition of SIP trunk connectivity options from companies such as Ifbyphone, FACTELs, VIRTELs and call centers, are able to integrate an APPTEL solution into their platforms. This integration provides FACTELs and VIRTELs with a powerful value-priced addition to their product lines. IT

Irv Shapiro is CEO of Ifbyphone. Visit his blog at http://public.ifbyphone.com/irv or email him at ishapiro@ifbyphone.com.

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The Future of IPTV

By Erin E. Harrison

Bucking downward trends in the economy through aggressive deployments, IT market researchers predict that Internet protocol television – or "IPTV" – will grow more than 50 percent this year. According to international research firm Parks Associates, the number of subscribers worldwide to telco/IPTV services will approach 40 million by year-end 2009.

IPTV is a system where a digital television service is delivered using Internet Protocol over a network infrastructure, which may include delivery by a broadband connection. A general definition of IPTV is television content that, instead of being delivered through traditional broadcast and cable formats, is received by the viewer through the technologies used for computer networks.

The global recession has been a stumbling block in this market, yet strong growth in telco/IPTV services is predicted – partly due to aggressive provider deployments, according to the firm's recent whitepaper, "IPTV and the Digital Home." The most successful rollouts will incorporate multiple services, such as home networking, convergence in entertainment and communications features, and unique interactive services such as quality on-demand programming, industry experts say.

Parks Associates reports the number of telco/IPTV households worldwide grew by nearly 80 percent in 2008 to exceed 20 million. It is forecasted that the growth rate will exceed 50 percent in 2009. Japan is seeing greater deployments, however, the United States is projected to see a larger movement toward IPTV deployments, industry experts say, as more residences transition from cable to wireless.

"In Asian markets, such as Japan and Taiwan, IPTV is pushing home networking like you would never believe," said David Thompson, product marketing director of Taiwan-based Zyxel, which also has a headquarters in Anaheim, Calif. "In North America it is now very common for most homes to have a wireless router, so you can get WiFi throughout the home, you can carry a laptop or a new netbook around the house, but very few people are actually doing anything other than some basic video functionality over WiFi."

"Demand for IPTV continues to grow and is continuing to build up, even with the slowdown with the economy the first two quarters, it's starting to pick back up or at least hold steady through this economy," Thompson continued. He said that the IPTV server market is expected to triple in the next four years.

Zyxel is a leading provider of broadband access solutions for service providers, as well as for businesses and home users and offers triple play, quality of service, network security and network management services.

Marc Savoie, vice president of product management at Mariner – a New Brunswick, Canada-based provider of IP video solutions and consulting services – said that on the cable side, there are great strides being made to increase the amount of interactivity across both cable and IPTV.

"IPTV to date has been focused on getting up to par with the cable operators, so offering broadcast television the PVR services, high definition services and payloads," Savoie said. "I think you find now that telco IPTV operators are now pretty much at par with their cable companies. Now, you're seeing a lot more telcos leverage the fact that they bought this IPTV platform that allows them to do interactive services."

Through its "lifecycle" services, Mariner develops technologies for the IPTV industry. Savoie said that – especially in North America – the "cash cow" of voice has been eroding for telcos for about a decade and voice over IP, like IPTV, has enabled cable operators to take the whole bundle away from the telcos.

"Where we think the gauche is it costs more for the telcos to operate that environment then the cable companies and satellite companies as well so right now they're at a disadvantage on the operational expenses so it just costs more to operate that per customer," he said. "So it's hard to compete when you're rolling more trucks because it's costing you more money to roll those trucks, every time a customer calls in it's costing you more money. The cable operators have fine-tuned that and have been able to because they had a 10-year head start to benchmark and establish

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best practice on the cable operations, telcos had to pretty much do a step-function in the last five years to become TV operators."

Patrick Moreno, product manager for IPTV at Zxyel, said that telecom companies are starting to gain greater traction in the IPTV market, but it's been an uphill battle.

"The market has obviously been evolving in the last few years and it's always been dominated by the MSOs operating their packages with the television and Internet and now the telcos are starting to come up and they have that technology to be able to deliver the IPTV type of service," Moreno said. "New trends are developing where users actually have more control and they can select any kind of content they want and have it on demand when they want it. You see this now recently with cable and satellite offering interactive widgets and tools to allow you to get the weather and sports scores make it more attractive to customers."

For Savoie, the competition for customers yields a catch-22.

"Every time you touch a customer you have just reduced your ability to make that customer profitable for you," he said. "So every single truck roll that gets there pushes out the profitability for that customer by several months, so that's where we went and productized some of our thinking and requirements gathering into a suite of products called XFUTV Care that goes after the operational expenses with laser-like focus on reducing those costs."

"It's a huge capital and resource intense endeavor to update your access network. But we're seeing quite a bit of success of telcos doing this over DSL and you're starting to get some great technology that's able to mask some of the issues that you're seeing in access networks such as Microsoft, which has built into their platform a packet repair technology that allows them to repair small packet loss that occurs in that bottleneck of the DSL network. Cisco is another company that has come to the table with a product called the VQE platform which does Packet repair for the access networks, so you are starting to see vendors come to the table with some technology that it goes after optimizing that last mile, so stretching out the capacity of that DSL link. Despite being bandwidth-limited, there are all sorts of technology that's enough to deliver HD services reliably to most households."

According to Tier-1 global IP network services provider NTT America, while demand for IPTV is increasing, the number of IPv4 addresses is decreasing.

According to the American Registry for Internet Numbers, the availability of IPv4 addresses is down to 15 percent with the number decreasing every month. It is estimated that by mid-2012 the pool of IPv4 addresses will run out, creating a sense of urgency for the adoption and implementation of IPv6. IPv6 solves the address crunch problem by offering a vastly expanded usable addresses space. IPv6 also offers a significant number of benefits for the development of new IP based applications, such as IPTV.

Cody Christman, director of product engineering for NTT America, explains that Japan is seeing the greatest proliferation of IPTV deployments using IPv6 service.

The company's Japanese subsidiary, NTT-Plala, offers Hikari-TV, the first large scale, commercially successful IPTV over IPv6 service. The Hikari-TV service comprises 76 channels including high-definition channels, more than 10,000 video on demand titles and over 13,000 titles in its karaoke service, and is accessible to consumers via a "broadband button for Hikari-TV" on the remote.

"This network has 89 percent coverage in Japan and over 10 million fiber-to-the-home subscribers," Christman said. "One of the benefits of these closed networks is it gives the provider a little more control than they have on the broader open public Internet, especially when it comes to things like quality of service."

That may make it seem as though telcos have a major advantage over traditional TV service providers. Yet, according to Savoie, other problems emerge – in part because telcos saw a later market entry and they're facing established industry standards and customer benchmarks.

"Most telcos would tell you that this was a difficult service introduction," he said. "For telcos it's the first one that a benchmark was already established. The traditional role of a telco has been telephone, Internet overlay services, mobility services and then they got into TV. It's the first service they introduced that a customer benchmark had already been established."

The growing interest in IPTV combines increased broadband penetration with the capability of integrating television with other IP-based services on a home network such as Internet access and phone service, video on demand and karaoke, and opportunities to make TV interactive, ultimately making more efficient use of the broadband connection, NTT executives say.

"The purist in me says IPTV is traditionally telcos providing TV service over their copper or fiber lines," Savoie said. "Where there's a clear distinction for me is as soon as you go Quam that is typically a cable deployment. For example, the Verizon broadcast TV deployment, in my personal view looks a lot like more a cable deployment. While for AT&T and others that is more of what the industry defined as a telco IPTV offering. It opens the door to a lot more interactive services."

"You certainly sense that over the next few years there will be a coming together of those systems. It will all start depending on what your access network looks like – whether it is a combination of fiber and DSL – that today defines whether it's IPTV or cable. But as you're seeing more fiber to the home deployments those lines are being grayed out." IT

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Enterprise WiFi: From 'Best Effort' to 'Mission Critical'

By Erin E. Harrison

Companies are increasingly deploying voice over WiFi solutions to improve the flexibility of the workforce and become more mobile. However, sometimes in order to take two steps forward, they may have to take one back first. The challenge for enterprises to become more mobile encompasses not only the available technology, but cost containment and feasibility as well.

The potential increase in workforce productivity from deploying voice solutions over the wireless network notwithstanding, several challenges exist for enterprises to install a seamless solution, according to Chris Kozup, senior manager, mobility solutions for Cisco.

"The first thing we continue to see, and which is perhaps is even accelerating, is the breadth of new mobile devices coming into the market – specifically, those that have WiFi connectivity in them. It's not be limited to the traditional types of devices, such as laptops or phones or scanning handheld devices," Kozup said. "We really see a whole host of broader endpoints now requiring WiFi connectivity as well – Things like LCD projectors, digital cameras, a host of medical/health care devices, such as infusion pumps, heart monitors, etc., and even vending machines, all with embedded 802.11n. You're really seeing this broad proliferation of endpoints that are now embracing WiFi as a connectivity means to access network resources."

Kozup explains that these varied endpoints have more than one implication. For one, "all those devices all are expecting to connect somewhere and I think the implications for the enterprise, specifically, is that we do expect to see continued demand for WiFi access," which he says will result in broader, more pervasive deployments.

The Future of WiFi and Mobile Convergence

Looking ahead, Kozup predicts that most enterprises, ranging from small to medium-sized businesses to large corporations, will move toward a "blanket" approach to meet their WiFi needs.

"We do expect this kind proliferation of devices to really continue to drive enterprise customers towards pervasive coverage, really kind of blanketing their facilities, but also we expect them to look at really delivering or embracing WiFi systems that are really much more enterprise class and designed for the feature functionality requirements that just the breadth of these devices – and the subsequent applications that will be running over them – ultimately require. We're talking about a move from 'best effort' to 'mission critical' expectations in terms of SLAs."

Kozup notes that there are many cases where customer needs can be satisfied by technology that exists today, though "seamless mobility" is going to be difficult to actually achieve.

"The industry is still in the early stages in terms of making this a true reality… there are technologies that exist, but, in many cases, the maturity of the technology is not yet there and it will still be a little bit longer before we see full production systems that are capable of fully handling that seamless roaming, or hand-off, between WiFi and cellular."

"Cisco's approach is that we are investing in this area and we do believe in this area, but I think a lot of times people get hung up on the concept of seamless hand-off and forget really to look at the user requirements. When you do that you realize that a lot of the technology that is very seamless and is in place today solves a solid 80 or so percent of user needs."

Kozup also sees a movement toward stronger wireless networking solutions.

"I think you'll see that there's going to be an evolution towards 11n, as there was from 11b to 11g. I think the dream for a lot of enterprises, the vision, is to go get to the stage where they can get to an all-wireless office to really cut down on the capital expenditure associated with cabling and expenses with access switchports. So, using 11n wireless to get high-capacity wireless, so you still have very fast and low latency networks, high-bandwidth is going to be one of the drivers for people to migrate from 11g or even 11b or 11a, the earlier networks," he said. "From a VoIP stand-

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point, the benefit of 11n is that you've got a lot of capacity, and that extra capacity allows you to run voice and data simultaneously. That's a pretty reasonable request from enterprise IT managers. With wireless I feel that there's a perception that you're moving a step backwards from wired networking, and being able to give customers the confidence that they're going to be able to provide good quality of service as well as the untethered experience for their users. That's they key, and that's generally what you'll see 802.11n driving… lots of bandwidth with mobility."

For many customers, WiFi has really been a 'best effort' network, according to Kozup. "It was kind nice to have, as something that they augmented their wired network with. Now, as we move forward, we really expect to see much more of a unification of wired and wireless, where the SLA expectations for wireless start to approach those that are already in place for the wired network."

Agito Networks' Chief Marketing Officer and founder Pejman Roshan contends that WiFi will continue to become more mainstream in the workplace.

"Pretty much what we predicted back in 2005 is starting to come true, which is that smartphones and smart devices are coming standard with WiFi. WiFi is becoming just as commonplace with smartphones as Bluetooth and cameras are [as opposed to three years ago]. I also see awareness around voice over wireless and what these phones are capable of from a solutions standpoint," Roshan said.

"I see enterprise adoption in general, despite the economic downturn, continuing to increase. We see the Blackberry and the iPhone as the two dominate handsets, with Blackberry having roughly 55 to 70 percent market share. We see it right on the bubble at six out of 10 opportunities coming in being Blackberry-standardized as the smartphone of choice," with another 10-20 percent being iPhone-centric."

Agito's flagship product – the Roam Anywhere Mobility Router – enables enterprises to extend voice and unified communications to cell phones.

"What's exciting now is that we're starting to see enterprises – when you ask them about unified communications or voice communications and mobility – they're starting to equate those requirements with solutions like ours, which are premises-based, and deploying their own solutions, as opposed to looking at their mobile operators, which had typically been the case for so long. That's pretty exciting," Roshan said.

Cost Containment and Control

As is the case with all IT deployments, cost is top of mind for decision makers looking at mobility solutions. However, whether it's going to be the Agito solution or some other solution, there is going to be that component that glues IP telephony and unified communications together with the networking aspects of voice over wireless LAN, according to Roshan.

"What they're starting to recognize is that there are alternatives that they can take advantage of, and that it is possible to get the benefits of mobility cost-effectively. That's one of the big downsides of mobility – it can be quite expensive. The device itself is going to cost $200-$300 per user, plus the recurring cost of somewhere on the order of $70 to $100 per month per user. So it's a non-trivial expense when you think about it at the macro level. If I've got 1,000 people, this is a million dollars the first two years kind of deployment, it's not cheap. So being able to take advantage of a solution like Agito, which cuts down on the operational expense by using voice over wireless LAN, by using WiFi, is a huge win for enterprise administrators. The pervasiveness of WiFi throughout the enterprise is what makes that possible."

Mike Manzo, chief marketing officer of Openet, explains how service providers can gain visibility into and control over their networks and monetize and personalize services, noting that cell phone usage in the enterprise – whether for voice or data – represents a rather significant cost-containment issue.

"In very much the same way that a parent wants some sort of parental control solution to govern access to services that are undesirable or the usage of services that result in consumption-based billing, the enterprise wants the same type of thing. The correlation here is that the adoption of a dual mode handset that works on a WiFi network as an extension of a PBX but also operates on a cell phone network simply makes it easier for the majority of the employee base to have a cell phone. It also means managing expenses and governing who can use what services and what the enterprise is paying for becomes that much trickier," Manzo said. "So, what we do in very much the same way that our policy and charging products support governance by parental controls of the usage of services by time of day or physical location when the caller or usage is occurring or by monitor of usage, we can do the same thing for an enterprise."

More business models, services and applications are being deployed more quickly from more partners, therefore, service providers must ensure they are able to monetize those services and control access to and allocation of network resources, he explains.

"Any means to proactively control and ensure that the size of that bill stays within budgeted limits is a value-add. I think relative to the cell phone portion of the usage on a dual phone handset – meaning any charges that roll across the operator bill – we have technology that allows the ability to control that consumption by monetary restrictions or by any other metric, it could be number of minutes or amount of data – but we can govern that down to the service and subscriber level very granularly based on explicit rules that are created by the IT administrator or the finance administrator. That is a very nice pairing to any enterprise telephony or any enterprise voice or data application that involves operator or service provider connectivity. IT

Erin E. Harrison is senior editor of Technology Marketing Corporation.

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Adding Video to WiFi Handsets
Innovative IP Multimedia Communication

From the Wireless VoIP Handset Experts

By Erik Linask

During the past decade, there has been no single opportunity for lowering recurring cost while adding value to a business than the implementation of VoIP to replace legacy TDM telephony. In addition to reducing operational expenses, VoIP can be easy to deploy – there are a number of systems that can be set up in less than a day, even less than an hour, depending on the size of the implementation.

There's also the flexibility a VoIP system offers. As a business grows, adding new extensions and additional capacity are easily done by the network administrator – they do not require a technician to be called in from the service provider. VoIP systems can be implemented – and expanded – using existing wiring and other infrastructure, so there is little that is required in terms of physical installation. Furthermore, new features and capabilities can be added with simple software upgrades, which are then extended to the entire network.

Among the most requested capabilities enabled by VoIP systems is mobility, which comes in several flavors, and is a key element of transforming VoIP into Unified Communications. For instance, mobility is embraced by executives and other road warriors, who travel regularly, but are able to connect an IP phone or laptop with a softphone to an IP network to place and receive calls while on the road. And certainly the latest generation of smartphones and software to extend PBX capabilities to wireless devices are a major driver of mobile productivity.

But mobility is finding an increasingly relevant role within enterprise facilities as well, with the proliferation of WiFi routers and access points, which provide connectivity to laptops, WiFi-enabled smartphones, and a growing number of wireless VoIP phones – a logical evolution of traditional cordless handsets that are so popular in the consumer market. WiFi-enabled VoIP handsets allow users to not only move within an office environment to collaborate more effectively without having to hang up and place return calls, they also allow users to receive important calls when away from their deskphones, further increasing collaboration among colleagues and enhancing customer service.

To support businesses looking to leverage their wireless infrastructures, UniData Communication Systems is launching a new WiFi-enabled voice and video handset, its SQ-3000. The SQ-3000 supports 802.11a/b/g protocols, and for high-quality video and H.264 playback at 30 fps, it sports a 240x320 resolution 2.8-inch touchscreen, along with the G.722.2 wideband codec for the highest quality voice calling. For added functionality, UniData has integrated video and music file playback capabilities, and a XHTML browser, and added a battery that offers up to three hours of video and six hours of voice calls on a single charge.

UniData, which already has two 802.11b/g-capable voice handsets on the market – its WPU-7000 and WPU-7700 models – has tested all of its SIP-based handsets for compatibility systems from Avaya, Nortel, and BroadSoft, as well as Asterisk-based platforms.

WiFi-enabled IP handsets are drawing increased attention in a variety of vertical markets, including healthcare, financial, hospitality, higher education, retail, and security, as well as the general enterprise space. The ability to place and receive calls anywhere within the WLAN environment is quickly being recognized by executives as an easy means of increasing productivity – not to mention reducing costs, since they cut down the number of cellular minutes used within the enterprise.

For instance, healthcare facilities are able to leverage their converged IP networks to reduce monthly calling costs and simplify network management, while increasing communications between doctors, nurses, and patients. In an effort to enhance patient care, instant, direct communication with care givers and other hospital staff expedites response time and decision making, significantly enhancing their ability to provide consultation and service in what may literally be life or death situations.

In the hospitality space, many hotels have already adopted VoIP as a way to cut calling costs internally and for guests. Unified management platforms and ease of deployment help reduce maintenance and administration costs and time, and because many hotels already provide wireless broadband access already, so integrating WiFi-enabled handsets is a simple task. Installing WiFi-enabled handsets also means hotels can reduce the number of phones they install in guestrooms, since the handsets are not tied to a desk or a night table – the same phone can be used throughout the room.

The combination of cost effectiveness, productivity increases, and convenience have already made the case for WiFi phones in many businesses. The continues investment in WLANs, and improved resilience of wireless networks only adds to the draw of making WiFi handsets a part of every business. UniData's voice-only and now voice and video capable wireless VoIP handsets present a functional – and attractive – option for any business looking to leverage its WLAN investment. IT

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Making the Switch to Wholesale VoIP

By Erik Linask

The continued growth of the VoIP industry, both in business and residential markets, has created a natural demand for increased origination and termination, particularly for international calls, but regionally within countries as well, where VoIP providers need to provide access to markets beyond the reach of their own networks.

"After using MVTS Pro for more than a year, we can safely say that this VoIP softswitch covers all our needs. Using MERA Systems' products, we are able to offer several VoIP services that were not available to us before. The stability of MVTS Pro ensures the efficient performance of our networks."

– Mircha Grimberg, President of A&G Communication Group,

This has opened up an opportunity for service providers to become wholesale VoIP providers, because it enables them to increase their network usage, lowering unused bandwidth, and grows their customer base at the same time, creating a new revenue stream. Becoming a wholesale provider also helps build relationships with other providers as well as end users, which have the potential to turn into additional revenue opportunities in the future.

But, while the decision to sell wholesale VoIP may seem an easy one, as with any service, it must be done well, which is where many wholesale providers have faltered of late. The VoIP industry is as competitive as it has ever been, and the migration to next generation technologies is well underway, which will serve providers well. But, they must make the right investment decisions when deploying the equipment that forms the core of their operations.

Canada-based MERA Systems has provento be one the pioneers of VoIP industry, a carrier switch vendor with reliable products on the market. In 2002 the company introduced the softswitch that was so urgent for carriers needs – its MVTS I. Then,in 2006, understanding the needs and concerns of highly competitive telecom market, MERA Systems launched its flagship MVTS II, a unique combination of switching, billing and intelligent routing.

Now VoIP has become a reality for facilities-based carriers as well as for mobile network operators. The large volumes of traffic processed by VoIP carriers bring them to look for high-performance VoIP equipment with unlimited scalability and high level of integration into the existing network infrastructure. That is why, in 2008, the company introduced MVTS Pro, which was designed specifically to meet the requirements of current market players.

When it comes to deployment flexibility, the MERA product stands out among its key competitors in the Class 4 switch market because it is a softswitch. The debate continues over whether a hard- or softswitch is preferable, but the undeniable general trend in communications is towards software-based products that do not require specific hardware implementations. The MVTS Pro can be installed on an existing server, cutting capital expenses and allowing customers to choose whichever servers they prefer. A software platform can easily be migrated to a new location or a new, upgraded server with greater capacity and processing power.

Released in April 2008, MVTS Pro is a combination of softswitch and session border controller (SBC). It is designed to handle 1,000 cps per traffic entry point for carriers that process 5-10 million minutes monthly, with careful consideration given to reporting and analysis tools for network control and QoS troubleshooting, while providing all the functions wholesale carriers need to manage their VoIP networks: collection, switching, transcoding, processing signaling and media, border control, billing, etc.

"VoIP market demands have significantly changed over the past several years, requiring enhanced softswitches with more complicated technological features. MVTS Pro delivers one of the best system capacity, modular architecture and various redundancy schemes currently available on the market," says Konstantin Nikashov, CEO of MERA Systems. "For the past year, MVTS Pro has become the product that meets the up-to-date requirements of VoIP carriers allowing them to operate to the utmost of their capability."

MVTS' key differentiating features include:

- Up to 1,000 cps per traffic entry point;
- Multi-level redundancy schemes, including geographic redundancy;

- Geographically distributed architecture, where a single switch can replace many legacy switches;
- Flexible routing, including quality-based routing and creation of customer-specific routing formulas;
- High level of integration into existing network infrastructures;
- Ease of maintenance and configuration;
- Disconnect code mapping;
- Advanced debugging tools; and
- SIP/H.323, SIGTRAN/MGCP support and codec conversion.

The key to the benefits of MVTS Pro is its flexibility. It functions as a SIP registrar, H.323 gatekeeper, H.323 RAS endpoint, RADIUS NAS port, or SIP/H.323 signaling proxy. It has been developed to provide a single point of entry into the carrier network, allowing a choice of proxy mode for individual gateways and destinations, increasing throughput and minimizing bandwidth management requirements.

Its modular architecture, consisting of two distinct functional layers, Traffic Switch and Traffic Manager, allows for a variety of redundancy arrangements and ensures fault tolerance via dynamic re-distribution of traffic loads over system components. Traffic Switch handles H.323 and SIP VoIP traffic, performs kernel level protocol translation, functions as an SBC and the source of call statistics. Traffic Manager is the system's intelligence that provides means for authentication of VoIP endpoints, traffic balancing policies implementation, call analysis, number validation and transformation, quality of service (QoS) control, generation of all relevant session details.

MVTS Pro further supports carriers' quality control efforts by providing tools for effective network management and control and QoS assurance. Carriers have the ability to view call statistics sorted by any number of criteria: originator, dial peers, terminating equipment, gateways, or destinations. They can then identify instances of performance degradation and isolate faults, allowing them to fulfill service level agreement (SLA) obligations. System monitoring can be done on-site or remotely.

While it is incumbent upon each carrier to perform the requisite research, the MERA platform provides a set of features that combine to create a reliable, feature rich switching platform to support a sustainable wholesale operation. The economic crisis, which is now said to be winding down, created an uncertainty in the market that, for many in the VoIP industry provided a growth opportunity – after all, people don't stop communicating; they just look for more effective ways of doing it. Likewise, carriers must look for the most effective ways of providing those communications services, recession or boom. IT

Time to Upgrade Your Business

By Konstantin Nikashov, CEO, MERA Systems

The 2008-2009 global economic slowdown quickly seized on market flaws but it gave the strongest impetus to all market players. They awake to the fact that it's not time to just talk about the future – it's high time to shape it. If operators want to stay afloat, they need to revitalize their networks with the industry recent technological trends.

The incredible success of VoIP model can be explained by its cost-effectiveness due to the prevalence of broadband connections. Despite borrowing and investment constraints forced upon operators, this year looks to be shaping up nicely for VoIP market, and carriers are still looking for new ways to derive benefits from VoIP technology.

MERA Systems has always been in the vanguard of VoIP industry movement, taking the lead in offering up-to-date products for VoIP carriers. The first product the company offered to the market named MVTS has brought MERA Systems international recognition for stability and excellent technical support. As an extremely reliable solution with wide variety of features, MVTS I became MERA's flagship switching product and has been on the market for over 5 years.

But from the perspective of the past several years, the technology has dramatically improved over earlier generations. The main reason for this was higher quality service and new capabilities of VoIP equipment compared to what customers experienced with the previous generation of VoIP. MERA Systems accepted the market challenge, introducing MVTS Pro, a more functional and scalable product, that inherited the best features of a well-known MVTS I – business-critical reliability and easy system management as well as an ability to provide smooth equipment and networks interconnection – but was enhanced with distributed architecture and unmatched productivity.

The market forced the company to announce the End of Life for MVTS I, and following the overwhelming success of MVTS Pro, we have launched MVTS I to MVTS Pro Transition Program for our existing customers with an aim to ensure a straightforward transition from MVTS I to MVTS Pro.

In pursuit for making the transition more attractive, MERA Systems offers special prices for those customers who join the program before December 31, 2009. We encourage our existing clients as well as new customers to visit www.mera-systems.com or address MERA sales representative at sales@mera-systems.com

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The Next Killer App Isn't Really an App

By Erik Linask

Whether you believe we've reached the end of this recession as many economists claim, or not, the undeniable fact is that the global business markets, including the communications industry, will continue to feel the effects of the downturn for years to come. In fact, it's a fair assumption that many of the steps businesses took to weather this recession will remain part of their ongoing initiatives. After all, cost cutting measures were being implemented well before the economy took a turn for the worse.

Likewise, the strategies communications vendors have implemented over the past year to help their customers and end users meet their need to cut costs while remaining competitive will live on, perhaps in perpetuity.

Part of the strategy for service providers continues to be defining the "killer application" that is going to provide a competitive advantage for them in the market. It also means carefully considering any new technology investment, more so than ever before, which means that their vendors must, likewise, be ever more diligent in demonstrating how their products will help support providers' bottom line initiatives.

I recently had a conversation with Aculab's Ian Colville and Andrew Nicholson about this very dilemma facing providers and their vendors, and we agreed the killer app is a moving target across time and across different providers and their different customers, not one single application that transcends differences between providers or their customers.

According to Colville, The key for providers is being able to provide customers what you want to provide – what they want you to provide – and having the infrastructure in place to be able to do that. That includes existing infrastructure as well as new investment in next generation networks – and, importantly an ability to bridge the two. It's what Aculab appropriately labels "extensibility" – an ability to integrate new products and applications while continuing to leverage their existing infrastructures

"It gives customers the best of both worlds," Colville said, "The opportunity to leverage the advanced communications solutions that are right for their businesses, without having to endure the disruption and expense associated with upgrading or replacing their networks."

So, perhaps there isn't really a killer app, rather a killer platform – either software or hardware – that is to which you can incrementally add new features to meet new needs and to bring new service revenues. In fact, this plays well into Aculab's traditional strengths, its enabling technology that is built on the fundamental need to allow new services to be integrated into existing infrastructures.

Recent product enhancements from Aculab, including those to its Prosody S HMP software, a new version of its GroomerII gateway, and a new release of its ApplianX gateway, are all focused on the market's need to bridge legacy technology with next generation implementations.

The fact is that providers still need the best of both worlds – they need to retain their legacy infrastructures to support a large number of existing TDM customers and applications, but the need to invest in next generation networks to remain competitive and attract new subscribers who want the latest applications and the latest technology at their disposal.

The concept of extensibility goes hand in hand with this need for supporting both customer segments. As Colville and Nicholson both note, it's something of a necessary evil. Nobody wants to support two networks, but the migration of customers to new infrastructures is a process, one that could take 10 or 20 years, because most providers aren't in a hurry to rip out the their existing infrastructures and deal with migrating their entire subscriber bases all at once.

Aculab products, of course, are designed to enable just that – they can sit on both sides of the technology and to allow the same features to be applied to different networks at the same time.

"We are trying to make it easy for people to move from one to the other or to keep both types of

So, as service providers and application developers continue to innovate – that, after all, is their means of attracting and retaining subscribers, they need vendors like Aculab that continue to innovate with them, and which recognize that, for all the wonder of next generation networks and applications, traditional networks are still here, and will be for some time.

There are, of course those newer providers that have effectively started with next generation networks and services, and in order to compete effectively against them, providers with traditional and hybrid networks will need to embrace this theory of extensibility, even as the economy begins its recovery. IT

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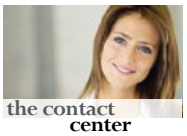

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