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INTERNET TELEPHONY®

VOLUME 11/NUMBER 2 FEBRUARY 2008

The IP Communications Authority Since 1998™

2007 Products of the Year!



The **Small Business** Triple play

Speakeasy

Delivering the small businesses core
communication and IT infrastructure.

Unified Communications on a Roll

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Mobile Enterprise **Innovations**

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Speakeasy: Champion for Affordable Small Business Communications

By: Greg Galitzine

As broadband trends evolve toward faster Internet solutions and increased mobility, small businesses will increasingly look to affordability, innovation and high levels of service and support as key components of any small business solutions they consider.



Bruce Chatterley, CEO of Seattle, WA-based Speakeasy, believes that customers who are looking for a new communications provider would do well to consider the following:

- Look for a single provider.
- Look for a partner with high customer satisfaction scores.
- Look for a financially stable partner.

Says Chatterley, "I think telecom shouldn't be complex. Try and choose a single provider, and try to consolidate your complex technology into a single interface so you can hold someone accountable for that technology or group of technology solutions.

"Second, look for someone who has a long history of great customer support. These types of technologies have become the foundation of a business, and if they're down, usually the business is down, and if you are a small business, you cannot accept that."

Chatterley continued, "As we all know, financial instability is rampant in the marketplace, and the last thing you want to do is be working with a company that has financial problems and be worrying about



not only your own business but about your technology supplier and whether they're going to be here tomorrow."

As one of the fastest-growing voice and data providers in the nation, Speakeasy understands the communication needs of small and medium businesses (SMBs). Over the past decade, the provider had become the champion for small businesses nationwide.

Chatterley takes great pride in helping Speakeasy's customers achieve their varied goals.

"Our vision as a business is very simple," he says. "It's to help small businesses succeed and for us it's the vision that gets us up at 5 am every morning and causes us to run to work.

"Through all our research and experience with small business, we have found that every business has a different definition of success. For some it's to have a lifestyle business and not work for "the man" and really not to grow, but to be able to control their own destiny. On the other end of the continuum, there are small businesses that want to become Fortune 100 companies. They want to grow and succeed that way. And of course you have everything in between."

So, according to Chatterley, "Our vision is to consult with small businesses to understand their definition of success and give them the suite of tools to help them achieve their goals."

Speakeasy Business VoIP is popular with small businesses because it cuts costs and delivers competitive advantages unavailable with traditional phone systems. Advanced features like voicemail delivered as e-mail and MS Outlook integration give small businesses a revolutionary toolset for boosting productivity and maximizing business continuity. Employees can make VoIP calls from any location with Remote Office, or install softphones on their laptops and make VoIP calls from the road. With Find Me/Follow Me, incoming calls can be routed to search for employees at multiple numbers, so critical calls always get answered. Because Speakeasy Voice over IP is a hosted solution with Web-based administration, management is virtually effortless.

Speakeasy also offers a level of customer support far beyond what the typical consumer ISP or local phone company can provide. In fact Speakeasy has been leading the telecommunications industry in customer support for more than a decade.

As Chatterley says, "We offer a level of customer service that's way beyond the incumbent telephone companies and cable companies. We have a 12 year history of having some of the best customer satisfaction scores in the industry, and in fact in any industry, with most customers (85-90%) selecting the top two box scores (satisfied or very satisfied) when surveyed."

"So, we have a reputation for high levels of customer service and we're going to continue that," he pointed out.

Speakeasy offers their customers a variety of different products and services, from voice and data to managed services.

Chatterley refers to the Speakeasy offering as the business triple play.

"We're very disciplined in terms of our focus, we focus on broadband communications and IT infrastructure. You won't find us doing things like hosted financial systems and ERM systems and those types of things. We're all about being a partner in delivering the small businesses core communication and IT infrastructure."

The three elements that make up the Speakeasy business triple play are mission critical data communications, broadband-based voice communications services, and managed services.

Mission Critical Data Communications

Speakeasy offers nationwide business grade data communications services, including T1, bonded T1, dedicated DSL ADSL2, on a nationwide basis.

Broadband-Based Voice Communications Services

Speakeasy offers a variety of versions of that, including a hosted VoIP solution, which essentially has all the functionality of a Fortune 500 PBX without the requirement to buy and deploy a PBX on site.

It should be noted that Speakeasy owns its own VoIP infrastructure and network; they also have a nationwide fiber-optic network that they've worked with several different providers to build, Level 3 in particular is a major supplier. The company wanted to drive home the fact that when you communicate from a voice standpoint, you never transit the public Internet on Speakeasy service.

Managed Services

Essentially the way to think about this is any server that you would run in your small business (exchange servers, hosting servers, etc...) Speakeasy can run on behalf of their customer in their data center, which precludes the need to buy any such equipment. Speakeasy then wraps that server with managed security, performance monitoring 24x7, virus protection, basically everything you need to have an IT grade infrastructure, and delivers that over their broadband connection.

So Chatterley summarizes the Speakeasy business triple play as, "It's mission critical data communications, broadband voice communications and IT infrastructure and it's delivered and wrapped in a value proposition that we call the 4 S's:

- Single supplier: for voice, data, and managed services.
- Single bill: consolidated, easy-to-understand, and easily accessed.
- Single support person: one point of contact to resolve each issue.
- Simple, predictable pricing: flat-rate, easy-to-understand unlimited pricing bundles.

Market Opportunity

Speakeasy is well positioned to serve the small business community, and that opportunity will be huge if Gartner's take is correct. The Stamford-based analyst puts the market opportunity at 10 million small business telephone systems deployed in the U.S. with less than 100 lines, and puts the total spend of this market at approximately \$63 billion worldwide for basic telecommunications.

Chatterley is excited by the company's growth. "We anticipate over 50% growth in our VoIP service in FY09" he said.

"We focus on businesses that have less than 100 employees," Chatterley says. As for the type of customers Speakeasy tends to serve, he reported that "We focus on information oriented businesses. These are businesses that use knowledge or data as the core raw materials for their business model; businesses such as legal tech companies, software development firms, publishing, real estate, stock brokerages, and so forth."

Go To Market

Chatterley shared some insight regarding the company's go to market strategy. "We have several different models," he said, "including a direct sales force, which is an inside sales force for the most part. We also have a partner channel made up of over 6,000 independent IT consultants, we now have Best Buy for Business as a channel, and then we have a Web-based asset that is really unparalleled on the Internet, which is the Speakeasy Speed Test site, which brings about 2.6 million unique visitors per month and that number is growing fast. So it is tremendous asset for us in terms of expanding our brand as well as having a Web site where we can present different solutions depending on the customer need."

Speakeasy Business VoIP is popular with small businesses because it cuts costs and delivers competitive advantages unavailable with traditional phone systems.

Widely reported at the time of the acquisition, Best Buy acquired Speakeasy last April to deepen its relationships with small business customers. Speakeasy aligns with the Best Buy For Business vision to provide small and medium-size business customers innovative solutions to help their businesses succeed.

Chatterley believes the relationship with Best Buy puts the company in a great position to grow and service the needs of the small business community. "Speakeasy, as part of Best Buy, is probably the most financially stable alternative to the ILECs and cable companies that's in existence today, and I would include in that all of the CLECs, because we're owned by a multibillion dollar company.

"The Future of VoIP is strong," believes Chatterley, citing reports that have IP phone revenues doubling over the next five years, while shipments of IP Phones are forecasted to grow 25 percent a year over the same period. He points to a Dell'Oro report that further indicates the healthy growth of IP lines from slightly less than 20 percent of total lines installed in 2007 to over 50 percent in 2012.

In the end, it all comes down to enabling the customer to succeed in their business by providing the tools to help them get there.

"Speakeasy is focused on simplifying business communications," says Chatterley. "Our streamlined, high-quality voice and data solutions improve employee productivity and enhance overall company performance." **IT**

Greg Galitzine is TMC's group editorial director.



The Speakeasy Promise



The champion for small businesses nationwide, Speakeasy is focused on simplifying business communications.

What? Why? How?

For small businesses, VoIP opens doors to a complete communications system with productivity and mobility features like nothing they've ever experienced. And with the increasing convergence of media and software applications, VoIP is rapidly becoming the essential foundation for a future-focused business. However, before small businesses can leap into the future, decision makers need to understand the basics: what VoIP is; what it offers; and how to choose the right solution for your business.

If the questions below sound familiar, you need to follow the example of thousands of small businesses before you and visit www.speakeasy.net/buyersguide/ for more answers

- What are my phone system options?
- What is VoIP?
- Is VoIP right for my business?
- How can these calling features help my business?
- What will it cost?



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Featured Case Study

Clinic IT



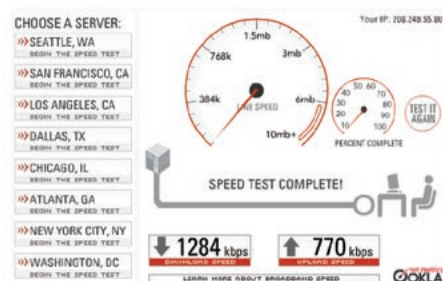
Clinic IT is a NY-based IT consulting firm. Clinic IT looks for partners who can work with them on a technical level, and they've been impressed by the competence of Speakeasy representatives and support technicians. They knew Speakeasy as a reliable connectiv-

ity provider with a reputation for exceptional support, and they found Speakeasy's VoIP solution to be the best name at the lowest price point. According to Karl Nelson, Principal, Clinic IT, "Speakeasy has always displayed a higher level of technical competence than other providers. The VoIP service is reliable, and we've been very happy with the level of support and response. The price point is attractive, the solution is scalable, and our clients are pleased with the feature set."

View additional case studies:

www.speakeasy.net/casestudies/

Home of the World-Famous Speakeasy Speed Test



www.speakeasy.net/speedtest/



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Andre Temnorod, CEO of Broadvox

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The Zippy Files



WiMAX Gets Its Second Wind

Just as the public and Wall Street were writing off Sprint Nextel's ([News - Alert](#)) efforts to bring WiMAX to North America, a salvo of major announcements have appeared to prove to even the most skeptical among us that substantial wireless broadband services are approaching and will soon be available.

As we were about to go to press, revamped versions of Asus' Eee PC and OQO, Inc's Model 02 devices were demonstrated running built-in WiMAX that can connect to Sprint's WiMAX-based Xohm ([News - Alert](#)) (pronounced "zoom") network that may have launched by the time you read this.

A number of WiMAX-capable laptop and sub-notebook devices were talked about at this recent Asus/Intel ([News - Alert](#))/Sprint press event in Las Vegas.

We all remember how WiFi adoption got a tremendous boost when Intel put a WiFi chipset in a little card for laptops. Now Intel hopes to do the same thing for WiMAX ([News - Alert](#)), by getting all sorts of WiMAX silicon out there for laptops, ultra-mobiles and Mobile Internet Devices (MIDs). Indeed, one of Intel's efforts is codenamed "Echo Peak"; it's a minicard for Centrino notebooks based on their Montevina mobile platform, that manages to integrate both WiMAX and WiFi ([News - Alert](#)) technology on a single chip. Another is the Menlow platform for ultra-mobiles and MIDs. Yet another WiMAX chipset codenamed "Baxter Peak" is for such mobile devices as Nokia's ([News - Alert](#)) upcoming WiMAX-enabled N-series Internet tablets, such as the N800 with its 5.7-inch wide screen.

Asus showed photos of an ultra mobile PC, the R50A, with built-in WiMAX, GPS capability and a 5.6-inch screen.

The Las Vegas event brought some attention to OQO ([News - Alert](#)), which was displaying a Mobile WiMAX-enabled version of their Model 02 computer, thought OQO is not currently selling the device. At the moment you'll have to settle for their versions of the model 02 based on EV-DO Rev. A in the U.S. and HSDPA for the international market. Still, seeing another ultra mobile PC compatible with Sprint's Xohm network — even just one demo model — gives one even more confidence in the launch of WiMAX in the U.S.

OQO, headquartered in San Francisco, is an interesting company, having devised some of the world's smallest devices that can run Windows XP and Vista, along with multi-media and networked business applications. Having a Vista machine lurking in your shirt pocket can give you a strange feeling. OQO obviously couldn't avoid imbuing at least one of their ultra mobiles with Mobile WiMAX so as to partake of Sprint's Xohm network success.

Several months prior to this event, Sprint and Motorola ([News - Alert](#)) hosted a demonstration of Xohm's WiMAX capabilities on a boat in the Chicago River, in Chicago, using four tower base stations, 12 laptops, some WiMAX-enabled cell phones, and Motorola customer premise WiMAX gateways.

Sprint's tests reveal that Xohm will provide between 2-4 Mbps downstream and 1-2 Mbps upstream with 70 milliseconds (ms) latency while the user device is stationary, and 2.4 ms downstream and 1.4 ms up with a 99 ms latency upstream while the device is moving. Fortunately, WiMAX's QoS (Quality of Service) will be more like a real broadband service (cable, DSL, T1) than conventional, flaky cellular-wireless systems. Sprint says it will support unlimited data transfers over its Xohm WiMAX service, for \$55 per month, with no contracts or early termination fees. **IT**

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

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Comcast 2.0



In December of 2004 I wrote an article titled VoIP 2.0 (www.tmcnet.com/1451.1) in *Internet Telephony* ([News - Alert](#)) Magazine which focused in part on next-gen devices. VoIP service providers need to differentiate themselves. As VoIP becomes commoditized, many providers will copy the iPod model from Apple. Providers need a killer WiFi ([News - Alert](#)) VoIP phone that lets you talk for an unlimited amount of time and supports conferencing, IM, speakerphone, Bluetooth, etc.

I'm now happy to say that I have found the company who has come up with the killer VoIP device. It is Comcast ([News - Alert](#)) (www.tmcnet.com/1452.1), a cable company now ranked 4th in the U.S. in terms of providing phone service. Comcast has also released what they call an Enhanced Cordless Phone which is in a trial at the moment and will be rolled out in 2008. While WiFi was all the rage when I wrote my article a few years back, DECT ([News - Alert](#)) is cheaper and less power-hungry and powers this new device.

This phone does exactly what I thought such a phone should do. It syncs with your online address book. It allows you to view and answer email. It lets you see your voicemails and listen to them in any order you choose. In other words the phone is much more like an iPhone ([News - Alert](#)) or Simulscribe-enabled device (www.tmcnet.com/1453.1) than a traditional phone.

Cathy Avgiris, SVP and GM of the Comcast Voice Services Group, called me from CES ([News - Alert](#)) in Las Vegas and beamed with enthusiasm over the phone as she told me that the next version of this product will be more PDA-like. Comcast will also be partnering with other phone makers besides their current manufacturer, Vtech.

Google ([News - Alert](#)), eat your heart out — the good news about this cordless phone is not over. It does search. It allows you to search for generic items in a geographic area... For example, pizza near your Zip code. It allows you to then call the resulting company(ies) or, if you prefer, save them to your address book for that big game on the weekend.

Avgiris consistently reminded me that her company is looking to reshape the way consumers think about cell phone service and they are absolutely doing so. Many companies I speak with talk a big game but launching a new consumer electronics gadget is exactly the way to gain share in the IP communications service market and Comcast should be commended for their efforts. This phone is just so sticky... It will be difficult for customers to switch carriers once they get hooked.

I truly believe this new phone is the baseline for all VoIP carriers. To learn more about "Phone 2.0" options, be sure to see Tom Keating's ([News - Alert](#)) blog post (www.tmcnet.com/1455.1) on the matter.

In case you are curious, the company who makes the web software powering this phone is based in Silicon Valley and is named Casabi ([News - Alert](#)) (www.casabi.com).

Comcast is also up to other things such as soon to be providing universal Caller-ID service. For example while Cablevision has Caller-ID (www.tmcnet.com/1454.1) which displays on the phone and TV, Comcast is looking to one-up others by also making Caller-ID information available on the computer screen. This will likely be accessible via the company's SmartZone Communications Center which is said to be very powerful and should behave a lot like Microsoft ([News - Alert](#)) Outlook.

Comcast worked with Plaxo to develop the SmartZone address book and one-click entry for new contacts.

Honestly, if I identify a need in the market and, a few years later, a company comes along and actually fulfills this need, I'll be happy and write good things. Comcast has done an excellent job by marrying their service with consumer electronics. This is very smart and while the first generation Vtech phone is not going to be confused with an iPhone, it is just a matter of time before the form factor improves.

I am extremely enthused by all the things I am hearing from Comcast in the world of communications and they should be commended for their efforts. **IT**

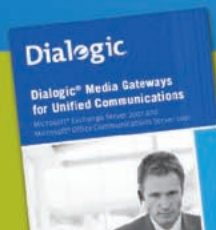
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To stay current and to keep up-to-date with all that's happening in the fast-paced world of IP telephony, just point your browser to www.tmcnet.com for all the latest news and analysis. With more than 16 million page views per month, translating into more than 1,000,000 visitors, TMCnet.com is where you need to be if you want to know what's happening in the world of VoIP.



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

Business Communications Platforms Deliver True Convergence

For years now vendors have been touting convergence as one of the primary motivators for moving to VoIP. But for the most part, enterprises have enjoyed only nominal benefits from combining their voice and data networks. In most enterprises, the voice world and the IT world remain independent islands of automation, hosted on autonomous platforms, operated by separate staffs. Next generation Business Communications Platforms (BCPs) are helping unite these separate worlds by delivering voice as a service in an IT architecture.

www.tmcnet.com/1542.1

OCS Exposed — “Assimilation is Essential” — The End of the PBX & Hosted VoIP

For more than two decades, Microsoft has been “hanging around” the telephony business. In the early 90's, Microsoft was a key player along with Novell in TAPI and TSAPI forging new concepts in CTI. It should come as no surprise that they now plan not to be just another player, but to be the dominant provider in the telephony business, or how it's now referred as the UC/UM—Unified Communications/Messaging business.

www.tmcnet.com/1543.1

As the World Turns

As the new year begins, the world as we know it is coming to an end. Since the early 1980s, the wireless business has been a simple proposition: companies built networks and then competed based on the capabilities of those networks. As 2008 begins, that concept is beginning to look quaint and oh, so twentieth century.

www.tmcnet.com/1544.1

Finding the Right FMC Recipe

As enterprises move to take advantage of the vast potential that mobility offers, fixed-mobile convergence (FMC) is where they are turning to integrate the calling features of a desktop phone with the flexibility and freedom of a mobile device. Whether their FMC strategy takes the form of simply adding voice capability to their wireless LAN or some more sophisticated approach, they need to determine exactly what they want FMC to accomplish for them in order to choose the right solution for their needs.

www.tmcnet.com/1545.1

The New Table Stakes for Triple Play Deployment

Offering video, voice, and Internet as a combined service is a growing trend in the telecom service market. Telcos and service providers are eager to generate new revenue from triple play services; however, adding video service to the IP infrastructure creates a huge demand in bandwidth. To win and keep customers, service providers must deliver unprecedented QoE, a customer's subjective perception that they are experiencing triple play services as they anticipated.

www.tmcnet.com/1546.1

TMC's Whitepapers of the Month

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

VoIP Doesn't Require any Phone Equipment Investment

One of the key benefits of VoIP is the savings over traditional phone service. However, most VoIP vendors offering these long-term savings require a huge up-front investment in new phone systems and equipment before those eventual savings become a reality. To a large corporate entity with millions of dollars to spend, that might not pose much of a problem because the ROI can be measured in years, but for growing small to mid-sized companies, dependant on every dollar to survive, that kind of up-front expense is simply not an option.

www.tmcnet.com/1548.1

Convergence in Telecommunication

Only about 20 years ago, the telecommunication world was clearly defined, but the introduction of mobile services brought about a major revolution. The back office, and to some extent, the front systems were, as a result, relatively strongly linked to these underlying technologies. Thanks to the generalization of the IP and IMS in telecommunications, the increase of hardware power as well as the increased use of layered architecture in software development, the telecommunication world is converging, leaving room for improvement through better BSS and OSS products.

www.tmcnet.com/1549.1



This Month's Featured Channels

Hosted PBX Channel



www.tmcnet.com/channels/hosted-pbx/

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www.tmcnet.com/channels/video-conferencing/

SIP Trunking Channel



www.tmcnet.com/channels/sip-trunking/



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By: Brough Turner



Video over Mobile IP — Operators Shoot Themselves in the Foot

With the advent of 3G, it's possible to do real time video on mobile devices. Looking at early adoption, it is clear two-way video telephony remains a niche application but there are myriad uses for one-way interactive mobile video sessions. The first biggie is see-what-I-see. "Gee Mom, I'm climbing Mt. Fuji. Look at the view!"

With ever improving camera technology, it's only a few years before most people will be carrying high performance portable webcams with them at all times. What will they use them for? Early indications are coming in from Asia and the EU. Dating and other forms of social networking are hot. Mobile services like "See Me TV" and "Look at Me" let people share user-created video clips. And AlloCiné, France's largest movie information and ticketing service, offers movie trailers via their interactive voice and video response (IVVR) portal. In fact there's a wealth of services that are being offered via IVVR.

But there's a catch. Most of the innovative applications deployed today are using either 3G-324M (video telephony over circuit-switched data) or MMS (multimedia messaging, a specialized combination of SS7 and IP technologies). Pure video over mobile IP is technically possible, but not widespread. There are two problems.

First is the operators' walled-garden mentality. For a third party to offer a service over mobile IP, they need IP connectivity with

the operator. That's not always possible and, when it is, you usually have to jump through hoops to qualify. 3G-324M and MMS use PSTN phone numbers, so third party service providers just need to obtain phone service from one operator to reach any mobile subscriber.

Second is the technology itself. Mobile operators intend to implement video-over-IP on their new IP Multimedia Subsystems (IMS), but full-blown IMS doesn't exist yet so pre-IMS and partial IMS solutions are deployed. These are not necessarily interoperable. They don't offer QoS, so interactivity suffers during busy periods. And there's little uniformity in handset client performance. 3G-324M and MMS don't suffer from these issues as they have been standardized. The 3G-324M handset client may be limited to QCIF resolution (176x144 pixels), but nearly every 3GSM ([News - Alert](#)) handset (except in the U.S.) includes 3G-324M client software.

So the prospects for new mobile video services are very bright, over the next 2-5 years. But only because I expect competition (see my October 2007 column) to force mobile operators to open their mobile IP networks to third party application providers. **IT**

Brough Turner is Senior VP of Technology, CTO and Co-Founder of NMS Communications. For more information, visit the company online at www.nmscommunications.com.

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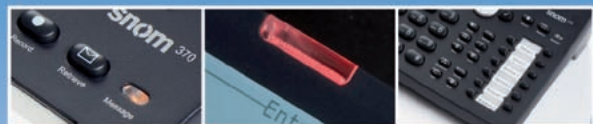
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By: Michael Stanford **802.21 — Cross Network Roaming Improvements**



UMA and perhaps later VCC have adequately solved the problem of moving voice sessions back-and-forth between cellular circuit switched and WiFi ([News](#) - [Alert](#)) connections for consumers. Data sessions don't benefit from these technologies, nor do enterprise voice connections that have to support PBX features.

For voice service that combines the mobility features of cellular service with the enterprise PBX ([News](#) - [Alert](#)), there are proprietary mobility controllers from numerous companies like DiVitas, Tango, Aruba, Firsthand, Cisco, Avaya and RIM.

A technology that can complement all these solutions on the data side has been gestating in the IEEE ([News](#) - [Alert](#)) since 2003. It is called 802.21. The standard is due to be approved in March 2008.

The founders of 802.21 were frustrated that their laptops would often try to associate with the wrong 802.11 network when faced with a choice. They conceived of a mechanism that automatically led the PC to associate with the most appropriate network.

802.21 specifies a server that gleans information about networks from multiple sources, applies rules, and returns to the clients advice about which is the best network to be using at any given moment. It doesn't cover the actual handover process, only the network discovery and selection, and the setup of the next link. It doesn't just apply to 802 networks like WiFi and WiMAX ([News](#) -

[Alert](#)), but to any wireless network, including cellular networks.

Since each of these network specifications already provides for handover, the 802.21 working group has had to work with them to retrofit protocol changes to accommodate the 802.21 protocol. The changes to 802.11 are being handled in 802.11u, the changes to WiMAX are being handled in 802.16g. 3GPP has also indicated that it will put provisions into cellular protocols to transport the 802.21 messages. The IETF is adding 802.21 support to its Mobile IP protocol work.

All cellular voice currently goes over TDM circuits. TDM is more bandwidth-efficient than VoIP, and the carriers have vast investments in it. As radio technology continues to evolve there will come a time when it will make sense to phase out the TDM and use VoIP for cellular voice service. When this happens, 802.21 will be useful even for voice session handoffs between cellular and 802 networks.

All this means that we will soon be hearing more about 802.21; mobility controller vendors will have this as a checklist item in their brochures, and ideally we will find that roaming between cellular, WiFi, WiMAX and other networks becomes seamless, swift and reliable. **IT**

Michael Stanford has been an entrepreneur and strategist in VoIP for over a decade. In his current consulting practice, he specializes in VoIP wireless networks, both WiFi and WiMAX. Internet Telephony Magazine recognized him as one of "The Top 100 Voices of IP Communications" and VoIP News named him one of "The 50 Most Influential People in VoIP".



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By: Tony Rybczynski

Hyperconnectivity Leads to Enterprise Transformation



Hyperconnectivity is a mega-trend, through which everyone and everything that can benefit from being connected to the network will be connected. Hyperconnectivity can be transformational to enterprises by not only impacting how work is done, but also by redefining how work and business processes are organized and accelerated in a business environment. This opportunity has five value dimensions:

Enhanced Personal Productivity and ESAT: In the transformed enterprise, the hyperconnected employee no longer has to deal with missed calls, telephone tag, and email overload. Employee productivity goes up as does morale and loyalty. And we know that there is a direct link between motivated employees and loyal customers.

Seamless Mobility: In the transformed enterprise, seamless mobility allows users to stay connected through fixed mobile convergence, bridging the enterprise wired and wireless environment with the public wireless network. With a 'true broadband' experience everywhere, the unwired enterprise becomes a reality.




Rich Collaboration: Knowledge and information workers are paid to make decisions, while the amount of work that relies on group input is increasing significantly. In the transformed enterprise, rich collaboration capabilities are provided to allow knowledge workers to work together effectively across a highly distributed environment and deliver faster and higher quality outputs.

Business Process Acceleration: Gartner ([News](#) - [Alert](#)) has estimated that 85 percent of business processes are slowed down through human latency. Unified communications can accelerate human processes by enabling timely closure with key stakeholders, and shortening the 'time to X' where X can be problem resolution, service, product, revenue and so on. Enterprise transformation comes with enabling applications and business processes with unified communications capabilities.

Real-time Everything: With enterprise transformation, business applications become environmentally aware by incorporating a broad range of inputs (e.g. sensor, location and RFID). This results in improved energy efficiencies through building management systems; better utilization through asset tracking systems (e.g. a fleet of trucks, medical carts); improved risk management through enhanced security and hazard monitoring; and improved effectiveness over a full spectrum of location-based services integrated into communications-enabled applications (e.g. for better response to emergency situations).

There are three steps that enterprises should follow to meet the challenges and capitalize on these opportunities. Firstly, start laying the foundations for enterprise transformation in the form of software (not network)-centric unified communications. Secondly, start engaging your applications folks, identifying opportunities for streamlining human and electronic business processes. Thirdly, free up some dollars by assessing opportunities for multivendor networks that can better serve you in the hyperconnected world. **IT**


Tony Rybczynski is Director of Strategic Enterprise Technologies at Nortel (www.nortel.com).

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By: David Yedwab

SOA What?



Or, for our Canadian friends, SO “A” What?

Seriously, we in the converging infotainment industry always are, like Indiana Jones — looking for the “Lost Ark” — striving for the next “silver bullet”, the “killer app”. So, how does SOA, or Service Oriented Architecture, fit into this long-running, many-act play and what are some likely outcomes and opportunities. . . especially for network service providers?

What is SOA anyway? As Wikipedia sees it, “Service Oriented Architecture (SOA) is an architectural style that guides all aspects of creating and using business processes, packaged as services, throughout their lifecycle, as well as defining and provisioning the IT infrastructure that allows different applications to exchange data and participate in business processes loosely coupled from the operating systems and programming languages underlying those applications.” I’m not one to question Wikipedia, but let’s see if I can help explain this further.

Every major equipment and software vendor is either “on the SOA bandwagon” already and playing their own riff on the tune, or, at a minimum, seeking their “seat on the SOA-bus”. We’ve heard a similar mantra many times before — with an endless succession of different names (OSI, ISDN, structured programming, IMS, etc.) that keep changing in the hope that we forget the previous ones and their often less-than-glorious outcomes.

But, despite my healthy skepticism, there does seem to be a difference here, with SOA. We may have reached a “Tipping Point” — the “Holy Grail” may almost exist. Why? Well, several things have changed. . .

our processors are almost infinitely fast, our storage is about limitless, enough bandwidth is almost available, the Internet is virtually ubiquitous and very Open, and many services providers realize they cannot do everything themselves. . . so that a software process emulating or modeling (some might call it running) a business process can have the capability to find the “tool” it needs to connect to the required communicator (or other process) to make the business decision or provide access to another service to allow a consumer to be authenticated for security (or have their rights verified) to watch the video he or she wants to see on the device he or she has available. And, along the way, enough information has been identified and captured for a transaction record to be created so that the proper billing and revenue sharing may occur amongst the various players (the content owners, the aggregator, the network provider, etc.) — either on-line or off-line, as the service model requires. No individual participant in the transaction does everything — they rely on each other to do their portion of the process and share in providing the ultimate result — a satisfied customer.

A pipedream? I hope not. SOA seems to provide the tools, broad industry attention and awareness to allow the various pieces to become architected together to provide virtually any service at any device on any network that a user/subscriber/business wants. What’s needed now is to describe, define or create the business models so all of the many players can live well together and make this “21st Century Search for the Ark” not be as futile as in the past. It’s up to us. **IT**

David Yedwab is a Founding Partner in Market Strategy and Analytics Partners LLC. Contact him at 908-879-2835 or david.yedwab@mktstrategy-analytics.

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By: Hunter Newby



Peering MashUps

Who cares about voice?

The Voice Peering Forum Fall session was held at the Ritz Carlton Battery Park in New York City on December 5th. Many interesting news

bits were captured and blogged in real-time by a few of the attendees — including TMC's ([News - Alert](#)) very own Rich Tehrani! With all that happened during the general and breakout sessions, there was really a lot of content to synthesize. Aside from the background of voice peering and the excellent historical trend data provided by Stephan Beckert ([News - Alert](#)) from Telegeography, most of the topics delved into the future of IP applications and not just voice. This was an interesting twist on past Voice Peering Forums and it took a few days for it to all sink in.

In the beginning, the Voice Peering Forums were a way to help educate the interested about the Voice Peering Fabric (VPF), what it is, what it does, that it is real and works and so forth. That was the first year or so. Then it turned into an event that not only included education of the willing, but also where the members (now totaling well over 300 — the education paid off) would meet and establish business relationships. Those transactions would of course be consummated over the VPF as VLANs. That was basically the second and third years.

The VPF ([News - Alert](#)) is on to its fourth year of life as of October 2007 and this most recent Forum was its first as a 4-year-old.

What was interesting about this Forum was that the attendees were largely the active members that are beyond the "show me" stage. They are already using the VPF and the new business transacted at the Forum is almost a given.

They are now on to very high-level discussions about what is to come of the entire voice business. The ultimate forbidden topic — voice as a true add-on feature — was the main derivative of the mashup discussions. Advertising revenue models that subsidize losses in other established industries were also a major concern, but it all wasn't about dwelling on the unknown, but rather identifying the real models and where the new money is.

This group has faced the music. No one is under any illusion that voice continues to make any significant, high-growth money out into the future. The mission is now to determine what other apps, such as mobile video content voice mashups, can be monetized and how.

For this group there is one challenge that no longer needs to be addressed: the network interconnection piece. They're all already connected — on the Fabric. Whatever comes next is just a VLAN away. **IT**

Hunter Newby is Chief Strategy Officer for telx (www.telx.com).

Enterprise View

By: C. Don Gant



Unified Communications' Value to SMBs

The many challenges faced by Small and Medium-sized Businesses (SMBs) force them to become more flexible to survive in increasingly competitive markets. This demands increased productivity from employees and optimized operational efficiency from company resources to enable short response times and fast information-driven decision making. As competition increases from larger enterprises, improved employee communications and customer satisfaction become top priorities.

Unified communications (UC) enables individual and group communications that deliver increased people productivity and organizational efficiencies. UC is a crucial strategic technology available to SMB. Mobility, business continuity and enhanced connectivity to office resources are all foundational elements of a comprehensive UC strategy. SMBs are gravitating towards UC without even realizing it. SMBs with a high UC propensity typically operate in a dynamic environment that blends mobile lifestyles into their business process. UC & IP communications options are strong adoption drivers as well. The emergence of more complete SMB-focused UC platforms will further drive awareness. SMBs with more sophisticated communications needs will likely begin migrating to full UC suites.

For the majority of smaller SMBs, email and traditional key systems will likely remain their primary means of communication for the next few years, perhaps enhanced by tools such as Instant Messaging and unified communications.

With investment into UC from major technology companies such as Google and Microsoft ([News - Alert](#)), we'll see an explosion of marketing messages that will educate SMBs on the value of UC to their business. The result will be rapid ongoing adoption of various UC components over the next 3-5 years. This adoption will still be on a component-by-component level, with unified messaging, mobility and presence integration with existing business applications being the most sought-after capabilities.

Demand will grow dramatically as this new investment in the unified communication message will be focused on demonstrating strong linkages to business issues, processes and benefits. Traditional telecom resellers and channel partners need to become business consultants. Selling UC will require weaving the UC story into the SMBs' day-to-day communications usage and illustrating how business and operational issues are resolved and competitiveness enhanced in specific circumstances by using UC.

Ultimately, the SMB landscape is likely to be radically transformed by UC. In the meantime, vendors and channel partners have a lot of work to do in the areas of educating customers and relating the UC message to their respective businesses. **IT**

C. Don Gant is VP of Channel Marketing, Iwatsu Voice Networks (www.iwatsu.com). Iwatsu's IVN's Enterprise Suite incorporates sophisticated call processing, unified communications and productivity measurement solutions into a cost effective platform targeted specifically at SMB. Contact info@iwatsu.com or visit www.iwatsu.com for additional information.

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By: Jeff Hudgins

Telecom network processing is on the move.



Today's telecom applications are becoming more and more data intensive. The convergence of video, voice, data and mobility is driving demand for aggregation and security applications in the telecom networks. When supply meets demand, the design win activity is on the move. This is exactly what we are seeing in the world of telecom network processing.

Cavium Networks ([News - Alert](#)) (www.caviumnetworks.com) is a leader in Multi-Core Processors for networking, wireless, storage and control plane applications. Cavium Networks offers a broad portfolio of integrated, software compatible processors and accelerator boards ranging in performance from 10 Mbps to 20+ Gbps. Several application developers are now leveraging these advanced embedded networking functions and the new Cavium Networks' OCTEON™ 64-bit MIPS64® cores on a single chip with clock speeds up to 1 GHz. By teaming knowledge-based co-processors with these multi-core network processors, the acceleration of packet/content inspection, access control list (ACL) security, Internet Protocol version 6 (IPv6) routing and quality of service (QoS) are significantly improved.

Recognizing that reliability and time to market are key requirements for today's Telecom Equipment Manufacturers (TEMs), the introduction of Cavium-based Advanced Mezzanine Cards (AMC) comes at a very critical time. According to VP Prasannan, Senior Director Product Line Management at RadiSys ([News - Alert](#)) (NASDAQ:RSYS), "With the advent of ATCA (Advanced Telecom Computing Architecture) and AMC (Advanced Mezzanine Cards), system designers now

have an excellent way to leverage industry standard off-the-shelf solutions for both hardware and software to get a head start in developing their network elements. For example, RadiSys' ATCA and AMC solutions now include products based on the Cavium OCTEON Plus CN58XX processor, such as the RadiSys Promentum® ATCA-72xx Gigabit Ethernet Line card for ATCA systems."

Achieving maximum performance from multi-core processors also requires developing software optimized to take advantage of the multiple cores. "RadiSys supports datapath software in multiple hardware configurations. The ATCA-72xx uses an AMC carrier card (ATCA-1200) and one or more AMC-7211 modules to enable a high-density Gigabit Ethernet Line card with powerful packet-processing capability." (See RadiSys AMC-7211 at www.radisys.com/products/datasheets/Promentum%20AMC-7211.pdf)

Final Score

The network processor AMC and ATCA blades offered today are well positioned to drive wire speed processing for the next wave of telecom applications. The MIPS64® family offers a very scalable multi-processor range from 4-16 cores. When we couple this network processor family with MicroTCA ([News - Alert](#)) and ATCA architectures, we end up with a delivery model that is uniquely designed to serve telecom data intensive applications in a very cost effective manner with rapid time to market. **IT**

Jeff Hudgins is VP of Engineering at Alliance Systems (www.alliancesystems.com).

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Your Connection to the World

By: Rich Tehrani & Max Schroeder

Continuity Planning 101 — A Continuing Educational Series



In-house or Hosted?

"A man who does not think and plan long ahead will find trouble

right at his door." — Confucius

This educational series has continually emphasized that a business needs a continuity plan. However, there are many alternatives so where do you begin? This month's column will consider the most basic choice of all — should a company deploy an in-house plan or use outsourced services?

Let's look at an in-house fault tolerant solution deployed at Neutrik USA of Lakewood, New Jersey. Fault tolerance is defined as "a design methodology aimed at surviving component failures," and is probably the simplest implementation of a business continuity solution. Neutrik's system was installed and is maintained by CiBan (www.ciban.com). Faxing is very important to Neutrik as approximately 90% of their customers submit purchase orders by fax.

A essential part of the plan was to identify products built on Microsoft ([News - Alert](#)).NET with an N-Tier Architecture. To leverage the N-Tier architecture of the fax server, a Cisco Content Switch was used to achieve fault tolerance of the browser based "Presentation Layer".

A Microsoft Passive cluster architecture with a dual server design was utilized to provide additional data security. For more details on this design please go to www.tmcnet.com/disaster-planning and select "white papers and case studies".

In the healthcare industry, in-house solutions can actually present a major disadvantage due to HIPAA-mandated security issues. SecureCare Technologies, Inc. (www.securecaretech.com) offers a Internet-based service, Sfax™, that is a fully HIPAA-compliant secure electronic fax management system. Sfax provides the secure transfer of patient health information (PHI), a feature virtually nonexistent with manual faxing, and also includes an electronic signature feature using digital certificates. As a hosted service, SecureCare eliminates the need for a fax server deployment and in-house HIPAA or IT expertise so initial costs are kept at a minimum. In addition, SecureCare says Sfax can save healthcare organizations 95% of the time and 80% of the cost of manual faxing. For more details on this design please go to www.tmcnet.com/disaster-planning and select "white papers and case studies".

For additional information on business solutions please go to www.tmcnet.com/channels/disaster-planning. If you are interested in becoming a member select "DPCF Members Form" or contact Max Schroeder ([News - Alert](#)) directly at maxschroeder@tmcnet.com or mschroeder@faxcore.com. **IT**

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



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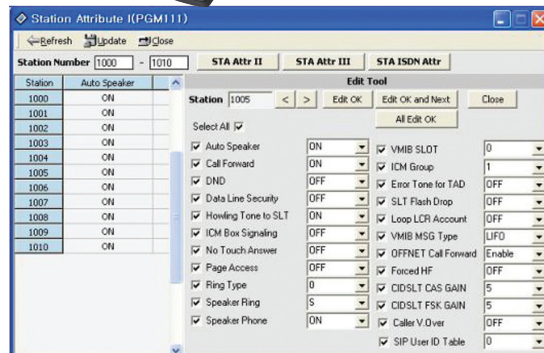
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By: Mark Bolsoni

Extreme Makeover! Data Center Edition — Part II



Just as IP telephony virtualized the need for PBXs to be situated in every physical office location, the next generation network components are enabling companies to view their data center equipment as true virtualized resources.

Last month we considered three network-related elements of the virtualized data center to think about when looking to optimize cost. Here we consider three others.

Application Network Services: Consider consolidating branch office server and storage resources to the Data Center to lower your overall costs and increase data security while providing LAN speed application access and performance. Further, with the use of these tools, you can optimize WAN bandwidth usage and distribute requests over multiple devices to help scale applications and to ensure uptime for those critical applications. Bandwidth optimization tools should be added where appropriate. These services and solutions can be obtained within a blade/line card in a chassis-type design or in some cases via an appliance.

Data Center Virtualization: Data center managers can build their own utility computing data center out of industry-standard servers, storage, applications, and management tools. Virtualization can help reduce IT expenses and provide advantages such as leveraging shared pools of resources, virtualized server and I/O infrastructure and the ability to respond to new business demands by swiftly redeploying servers. Furthermore, it provides the ability to add automated fail-over from a generic pool of resources and create unified 10 Gbps fabric for IP, storage area network (SAN), and server-to-server communications. This all adds up to leveraging existing investments with the appropriate tools to increase your Data Center ROI.

High Performance Computing (HPC) applications: These solve complex, computationally intensive problems and are widely deployed within enterprises, as they deliver significant business benefits. A key enabler for the broad adoption of HPC applications is the practice of clustering multiple industry-standard servers using a high-speed network to provide supercomputer performance at a fraction of the cost of traditional supercomputers. This can be done with technologies such as InfiniBand Compute Fabric Switches and Gateways as well as Gigabit Ethernet. Coupling these technologies within the data center ties together the Management, I/O and Inter-Process Communications (IPC) networks.

Tying it All Together

The network can and should be looked upon as the new operating system inside the data center walls. Add to that IP-based storage and server

switching technologies and you now have a data center that is better equipped to draw on resources when you need them no matter if they are in the next aisle of servers or in the data center across the country. **IT**

As Product Director, Advanced Network Technologies at Forsythe, Mark Bolsoni focuses on creating solutions that help customers optimize their IT infrastructure and business performance by taking advantage of the latest in network technologies. Bolsoni has created, launched, and managed programs that enable customers to demo advanced networking products using a defined Forsythe trial methodology.

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By: Richard "Zippy" Grigonis



Wet Computing with Elma

Years ago, Yours Truly got some crazy ideas to make a PC faster. I decided would overclock the CPU and, to keep it cool, build a combination liquid cooling/Peltier thermoelectric system. After spending a small fortune on aluminum boxes, fans, power distribution blocks, pumps and plastic tubing with copper fittings (Oh-oh, copper and aluminum — dissimilar metals!), I discovered that my motherboard would accept a more powerful CPU, so I ended up simply installing a new processor along with a larger CPU fan.

Ironically, we can expect CPUs to run hotter and hotter as they become more powerful, a situation begging for liquid cooling, and liquid cooling has become popular among gamers. Even some mainstream OEM computer systems are liquid cooled.

Liquid cooling a computer platform is best left to the experts, and Elma Electronic ([News - Alert](#)) (www.elma.com), the well-known maker of electronic packaging products, now offers a modular ATR (Air Transport Rack). The unit is configurable in various sizes (encompassing up to ten 6U x 160 mm slots) and configurations without starting from scratch, which saves time, effort, and money.

Designed to ARINC 404A, the chassis accepts conduction-cooled modules in various architectures such as VME/64x, cPCI,

VXS and VPX, and more. The independent dual liquid-cooled sidewalls dissipate in excess of 100 Watts per slot. You can use such varied coolig fluids as glycol, kerosene, PAO, salt water, etc. The unit is highly ruggedized and meets MIL-STD 810E, 461D and 704E standards.

The chassis can easily be scaled up or down while using the same liquid-cooled sidewalls (i.e., the walls for a 1 ATR are the same as the ones for a 1/2 ATR). To reduce costs, the liquid cooling can be optionally limited to one sidewall. Various plug-in power supply modules and front I/O configurations are possible in this design. Elma also offers a wide selection of backplanes in various architectures as well as different milled card cage sizes off-the-shelf.

The unit is power via 28V DC/270V or optionally 1 and 3-phase 115VAC @ 400Hz. The liquid-cooled chassis accepts up to a hefty 1 KW of input power. Custom I/O solutions are optional including MIL-STD wiring and connectors. Elma also offers ATR chassis in several sizes for convection (forced air), conduction, and in hybrid-cooled configurations. **IT**

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



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Tangoe is the industry thought leader in solutions and services that manage and control of the lifecycle of fixed and mobile enterprise communications

www.tmcnet.com/1540.1

Simena Introduces PTC3000 Portable Test Center

Simena's PTC3000 is a portable test system with LCD display, keyboard, and touchpad. It provides all existing Simena Network Emulator and Traffic Generator software, as well as recent additions of Stateful TCP Traffic Generation and BGP router emulation. The new model is a multi-user and multi-port system that can have up to 14 electrical or fiber gigabit Ethernet ports. It also supports up to four true-wire-speed SFP gigabit ports.

www.simena.net

www.tmcnet.com/1473.1

TANDBERG's New Content Server Increases Versatility of Recorded Video

TANDBERG has introduced a new version of its Content Server that increases the versatility of recorded high-definition video and multimedia presentations. With this, viewers get the flexibility to access content anytime and through multiple devices and create, store, download, and distribute video calls and multimedia presentations.

www.tandberg.com

www.tmcnet.com/1482.1

GL Announces Intrusive Network Voice Quality Solutions

GL Communications announced Intrusive Network Voice Quality Testing Solutions that offer a complete solution for testing voice quality over PSTN, VoIP, TDM, and Wireless telecom networks. "Today's telecommunication networks have become a combination of traditional PSTN networks, new wireless networks, and emerging VoIP networks. In many cases, voice calls may originate in one network and terminate in another. In such circumstances, voice quality can easily become an important issue."

www.gl.com

www.tmcnet.com/1475.1

New Edge Networks Developing New Traffic Shaping Service for SMBs

New Edge Networks is gearing up to deliver a new service to enable SMBs

to prioritize the traffic on their private, DSL-based networks. The company claims this will be the first service of its kind enabling management of traffic on company LANs and WANs. "Traffic prioritization over DSL is a breakthrough service offering for budget-conscious small and midsize businesses or enterprises that cannot yet justify the improved application performance and reliability of more costly T1 lines."

www.newedenetworks.com

www.tmcnet.com/1476.1

Astaro Security Technology Facilitates Greener Networks

Astaro Corporation, delivering UTM security appliances, has announced its technology allows customers to remove up to 10 stand-alone products while also providing other benefits like limiting waste and reducing electricity required to power network security applications by 50 percent to 1000 percent. The reduction in electricity consumption depends on the number of point products currently fielded, the size of the solutions, and their respective power draw.

www.astaro.com

www.tmcnet.com/1477.1

ClearOne Introduces Converge Pro 880T Conference Phones Solutions

ClearOne announced the availability of the Converge Pro 880T, a new addition to the Converge Pro platform of professional audio solutions for conferencing applications. The new 880T includes a built-in telephone interface and power amplifier, and is considered to be a complete standalone audio conferencing system. Company officials explained that it can also be linked with any of the other Converge Pro products to create larger systems to accommodate a greater number of conferencing participants.

www.clearone.com

www.tmcnet.com/1478.1

Asoka Unveils New BPL Network Testing Tools

Broadband over Powerline (BPL) solutions provider Asoka USA has introduced two new performance test tools, the PlugLink AV Performance Network Tester (PL8060-PNT) and the PlugLink Performance Network Tester (PL8050-PNT). These network performance testers are used for checking bandwidth availability and packet loss, as well as any jitter and latency issues.

www.asokausa.com



www.tmcnet.com/1479.1

Vidyo: A New Kind of HD Video Conferencing

Vidyo has introduced a desktop video conferencing solution that delivers on the promise to improve communications through higher quality video communications. While video conferencing solutions of the past included choppy and broken pictures, as well as high cost and the need for dedicated rooms or network facilities just to have a video conference, VidyoConferencing makes it possible to have high quality video conferencing sessions that include both room and desktop endpoints.

www.vidyo.com

www.tmcnet.com/1480.1

Packet8 Virtual Office Tango Introduced by 8x8

8x8 introduced the Packet8 Virtual Office Tango Video Terminal Adapter (VTA), an affordable and convenient videoconferencing solution that is designed to enhance the functionality of the Packet8 Virtual Office hosted iPBX phone system. "Many of our Packet8 Virtual Office voice customers have at least one employee located in a remote location, so being able to videoconference with these employees by just dialing their regular extension is an easy and inexpensive way to boost office productivity."

www.packet8.net



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NEWS

www.tmcnet.com/1541.1

NetDialogue enters foreign markets

NetDialogue has concluded a contract for construction and maintenance of a fiber-optic communication line at the railway distance from Nong Khai (Thailand), through Friendship Bridge between Thailand and Laos, to Ban Thanaleng (Laos), and further to the central office of the Lao Railway Authority in Vientiane. The customers of the project are the Lao Railway Authority (LRA) and the State Railways of Thailand (SRT).

www.netdialogue.com

www.tmcnet.com/1497.1

RAD Gateways Enable T-Mobile to Use DSL to Transport HSDPA Backhaul

T-Mobile says it is



ramping up its backhaul infrastructure in readiness for the latest generation of mobile HSDPA data services by deploying gateways from RAD Data Communications. The gateways are expected to give T-Mobile the added option of connecting HSDPA-enabled NodeBs (3G base stations) via low-cost ADSL2+ lines and drawing on the services of its sister company T-Com. Equipment from RAD is also to be used in other T-Mobile networks later.

www.rad.com

www.tmcnet.com/1499.1

Cox Communications Using STB Testing Solution from NDS

NDS, a provider of technology solutions for digital pay-TV, has announced that its IEX system has been chosen by Cox Communications as its automated STB testing solution. The NDS IEX solution combines hardware and software to automatically test all interactive applications on STBs operating in both cable and telecommunications environments.

www.cox.com
www.nds.com



www.tmcnet.com/1500.1

Verizon Gets FCC Approval for Submarine Cable System

Verizon Business has obtained final approval from the FCC to activate and operate its new Trans-Pacific Express submarine cable system in the U.S. Trans-Pacific Express project is the first major submarine cable system that can support high-speed traffic to the world's fastest-growing region, Asia Pacific. The new cable will have the capacity to support 62 million simultaneous phone calls and handle advanced video and e-commerce applications. Customers can access the system at speeds up to 10 Gbps.

www.verizonbusiness.com

www.tmcnet.com/1502.1

xG Technology Expands into New Markets

Mobile VoIP solutions provider xG Technology is expanding its market reach beyond its initial market in Daytona Beach, Fla., to include new customers in Maryland, South Carolina, Kansas and elsewhere in Florida. Shipments of the company's xMax VoIP base station, which facilitates mobile VoIP, are commencing in these new markets.

www.xgtechnology.com



www.tmcnet.com/1503.1

Sandvine Intros Gigabit Ethernet Platform

Sandvine has introduced PTS 14000, a 10 Gigabit Ethernet platform for mobile data and wireless providers. The PTS 14000 is designed for Tier 1 providers worldwide, providing visibility into network traffic, which would enabling providers to allocate network resources, in addition to improving on QoS for multimedia IP-based applications.

www.sandvine.com



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www.tmcnet.com/1483.1

Motorola Introduces CPEi 100 WiMAX Desktop Device



Motorola has introduced the latest addition to its portfolio of WiMAX CPE — the CPEi 100. The CPEi 100 is a single data port, 2.5 GHz “plug-and-play” WiMAX solution capable of delivering reliable, wireless broadband Internet connectivity, serving as the interface between a computer

and the WiMAX network.

www.motorola.com

www.tmcnet.com/1484.1

Integrated Speech Applications Announces Mobile Voice Office

Integrated Speech Applications announced its advanced mobile voice recognition capabilities that create a voice office for mobile users. Customers can use any wireless phone, and dictate emails and text messages, send or receive emails by voice commands and set and review appointments via voice recognition, in a hands-free environment.

www.integspeech.com

www.tmcnet.com/1485.1

Cybera Launches Managed Wireless Broadband Portfolio

Cybera has launched the first private, managed wireless broadband portfolio aimed at enterprise-class customers whose business models require fast install times, lower cost and complexity, and broadband performance. The SmartLink Wireless Broadband managed service is preferred for companies who desire to reduce the cost of wiring often associated with the upgrade to a broadband network without sacrificing performance and reliability.

www.cybera.com

www.tmcnet.com/1486.1

Azalea Networks to Supply Equipment for ‘Wireless Broadband Olympics’

Azalea Networks, a supplier of wireless mesh broadband equipment, has been selected to supply equipment for the “Wireless Beijing” project



designed for the upcoming Olympic Games. Azalea will supply and support phase one of the projects, which include 800 to 1,000 wireless mesh routers, giving broadband access over 30 miles in Beijing’s central business district, financial street, and other Olympic areas.

www.azaleanet.com

www.tmcnet.com/1487.1

ZyXEL and Sequans to Provide Mobile WiMAX Device for Sprint’s Xohm Network

ZyXEL and Sequans have signed an agreement to provide advanced Mobile WiMAX devices to be introduced as a part of Sprint’s Xohm network. ZyXEL is a Sprint-designated 4G WiMAX modem manufacturer, while Sequans is ZyXEL’s chosen chip supplier. The Sequans-based ZyXEL device would enable Sprint to offering its Xohm Internet mobile services.

www.zyxel.com
www.sequans.com
www.sprint.com



www.tmcnet.com/1488.1

Bluesocket’s Next-gen Integrated Architecture and 802.11n AP

Bluesocket launched its next-gen integrated architecture and 802.11n Access Point. Bluesocket says it is building on the advanced features and capabilities of its distributed edge switching and intelligent AP solutions; its new Virtual WLAN architecture unifies wireless and existing wired networks to produce a truly integrated and optimized networking solution.

www.bluesocket.com



www.tmcnet.com/1489.1

Alltel to Offer AAA Mobile Alltel Wireless and AAA have announced the release of AAA Mobile, which allows users to find AAA Approved places of interest and locations, and provides access to AAA member



roadside assistance with the help of their GPS-enabled Alltel phones. The GPS-enabled AAA Mobile application allows users to receive both audio and video directions on their Alltel Wireless phones.

www.alltel.com
www.aaa.com

www.tmcnet.com/1490.1

New Bluetooth Headset from Sennheiser

Sennheiser Communications has announced a new addition to its premium Bluetooth wireless headset line-up, the FLX 70. The second addition Sennheiser’s wireless Bluetooth headsets, the FLX 70 offers big sound quality in a small form factor. Barely larger than a stick of gum and able to reduce ambient noise by approximately 70 percent, this flexible mobile handset includes a closed in-ear speaker and flexible ear-hook with FlexFit technology as well as silicone sleeves in three different sizes, so a perfect fit is ensured.

www.sennheiserusa.com



www.tmcnet.com/1491.1

NETGEAR Unveils Wireless-N Networking Products

NETGEAR announced the availability of new Wireless-N products, including RangeMax Dual Band Wireless-N Router, RangeMax Wireless-N Gigabit Router, 5 GHz Wireless-N HD Access Point/Bridge, HD/Gaming 5 GHz Wireless-N Networking Kit, and RangeMax Dual Band Wireless-N USB Adapter. All have been certified by the Wi-Fi Alliance.

www.netgear.com



In a recent MySQL-sponsored survey of Oracle users, 65% said that cost savings was the main driver of open source enterprise acceptance.

OTHER INDUSTRY

NEWS

DEVELOPER

www.tmcnet.com/1508.1

Google Android Apps Arrive

We have all likely heard about Google Android but, for the first time, we will now be able to get our hands on applications that are specifically designed for Android. A La Mobile is the name of the company who has made "Google mobile history" — the applications will initially be available for the HTC Qtek 9090. The device will have a Google browser, camera, games, and more.

code.google.com/android

www.tmcnet.com/1509.1

Yahoo!'s Response to Google's Android

Yahoo! plans to open up its mobile web platform to enable outside programmers to develop applications that can be embedded in Yahoo! web pages. This measure, targeted at the mobile phone community, allowing outside developers to develop applications that can be placed in Yahoo! pages and can be made accessible via mobile phone applications. "We intend to be the pioneers for the mobile internet in the new millennium," Pforzheimer said.

www.yahoo.com

SIP

www.tmcnet.com/1511.1

Toshiba Adds SIP Trunking to Strata CIX

Toshiba has introduced SIP trunking capabilities in its IP Communications system, having now added the feature to its popular Strata CIX line. With the addition of SIP trunking, Strata CIX users will be able to communicate natively with their service providers across IP connections, allowing both data and voice communications to be securely and reliably delivered over a single connection. Toshiba also announced the first two service providers to have been certified with Toshiba's SIP trunking capabilities are American Broadband Services and Cbeyond.

www.toshiba.com/taistsd

www.americanbroadbandservice.com

www.cbeyond.com

IP CONTACT CENTER

www.tmcnet.com/1512.1

CRM on iPhone Service Offered by E.E.S.

E.E.S. Companies announced a new service allowing POS/OE 4 version 8 customers to run business operations on the Apple iPhone. The service lets remote users access their POS/OE 4 system in real time and view CRM data using iPhone. Users can create or access customers and contacts, and create or modify data for sales or service tracking.

www.eesco.com

www.tmcnet.com/1513.1

Hosted Contact Center Provider Five9 Partners with NovaTel

Five9 has announced a partnership with NovaTel, a provider of international long distance services to domestic and international call centers. The joint marketing agreement between the two companies will allow NovaTel to resell the Five9 Virtual Call Center in the U.S., Philippines, India, and Latin America. With Five9 Virtual Call Center products, companies are able to build an advanced call center anywhere in the world.

www.five9.com

www.novatelnetworks.com

CHANNEL

www.tmcnet.com/1516.1

BCS Adds Worksmart Hosted VoIP Services

Business Communications Solutions (BCS) has added Worksmart, a product of PanTerra Networks, hosted VoIP services to its selection of communications tools available at low cost. Specifically designed for SMBs, the Worksmart on-demand unified communications-hosted VoIP solution eliminates the need for silo on-premises systems and applications.

www.bcbservice.com

www.pandoranetworks.com

Other benefits cited included better performance and uptime (27%) and the ability to rewrite or customize code (21%).

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www.tmcnet.com/1518.1**Tangoe, Inc. Partners with Latin American Supply Chain Leader**

Tangoe has partnered with Brazil-based Webb, a procurement and logistics solution provider. Under the agreement, Webb will utilize Tangoe's CommCare Management Platform (CMP) software to provide its clients with comprehensive Telecom Expense Management (TEM) managed service solutions that encompass a comprehensive array of enterprise-wide fixed and mobile communications processes. The partnership is expected to further fuel Tangoe's expansion in the Latin American market, particularly in Brazil and Mexico.

www.tangoe.comwww.tmcnet.com/1519.1**Ezvim Launches Online Telecom Manager in SaaS Model**

Ezvim announced the launch of its Online Telecom Manager (OTM) service. OTM enables the operators to deliver web-based bill presentment, split billing, cost allocation, advanced analysis, and fleet management services to enterprises as it is the first ever commercial Electronic Bill Presentment Service offered in a SaaS model. "OTM allows operators to generate new revenue streams by offering advanced cost and service management services to enterprises, while reducing operational cost by eliminating the paper bill and making the Internet the first point of contact for bill enquiries."

www.ezvim.comwww.tmcnet.com/1520.1**Veramark Names New President and CEO**

Veramark Technologies announced that the Board of Directors has elected Mr. Anthony C. Mazzullo President and Chief Executive Officer. "Throughout his career, Tony has demonstrated the ability to drive growth and profitability in both start-up and established corporations. He has proven skills in leading strategy, business development, sales, marketing, product development,

professional services, operations and finance. We look forward to his joining and leading the Veramark team."

www.veramark.comwww.tmcnet.com/1521.1**Study Shows Benefits of Telecom Cost Management**

A study by Aberdeen entitled, *The Real Return on Investment of Total Telecom Cost Management*, has demonstrated that Best-in-Class organizations are enjoying an average of 46 percent ROI for their TTCM solutions. Furthermore, the productivity gains for telecom expense management activities are surpassing 40 percent. "The findings support that there are real benefits to pursuing a TTCM strategy."

www.aberdeen.comwww.tmcnet.com/1522.1**AOTMP Releases New Rules for TEM Engagements**

AOTMP announced its latest publication, New Rules for Improving Telecom Expense Management Engagements, featuring highlights and key points from TEM Decisions '07. The publication helps enterprises engaged with TEM Suppliers, which include those evaluating TEM solutions, and also those seeking to upgrade their own internal program and learn best practices and trends in enterprise telecom environment management.

www.aotmp.comwww.tmcnet.com/1523.1**Avotus and Digital Connections Sign Partnership Agreement**

Avotus Corporation announced it has formed a partnership with Digital Connections (DCI), a system integrator and certified reseller of Nortel and Cisco telecom products. As part of the partnership agreement, DCI will offer Avotus' entire suite of Call Accounting and wireless offerings to its client base, across a range of vertical markets, including healthcare, finance, hospitality, utilities, retail, manufacturing and distribution, education, and aviation.

www.avotus.comwww.digitalconnections.comwww.tmcnet.com/1524.1**Telecom Expense Management Services Driving OSS Market**

Operations support systems (OSSes), which include the types of services offered by many Telecom Expense Management (TEM) firms, are becoming increasingly popular among enterprises. Insight Research predicts the global market for OSSes will be worth more than \$46 billion by the end of 2008. "Our research suggests that terrific growth is ahead for those OSSes needed to support 3G wireless services."

www.insight-corp.comwww.tmcnet.com/1525.1**Mobility Management Services Giving TEM Market a Big Boost**

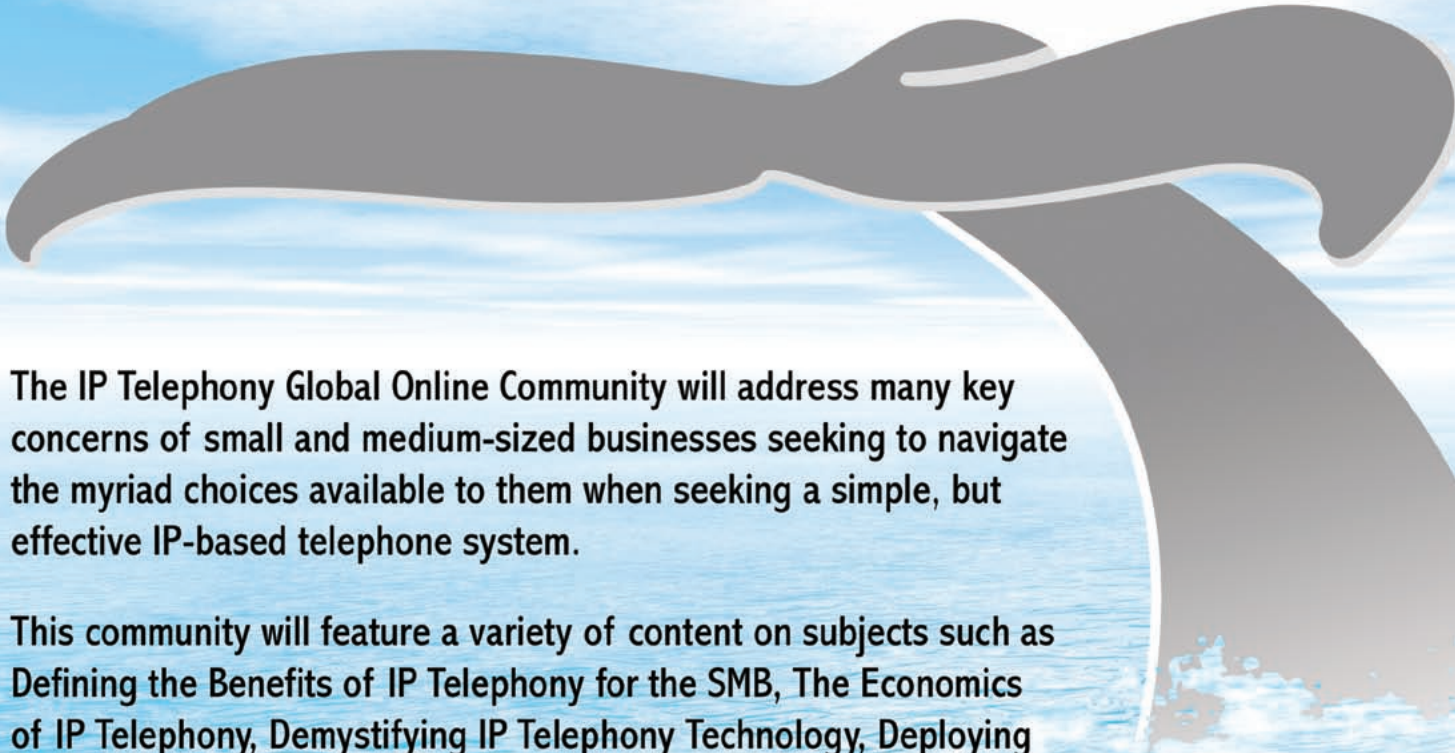
More and more businesses now rely on mobile services as both productivity boosters and essential components of staying competitive. Yet with increased usage of mobile services also comes increased need to manage those services. So much so that a whole new market, that for mobility management services, has sprung up. In fact, mobility management services — part of the TEM umbrella — is now a flourishing industry, no longer occupying a mere corner of the TEM market, but instead having come into its own, either as integrated components of TEM packages or as stand-alone offerings.

www.abiresearch.comwww.tmcnet.com/1526.1**EDI Features in Asentinel's TEM Solution Help Land New Business**

Asentinel announced a major new customer in the form of an unnamed financial institution serving the Gulf region of the U.S. The unnamed customer will be using version 5.0 of Asentinel's TEM software in a SaaS deployment to manage its telecom assets. This new client chose Asentinel in large part because of the software's Electronic Data Interchange (EDI) capabilities. EDI is a set of standards that specify how to structure digital information shared between businesses and among different departments within a particular organization.

Confused?

**Join the IP Telephony Global Online Community
to Find the Answers You Seek**



The IP Telephony Global Online Community will address many key concerns of small and medium-sized businesses seeking to navigate the myriad choices available to them when seeking a simple, but effective IP-based telephone system.

This community will feature a variety of content on subjects such as Defining the Benefits of IP Telephony for the SMB, The Economics of IP Telephony, Demystifying IP Telephony Technology, Deploying Broadband Phone Solutions Designed for Small and Medium Businesses, Overcoming the Limitations of IP Centrex, What to Expect from a Managed Service Provider, and a thorough analysis of feature-related benefits.

The community will also feature a wealth of information in the form of case studies and articles that are critical to the SMB decision maker seeking to deploy various applications such as multimedia conferencing; IP-based contact centers; electronic faxing; unified messaging; multi-site deployments; road warrior mobility; and much more...

<http://ip-telephony.tmcnet.com>

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PhoneFusion and Service Providers – A Perfect Relationship

By: Richard “Zippy” Grigonis

PhoneFusion, Inc., based in Fort Lauderdale, Florida, is a leading provider of reliable communications solutions to businesses of all sizes. The company’s portfolio of unified communications and fixed mobile convergence products combines all modes of communication – from mobile phones to traditional landlines to VoIP to Business Intelligence Suites and Distributed Call Centers – into one, single, manageable source. With PhoneFusion, organizations can confidently and seamlessly manage their daily business communications from any location, on any device, at any time.

The company offers three distinctive business communications solutions, designed to meet the needs of small-to medium-sized businesses and resellers alike. All the PhoneFusion products are built on cutting-edge technology with innovative and reliable solutions to combat today’s common business communications problems. From home offices to the virtual workplace,



PhoneFusion’s portfolio of business communications solutions enables organizations to stay connected with sales, customers and prospects whenever and wherever they are.

PhoneFusion One, the flagship product, gives businesses an easy way to manage all of their daily communications with just one phone number. Subscribers receive a permanent telephone number to give to clients, colleagues, family or friends. When callers dial the subscriber’s PhoneFusion number, PhoneFusion One will contact him on the numbers previously programmed online. With basic and enhanced features including call forwarding, voicemail, virtual attendant, fax to email, conference calling, call screening, call recording and many more, PhoneFusion One supports all communication needs.

PhoneFusion lets you easily add additional lines for family members or business associates so they can use the services at the same time you do.

As John McDonald ([News - Alert](#)), PhoneFusion’s Vice President of Marketing, says, “‘Unified Communications’ is something of a misnomer. If you want to reach someone, you don’t want to be concerned about whatever IP address, device or protocol they’re using. You just want to automatically figure out where they are and how they can be reached.”

PhoneFusion’s other product, PhoneFusion Intelgen, is a hosted Virtual Automated Call Distribution (ACD) and Predictive Dialing system that provides support for at-home agents, call centers and multiple site locations. PhoneFusion Intelgen allows businesses to maintain a workforce of at-home or onsite agents with no special hardware or software required and provides for integration with existing telephone systems, databases and all CRM tools. In addition, the call tracking features of PhoneFusion Intelgen assist clients in analyzing and managing their business communications. By easily scaling up or down on demand, PhoneFusion Intelgen gives corporations a cost-reduction solution to meet any business fluctuation.

The services offered by the company itself encompass all of the many functions provided by PhoneFusion’s Service Delivery Platform (PFSDP). It is the “ultimate” product. But PhoneFusion itself can be customized to produce a “white label” service that can be resold under another service provider’s brand, through the PhoneFusion ESP solution.

As McDonald explains it, “What’s been truly missing in the market until now is the ability to have a managed platform wherein one could empower ITSPs [Internet Telephony Service Providers] or any emerging potential VoIP service provider or alternate provider wanting to make available a value-add for their customer base. Our PFSDP platform is like a big Chinese menu, for want of a better description. The provider customer can tailor a solution to their subscriber customer base, user groups or community, or whatever. That’s really the beauty of PhoneFusion in terms of being a white label solution.”

“The service provider furnishes the front end, which is the brand, the marketing and the product set,” says McDonald, “but they can rely on our team of what I would call pure technology geniuses to manage the infrastructure at the back end.”

"It's not a case of just re-branding a service or re-labeling a box," says McDonald. "The service provider can customize it to become 'their' solution for either their existing or potential target market. With PhoneFusion ESP, telecommunications service providers can purchase unbundled elements of the PhoneFusion One product and create custom classes of services to offer their customers. With PhoneFusion ESP, service providers can incorporate valuable unified communication solutions into their product offerings that would otherwise be too costly to develop and implement on their own."

"Flexibility and customization is key these days among service providers because they don't want to lose market share via customer churn and, in fact, they want to capture more market share with an enticing set of features," says McDonald. "We founded our company on the concept that we could provide a customized solution to providers. Therefore, unlike our competitors, we didn't have to adjust our marketing strategy — customizability is the very premise which led to our developing the PhoneFusion product."

Great Channel Support

Indeed, PhoneFusion takes great pains in its skillful dealings with service providers and the reseller channel in general.

"Most channel programs fail, and most companies fail, when they introduce their products into the channel and don't consider the overall picture," says McDonald. "It's only superficially about 'How many seats can you sell for me?' or 'What do you expect this company to produce?' Unless you provide support to make resellers, agents and other channel members successful, you're setting yourself up for failure. I've seen so many programs fail and fall flat because a company wasn't willing to invest in a partnership that they had just developed. So I think that's one of the advantages that we bring to the market. We work with our partners and resellers to our mutual benefit."

"It's imperative that in order for any reseller or agent program to work, you need to have back-end support as well as the ability to train

employees," says McDonald. "You need to have front-line regional managers or directors who are working toward the mutual success of that company. What often happens is when you sell to a customer or reseller, concerns about the support structure for both the front and back-end, tend to drop off. Our vision, whether it's for our customer-facing PhoneFusion One or PhoneFusion Intelegen products, or PhoneFusion ESP, is the same. We provide strong frontline and back-end support for our partners."

"Most channel programs fail, and most companies fail, when they introduce their products into the channel and don't consider the overall picture," says McDonald.

"I've spent my entire life working in alternate channels of traditional telecom models," says McDonald. "Channel managers under a monthly quota often cannot obtain enough partners by the last week of the month. They've been trying to bring in partners to compete against their existing partners. But the best managers know that if you work with your partner — whether they are traditional telecom resellers or white label providers — and make them successful through marketing, sales training or any other means, then you are empowering them to generate revenue. When you sell to the channel you must put your partners and your resellers in the best position to make money and be successful, because then you are successful too."

Though PhoneFusion currently is focused on the U.S. market, the company has its eyes set on becoming a global presence. Given their huge feature set and superlative dealings with the reseller channel, that should be no problem for them. **IT**

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

Managing the Challenge of Unified Communications

By: John McDonald, PhoneFusion

Unified Communications ([News - Alert](#)) is not revolutionary - it's evolutionary. Unified Communications (UC) has subsisted in many forms for more than a decade. Written discussion has risen recently about the user communications "collision," where the corporate and personal management of devices, communications medium and infrastructure meet. This collision is affecting both the individual and enterprise user. Jonathan Hollander, founder of PhoneFusion, believes that "only with the recent intense pervasiveness of mobile phones, the maturation of Voice-over-IP [VoIP] and the penetration of broadband Internet has the stage been properly set for a true Unified Communications feature set to come to the market."

The challenge now is to fuse the features developed over the past decade into simple, usable feature sets that include landlines, mobile phones, VoIP devices, soft clients, faxes, email and video. Unified Communications can drastically improve the quality of business and personal communications while enhancing both employee and personal productivity. Each enterprise, enterprise user and division within an enterprise may have different priorities in implementing a UC solu-

tion. A UC platform must be able to integrate into the enterprise user environment with an interface that enables the organization to easily implement end user management in a secure environment.

PhoneFusion is a consummate technology company. It has departments tasked with the goal of working toward how to deal with upcoming trends and integrating video. In the process of doing so, PhoneFusion has developed a proprietary platform uniquely suited for managing the traditional and non-traditional communications flow in the global business and personal environment. The PhoneFusion product set is a hosted model, freeing customers from the expensive systems normally associated with provisioning and maintaining an internal infrastructure. The developers of the PhoneFusion platform have total control over the existing environment while being agile enough to keep up with a "new horizon" product introduction.

Ultimately, it's all about managing devices and managing and simplifying communications. That's the mantra of what UC should be - "simplified" communications.

La Capitol Reaches New Communications Stratus with Strata CIX

By: Erik Linask

Businesses large and small, in every vertical, are quickly learning the benefits of adopting VoIP technology to enhance their communications capabilities. For members of the banking industry, it is not only critical to ensure communications are reliable, but also convenient and secure, given their crucial need to protect customer information, while also providing high levels of customer service.

To meet these goals, La Capitol Federal Credit Union, headquartered in Baton Rouge, Louisiana, turned to VoIP technology, looking to enhance its customer service capabilities as well as internal communications. In addition to the main office, La Capitol also understood the value of being able to effectively communicate among its 13 branches, which combined receive in excess of 25,000 calls each month.

Thus, in addition to looking for a VoIP system for the main branch, it also sought a system that would easily allow it to connect all its branches, including centralized voice mail, simple call transfer, unified messaging, and enhanced call center and ACD opportunities.

The Solution

La Capitol turned to Gage Telephone Systems in Baton Rouge for guidance in selecting and deploying a new VoIP system. Greg Wood, Jr., Operations Manager at Gage, suggested Toshiba's Strata CIX business communications system, which he said would meet all of La Capitol's requirements.

This made the selection easy for La Capitol, since it had already been using a Toshiba system, and was looking to upgrade its technology to benefit from VoIP, not because it had problems with Toshiba.

In fact, Bert Callender, Assistant Vice President of Operations at La Capitol, said, "We have always been happy with Toshiba's unbeatable reliability, durability, and ease-of-use, so when we decided to move to a Voice-over-IP communications platform, we chose Toshiba again."

With the help of Gage, La Capitol proceeded to deploy Toshiba's ([News - Alert](#)) Strata CIX670 in its headquarters, as well as a Strata ACD Call Center system, TASKE call center reporting and supervision, Strata CIX iES32 Voice Processing, Unified Messaging, and Call Accounting with Strata Net Networking. It also deployed a CIX670 at its New Orleans branch.

The remaining 11 branches were outfitted with Strata CIX IP business communications systems, for a total of nearly 300 ports, including a combination of PRI, T1, and IP lines. La Capitol uses a selection of IP deskphones and softphones. Among the benefits of the Toshiba platform is that La Capitol was not required to replace all of its endpoints; where appropriate, it was able to continue using existing digital and analog devices from its previous systems.

Importantly, with the Strata system in place, the networked facilities were able to effectively communicate with one another using direct extension dialing, as well as transfer calls between branches or in the ACD groups with ease.

Benefiting from the Strata CIX

The benefits the Toshiba platform brought to La Capitol significantly improved both internal and external communications capabilities. In addition to the extension dialing and transfer capabilities, the enhanced voice messaging system has made internal communication considerably more productive, as messages can be forwarded or copied to any extension on the system, either as voice messages or emails. Having all 13 locations and some 200 employees on the same system allows La Capitol to do what it does best — serve its 55,000 members as though they are dealing with a single facility.

"Having the ability to easily share voice messages across the email system has given us a whole new way of expanding and improving our customer service," said Callender. "By being able to listen to voice messages over my email, it takes less time on the phone and makes the entire process of reviewing voicemails faster and easier."

In addition, the Toshiba system allows Callender to manage the whole system from his office, as opposed to requiring service technicians to be called out for any minor move, add, or change, providing both time and cost savings.

La Capitol's new Strata ACD system is managed using the TASKE software, allowing supervisors to view a variety of usage, call flow, and other reports to more efficiently staff the facility. The reporting features also are a benefit to the marketing team, as it allows them to easily understand which services and promotions are getting the greatest response.

By simply enabling callers to dial into the appropriate ACD group, the Strata system saves them time and, in the process, aggravation. With the system, queues are shorter and members experience greater satisfaction.

Of course, what business today is without its mobile employees? La Capitol's management is able to connect to the communications system via softphones on their laptops from anywhere — all they need is broadband connectivity.

"The SoftIPT screen looks and acts just like a Toshiba desk telephone, so the users can make calls, answer calls, listen to voicemail, transfer calls, initiate conference calls, and more, all from their notebook computers using a plug-in headset," explained Wood.

The Bottom Line

Having deployment of the Strata CIX systems, La Capitol quickly began realizing the benefits of its decision to switch to VoIP — the telephony features themselves made the move worthwhile. The customer service enhancements, including the enhanced ACD system, has allowed La Capitol to, first and foremost, meet its goal of improving its customer care, a large part of which includes the internal communications improvements.

Of course, the other key reason businesses look to VoIP is the cost savings they hope to achieve. In CAPEX alone, La Capitol says it saved more than \$20,000, not to mention to potential for millions in OPEX ([News - Alert](#)) over the coming years.

"Communication with our members and between our employees is our business," said Callender. "We give credit to Toshiba and Gage Telephone Systems for helping us maintain our lifeline to our members and employees, our IP business communication system." **IT**



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The Future Is SIP Trunking



Andre Temnorod is not one to mince words.

The Chairman & Chief Executive Officer of Broadvox ([News - Alert](#)) does an excellent job of translating when he distills the company's official mission statement:

"To be the premier provider of VoIP, SIP and IP communication applications and services delivered by the most skilled and motivated team in the industry generating excellent long term shareholder value..."

into the concise:

"Broadvox is an ITSP dedicated to providing the best service with the highest quality at the lowest price possible."

That Temnorod is keen on providing high-quality Internet telephony services to his customers should come as no surprise. He's been toying with the idea of creating a successful VoIP-based business since 1995, when involved in the white-box PC manufacturing business, he and several colleagues began looking for a differentiator to set themselves apart from the pack.

"I started looking at some early developments and some early products that offered Voice over IP," Temnorod said. "At that point, it was proprietary Voice over IP. We were looking for an Ethernet card with built-in voice capabilities. We were hoping to be able to plug phones directly into PCs. While we had our computer company, we did some layman trial and error. The end result was, we determined that customers really don't want to use their PCs for phone connections.

The bottom line is: even if the PC crashes, they want to retain communication through their phones.

"So I kept up with developments in VoIP. Back in 1999, I launched my first VoIP startup which we sold after a couple of successful years. Then in 2001, I started Broadvox. The whole premise of Broadvox was to deliver distributed Voice over IP services on a secure and reliable network to any carrier company that could use them."

Today, Broadvox provides managed VoIP services to a variety of customers across multiple markets, including SMBs, enterprises and carriers. It has deployed a global VoIP network and serves more than 160 telecommunications carriers, CLECs, ISPs and over a thousand enterprises to terminate and originate traffic to the tune of nearly 20 million minutes a day.

Broadvox has built a private IP network designed to transport traffic with assured quality criteria supported by state-of-the-art network elements from companies like Cisco ([News - Alert](#)), Lucent, Adtran, Sylanro, Sonus, Telica and others. The company's network is constantly growing and evolving, and Broadvox is currently in the process of standardizing on Sonus network gear.

Furthermore, the company mans a 24x7 network control center monitoring performance on a continuous basis.

And so, since 2001, Temnorod grew Broadvox into a successful independent wholesale VoIP carrier providing services to a number of prominent retail VoIP providers.

"I don't want to mention any names," he says. "But if you take the top 10 providers, we provide origination and termination service to

probably seven of them. The total wholesale SIP business represents around 90 percent of our revenues.”

Temnorod continued, “In early 2007, we launched a national marketing campaign focused on our retail SIP Trunking product and the development of a new channel of distribution for it. I believe our future is SIP Trunking.”

I asked Temnorod to share his vision for Broadvox and to describe how the company is positioned in the next-generation telecom market. According to Temnorod, “Our vision is to become the leading provider of SIP Trunking services to SMBs and enterprises in North America. Currently, we have an excellent business as a carrier’s carrier but we have seen the rapid adoption of IP telephony as an opportunity to evolve our business. We can provide the same cost savings and reliability of our traditional business to this rapidly growing business customer base.”

The company offers a solution known as the Broadvox Go!Anywhere SIP Trunking solution. According to Broadvox Chief Technology Officer Sergey Galchenko, “Go!Anywhere is a great solution for most companies that want to replace traditional phone lines and PRI’s. Economically, it’s a fairly easy decision because they’ll achieve phenomenal savings on their monthly expenses related to phone calls (we’ve seen up to 70% savings). There is also an inherent flexibility to our SIP Trunking solution that enables companies with multiple locations to share trunks and create a lot of custom network configurations that they couldn’t do with traditional phone lines or even most other SIP Trunking vendors.”

Galchenko describes the benefits of the Broadvox solution thusly. “Our customers have access to the same suite of features they had with their legacy services like Local Number Portability (LNP), 911, Directory Assistance, etc..., but they also get the latest and greatest in everything provided by SIP. For example, we can perform load balancing across multiple locations, provide virtual phone numbers for distant markets, share trunks among sites and more. Broadvox also has a very diverse network in terms of both the hardware and the service providers we work with which enables us to provide a customized solution for each customer based on their unique needs.”

Temnorod explained further that the Go!Anywhere solution can be tailored to a customer’s specific requirements.

“Our SIP Trunking package can be customized based upon the desired number of simultaneous calls, long-distance volume, toll-free call volume, number of DID’s, local number portability requirements, and other capabilities,” he said. “Each business defines its service package with Broadvox, not the other way around. Moreover, we are using an indirect channel of Value Added Resellers or VARs to sell the product, giving them greater flexibility to address the unique demands of their customers.”

Mark Bresler ([News - Alert](#)) is Broadvox’ Vice President of Channel Sales, and among other things, he is responsible for the success of the company’s reseller focused activities.

Bresler described what Broadvox looks for in a reseller, what they expect from their partners and how they go about becoming Broadvox certified.

“What we look for in a VAR is that they truly add value,” Bresler said. “The days of telephony company carriers engaging agents are almost over. Agents are legacy-types who have customer bases that they want to convert over and over, typically to go after a lower price and more commission. That’s their incentive to flip the base to another carrier. In this world of IP, we really need VARs that bring

additional value in their ability to identify and deploy customized solutions to the end user.”

“As an ITSP, we feel that for our SIP Trunking program to succeed we need to focus on our core competency which is delivering premium quality services and we need to partner with VARs that focus on their core competency which is the creation and deployment of a voice optimized LAN including any CPE necessary to ensure a successful solution for their customer.”

“We’re able to provide support for VARs around the interoperability of the CPE they represent by way of our SIP Engineering Group who jointly create technical application notes with that VAR’s particular CPE manufacturer.”

“So what we’re looking for as our partners are predominantly interconnects and network integrators.”

Bresler continued, touching upon some of the differentiators the Broadvox program offers.

Bresler for one believes that educating the reseller channel is “...paramount. It’s a dire need. It’s absolutely essential.”

“Broadvox is very different from the other VoIP carriers in that Broadvox employs ‘best in class’ metrics that would most likely be seen in a public utility or an incumbent local exchange carrier. We look at the total customer experience and meticulously manage the life cycle of the account throughout the contract term.”

“We have very well-designed processes both for VARs and end users. We provide several tools for the VARs on our Web Portal that enable them to view and maintain control of their accounts.”

According to Bresler, “Initially there’s the discovery phase where we make a determination of whether it’s a good fit for the VAR and for us. There are some requirements based on some aggregated monthly recurring charges across a ramp-up period that qualify the reseller for a certain percentage of commission.”

“The entry-level residual commission percentage is around 15 percent, but we have some VARs who are making significantly more than that.”

Education is another key area that needs to be addressed. Bresler for one believes that educating the reseller channel is “...paramount. It’s a dire need. It’s absolutely essential.”

“Even though Broadvox as a carrier really ultimately should not be responsible for educating VARs on specific OEM gear, we find ourselves becoming knowledge experts for every type of gear being deployed to ensure success.”

“The bottom line,” Bresler concluded, “is that unless people actually educate themselves about the technology and feel comfortable with it, they’re not going to be able to go out and sell it to their end users. We are going to help them do this”

CEO Temnorod pointed out one more key advantage of the Broadvox reseller program: compensation. “We believe we’re going to be compensating our resellers better than our competition will, quite simply



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FROM THE



AWAY

PBX.

Some things are better left untouched.

Before you start that big transition to VoIP, hold the phone. It may not be the grand reconstruction project they've been talking about. Simply stated, it isn't about ripping and replacing or big, upfront costs. That's because it isn't about hardware.

It's actually about software.

Now you can keep your hardware—your PBX, your gateways, even your phones. Move to VoIP with software. Software that integrates with Active Directory®, Microsoft® Office, Microsoft Exchange Server, and your PBX.

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because we have more margin on the product. Competing vendors have their softswitch supporting either hosted or SIP Trunks, and they have to take that traffic and send it to the carrier. We *are* the carrier for our customer base and we have extra margin because we own our carrier network.”

In addition to resellers, Broadvox is hard at work developing relationships with their technology partners, that is to say those companies that make the equipment that customers wish to connect using SIP trunks.

Eric Eckman is Director of Business Development and plays a major role in developing the Broadvox technology partner ecosystem.

According to Eckman, “The biggest key to our ecosystem is the depth and breadth of partnerships. This is such a rapidly changing field with the established PBX ([News](#) - [Alert](#)) vendors revamping their product set, new PBX vendors coming on board, new solutions around unified communications, contact centers, and communication-enabled business processes (CEBP), that it’s important for Broadvox to support the widest possible range of solutions. Our VARs and end-users have different requirements, and they choose different solutions to address them. We’re committed to making sure that we can offer seamless service no matter what our customers choose.”

As for the future of the IP telephony industry, Temnorod believes that consumers are still driven by cost when it comes to replacing their communications service.

“We seek out partnerships with the vendors that our customers want to work with. From both a technical perspective as well as in providing support, we know that it’s extremely important to provide a highly qualified and united team to make life easy on the companies that are using our service.”

Eckman explained that would-be partners must undergo a very detailed certification process.

“It starts with the engineers working together and testing all the functionality of our service in conjunction with the functionality of the PBX or software solution. We make sure that everything works, we document how to set it up, and we establish all the support processes in advance of actually deploying the combined solution. This process is repeated whenever we or our partners make upgrades or changes to any facet of the solution.”

On top of growing their ecosystem of resellers and partners, Broadvox is also planning to expand their network by adding SuperPOPs in several cities, including Seattle, Denver, Chicago, Atlanta and Miami in addition to existing facilities in New York, Los Angeles and Dallas.

Temnorod explained, “We’re redeploying our own network back to about eight markets that will be very heavily connected through the private network. We are actually buying fiber from market to market to

connect our gateways. And those gateways are much bigger than what we used to have, with the capability of handling up to 20 DS3s.”

“What we do is we backhaul any local interconnections whether it is a local ILEC, CLEC or end-user customer to one of our super POPs. It’s more cost effective for us to handle traffic this way.”

To help manage this expansion, Temnorod says that Broadvox will possibly add secondary network operations in Dallas within two years as well as an additional set of Voice over IP engineering resources in Dallas also.

As his company looks to expand their network operations, Temnorod also spoke about his faith in the future of IP Communications.

“I see little that can slow the growth of IP Communications. At one time it was thought that regulatory bodies might impede its progress but that no longer appears to be the case. The current success of IP communications might be impacted by some service providers with underdeveloped business plans or poor execution. Over the last year or so we have seen service providers go out of business as a result of over-reaching or not gaining an understanding of their target customer base.”

“Many of the new service providers are under-funded and led by inexperienced management. That creates a level of uncertainty, which impacts the adoption rate of new service offerings such as SIP Trunking. We have been delivering SIP-related services for over eight years and our new initiative is supported by an experienced organization and profitable business line. We expect the growth of IP communications to only accelerate as we progress along the adoption curve. Most industry analysts agree with this assessment of the market as it is forecasted to have double digit growth for the next five or so years,” Temnorod concluded.

As for the future of the IP telephony industry, Temnorod believes that consumers are still driven by cost when it comes to replacing their communications service.

“However,” he says, “the greatest benefit will come as the innovators begin to develop new applications leveraging SIP. It will be new applications and improvements in productivity that will form the long-term foundation for the growth of IP telephony. Innovative applications will result from the many developers that decide to leverage the open SIP standard to build a broader range of applications, moving from standalone systems to integrating applications based upon unified communications and solving key business needs. In doing this, they will sell a new generation of products.”

“At Broadvox we believe we will have an impact by participating in various forums working to establish the baseline for user expectations. Those expectations will influence the direction of the successful SIP application developers.” **IT**

Greg Galitzine is Editorial Director of TMCnet. To read more of Greg’s articles, please visit his columnist page on www.tmcnet.com.

SIP Community



Connect. Communicate. Collaborate.

Today's IP Communications world is moving fast. Innovation is being driven on many fronts, and at the heart of so much of this activity is Session Initiation Protocol, otherwise known as SIP.

SIP is the engine behind the notion of Open Communications. The idea or concept of Open Communications – integrating open, standards-based technology with leading brands of telephony platforms, devices and the latest in voice, video and data applications – is fueling a multitude of innovative SIP-based multimedia applications such as VoIP and Video over IP, IM and Presence, Collaboration and more.

The SIP Community is designed to serve as a central information resource for this fast-moving world of SIP-based IP Communications. To stay on top of the SIP market, bookmark the SIP Community and make sure to return often for the latest news, trends, and industry-specific content.



- SIP Latest News
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- SIP and Open Standards
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- Product Showcase

New Monthly Section – Open Source Communications

By: Richard “Zippy” Grigonis



Open Source

Welcome to the newest section in Internet Telephony magazine, “Open Source Communications”. Each month you’ll see one page of news items and another page by Yours Truly consisting of a one-page interview with an industry luminary (or some equivalent content) addressing open source industry issues and their relationship to telecom.

The world is being changed by open source software, an alternative to commercial software sold by vendors. Open source means that users can easily be “co-developers”, and programs such as the Linux operating system, the Apache Web Server, the Firefox Browser and the OpenOffice.org suite of business programs have been worked and reworked by thousands of programmers. Open source companies make their money by selling “surround stuff” such as hardware and support.

Telecom has been a particular beneficiary of open source. There’s something quite appealing about the scenario of struggling smaller businesses (or perennially budget-minded verticals such as education, municipal and state government, and financial services), stumbling across a way to enjoy the same call control and other telephonic capabilities as a larger, prosperous enterprise.

Once upon a time, a computer engineering student at Auburn University named Mark Spencer ([News - Alert](#)) began tinkering with the programming code for Jim Dixon’s Zapata Telephony Project, nicknamed “Zap-*tel*”. (You’ve got to love any disruptive technology named after a guerilla leader, General Emiliano Zapata.) After some considerable programming, Spencer brought forth what has become the world’s most popular open source IP PBX ([News - Alert](#))—Asterisk. Instead of Dixon’s BSD Unix-based hardware drivers for homebrew PC telephony interface cards, Spencer ported his code to Linux and founded Digium (www.digium.com) in 1999 to make slicker plug-in PCI bus boards so that Asterisk ([News - Alert](#)) could reach the PSTN as well as IP communications networks.

Digium eventually devised the Asterisk Business Edition, the professional-grade version capable of voice and data transport over

IP, TDM, switched and Ethernet architectures. Asterisk has now become the cost-effective alternative IP PBX for Small and Medium-sized Businesses (SMBs), since it can run on a PC and works with legacy PBXs (e.g. Lucent, Nortel, Siemens ([News - Alert](#))), IVR, next-gen gateway, auto-attendants, media servers and application servers. Asterisk’s functions match those of any IP PBX, including call control, voicemail, SIP, H.323, MGCP and Spencer’s own IAX (Inter-Asterisk eXchange) protocol.

This is why Asterisk/Digium ([News - Alert](#)) will be the subject of our first interview, in the March issue.

Many programmers and companies continue to adding scalability, reliability and security to efforts such as Asterisk. Yours Truly and many industry pundits have urged that some company make the same kind of effort to support open source telephony the same way IBM ([News - Alert](#)) has been a booster for Linux. Still, open source communications appears to be on a roll anyway in terms of popularity. To make it even more popular, some companies have drastically reworked existing code (so that it no longer takes several weeks for a C++ programmer to figure things out) while others have written user-friendly GUI front-ends to these systems.

Mobile Open Source Telephony

Linux, the open source operating system underlying open source telephony, is lean and mean enough, yet has sufficient features, to be incorporated into mobile phones processing multimedia applications. Those handset makers wanting to avoid licensing the Windows CE platform have adopted Linux. The first two companies to provide developers with fully programmable Linux-based handsets, were Trolltech ([News - Alert](#)) (which announced the Qtopia Greenphone in 2006) and First International Computer (which introduced the Neo1973 smartphone, running a Linux-based environment called OpenMoko).

Resellers and Integrators

Like traditional telecom, open source communications has spawned opportunities for resellers, VARs, VADs and integrators. We’ll be examining them too in this new section of the magazine. For example, NeoPhonetics ([News - Alert](#)) (www.neophonetics.com) will custom design a VoIP PBX solution for your SMB or enterprise, implement the solution at your location, and train your staff and support the implementation through 24/7 maintenance. NeoPhonetics also offers their Unified Management System which delivers a fully-redundant IP PBX, simple real-time management of IP PBX changes and centralized management of your whole voice infrastructure.

So regardless of whether you consider open source communications an innovation, developer community phenomenon, socio-economic movement or a cult, open source is increasingly making its mark on the contemporary IP communications scene. And you can read about it each month right here. Hope you enjoy it, and when you get a chance, give us some feedback on how we’re doing. **IT**

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

www.tmcnet.com/1527.1

Sun Microsystems to Acquire Open Source Database Solutions Provider MySQL

In what will likely be one of the most significant mergers the tech community will see in 2008, Sun Microsystems has entered into a definitive agreement to acquire open source database company MySQL AB. The deal marks Sun's entrance into the \$15 billion database market and makes it one of the top four providers of enterprise database solutions. The company will now be in direct competition with IBM, SAP, and its former database partner, Oracle. In addition it makes Sun one of the first major publicly traded companies to offer open source solutions.

www.sun.com
www.mysql.com

www.tmcnet.com/1528.1

a la Mobile Demonstrates Android Applications on HTC Qtek 9090 Smartphone

a la Mobile announced its support of Google Android by offering a demonstration of its applications based on the open source Android application framework on the HTC's Qtek 9090 advanced smartphone. a la Mobile has developed applications, including browser, phone dialer, audio player, maps, camera, games, calendar, contacts manager, calculator, tasks manager, and notes. "While mobile Linux has made steady progress in the industry since 2006, Google's advocacy with the unveiling of the Android framework further substantiates the position of Linux as a major mobile operating system alongside Windows Mobile and Symbian."

www.a-la-mobile.com
code.google.com/android

www.tmcnet.com/1529.1

Asterisk Hits One Million Downloads

If you have any doubt that there is tremendous interest in open source communications, consider the fact that Digium recently announced the one millionth download of Asterisk, the open-source PBX. This is a staggering number, given that we're talking about a product which most people use as a PBX. This just shows the incredible need for Asterisk.

www.asterisk.org

www.tmcnet.com/1530.1

Zimbra Expands Support for Apple Products and Technologies

Zimbra has expanded its support for Apple products and technologies, including Safari 3 and CalDAV for Mac OS X Leopard. "The amazing speed of Safari 3 has blown the Zimbra team away and we are excited to be the first major collaboration platform to support the calendaring standard CalDAV." The ZCS 5.0 Open Source Edition is available now.

www.zimbra.com

www.tmcnet.com/1531.1

Ifbyphone Partners with Voxeo

Ifbyphone has announced a partnership with Voxeo, a provider of standards-based IVR and VoIP platforms. Irv Shapiro, CEO at Ifbyphone, said Voxeo is the ideal partner for Ifbyphone custom IVR solutions, as they provide a high-performance, open standards platform with world-class product support. The Ifbyphone dynamic VoiceXML technologies allow Web developers to focus on solutions instead of syntax.

www.ifbyphone.com
www.voxeo.com

**Visit The Open Source
Online Community:
opensourcepbx.tmcnet.com**

www.tmcnet.com/1532.1

IP Communications 2007: Looking Back, A Look Ahead With Sangoma

As we get ready to bid farewell to 2007 and look ahead to 2008, David Mandelstam, CEO of Sangoma, spoke to TMC about the developments in the open source telephony market. "The really interesting development is the 'mainstreaming' of the idea of telephony as a software service, originally pioneered by people like Mark Spencer and Jim Dixon. Their efforts have resulted in a truly disruptive technology that is being picked up by the corporate giants of the IT world. Just like the Internet itself, it was Open Source products like Asterisk that showed what was possible and built not just

the technology, but also largely the market; a market that will be exploited by the large commercial firms."

www.sangoma.com

www.tmcnet.com/1533.1

Open Source Samba Gets Microsoft Protocol Information

Protocol Freedom Information Foundation (PFIF) has signed an agreement with Microsoft to receive the protocol documentation needed to fully interoperate with the Microsoft Windows workgroup server products and to make them available to Free Software projects. "This should inject competition into a market that had become dominated by Microsoft."

www.protocolfreedom.org

www.tmcnet.com/1534.1

Open Source Market is Getting Interesting

Xorcom develops software and hardware designed to reduce the complexity of setting up Asterisk PBXs in order to shorten the set-up time and make Asterisk available for a wider range of users. Eran Gal, CEO of Xorcom, says, "We strongly believe that open-source communication platforms and specifically Asterisk are going to significantly change the market. What we saw up until now is only the beginning. The benefits of using an open source are so significant that they allow a relatively small company to compete with market giants — this is what we are starting to see today. It is hard to say where this will lead eventually, but one thing is for sure: it is going to get interesting..."

www.xorcom.com

www.tmcnet.com/1535.1

OpenMoko Becomes Mobile Device Company

OpenMoko, an open source project created early in 2006 by First International Computer, Inc. (FIC), has now become an independent mobile device company thereby expanding its growth in the open mobile space. "We have reached our initial milestone with the developer version of the Neo 1973 — the world's first entirely open mobile phone — and will shortly announce an exciting new consumer product and key US partner."

www.openmoko.com

IP Communications Testing and Monitoring Solutions

Adoption of IP Communications systems has certainly increased in the past year, particularly in light of the new and innovative features and capabilities of the latest technologies and converged networking solutions. All these new IP-based technologies than enable things like fixed/mobile convergence, wireless communications, mobility, and more, are increasingly being adopted because of the productivity they engender, not to mention the cost savings they can deliver.

However, as these technologies become more advanced, and more common in both business and residential environments, customers are also demanding greater reliability and quality from them. When VoIP was but a start-up technology, early adopters understood they were deploying fledgling technology, and were willing to accept the consequences, in terms of lower than PSTN quality and reliability. However, as more and more money is being spent on development, and as more and more business are adopting IP Communications in lieu of their legacy systems, being able to ensure quality and reliability is steadily becoming a greater asset.

As such, acquiring the technology to enable high quality voice and video communications, in particular — since data transmission delays can be forgiven for the sake of real-time voice and video — is a priority for both enterprises and service providers.

There are, of course, a substantial number of vendors touting their communications network monitoring and testing solutions, just as there is a large selection of communications hardware and services vendors, each with their own areas of expertise. So IT managers must carefully weigh their options and choose the product or solution that best meets their specific needs. Fortunately, the list of testing and monitoring solutions is growing as IP Communications technologies evolve, and there is a solution available that can accommodate everyone, whether their focus is VoIP, video, wireline, wireless, mobile, pre- or post-deployment, end-to-end, or what have you, and for any access type and communications protocol as well.

The following is a listing of nearly 50 vendors offering a wide range of IP Communications network testing, measurement, and monitoring solutions. While each has its distinct features and benefits, the one thing they have in common is their goal of easing both deployment, maintenance, and operation of communications networks to ensure call quality is at a maximum, regardless of traffic volume.

We encourage you to use this listing as a starting point in your quest for a testing and monitoring solution, but remind you to contact the vendors for specific information as to how these various solutions can meet your specific requirements. As always, we realize some vendors may have been inadvertently been omitted, and ask those companies to contact us (elinask@tmcnet.com) so that we may update our information.

Agilent Technologies www.agilent.com/comms	Integrated Research www.ir.com	Network Instruments www.networkinstruments.com	ShoreTel www.shoretel.com
Allot Communications www.allot.com	JDSU www.jdsu.com	Opticom www.opticom.de	Shunra www.shunra.com
Ameritec Corporation www.ameritec.com	Keynote www.keynote.com	Packet Island www.packetisland.com	Simena www.simena.net
Anue Systems www.anuesystems.com	NetHawk www.nethawk.fi	Path Solutions (formerly NetLatency) www.pathsolutions.com	Spirent Communications www.spirentcom.com
Arcatech Limited www.arca-technologies.com	Hermon Laboratories www.hermonlabs.com	Psytechnics www.psytechnics.com	Sunrise Telecom www.sunrisetelecom.com
Brix Networks www.brixnet.com	InterWorking Labs www.iwl.com	Q1 Labs www.q1labs.com	Tektronix www.tek.com
Catapult Communications www.catapult.com	Ixia www.ixiacom.com	Omnigor www.omnigor.com	Telchemy www.telchemy.com
Clarus Systems www.clarussystems.com	Microsoft www.microsoft.com	RADCOM www.radcom.com	Touchstone Technologies www.touchstone-inc.com
Communicado www.communicado-inc.com	Navtel Communications www.navtelcom.com	RADVISION www.radvision.com	Trilithic www.trilithic.com
Empirix www.empirix.com	Netcordia www.netcordia.com	Safire www.safire-world.com	VeriWave www.veriwave.com
Fluke Networks www.flukenetworks.com	NetIQ www.netiq.com	Sage Instruments www.sageinst.com	Viola Networks www.violanetworks.com
GL Communications www.gl.com	Network General www.networkgeneral.com	Shenick www.shenick.com	WildPackets www.wildpackets.com

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



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Consumer VoIP Trends

By: Richard “Zippy” Grigonis

Being an editor in telecom often involves making sense of a continual barrage of hundreds if not thousands of statistics that regularly arrive via email or snail mail. Did you know that about 25 percent of France’s voice traffic from fixed-line phones ends up traveling over VoIP? Or that one of 12 Canadians is using a VoIP service and demand is increasing? Or that Japan has half again as many VoIP users as the USA? And how about the rise in user mobility, with video coming along for the ride?

Consumer VoIP trends are often tied into economics (“Is it less expensive than the PSTN?”) quality of service (“Can I hear what the other person is saying?”) and features and/or ease of use.

Sometimes user trends are constrained or enhanced by government regulation. A couple of decades ago, when making a phone call in France you picked up the handset (placing it “off-hook”) and threw it onto a chair or bed and walked away, coming back to it several minutes later to see if dial tone had appeared. A digital network conversion fixed that, but France’s state-owned monopoly was ill-equipped to enter the modern age of broadband communications. However, thanks to deregulation and “opening up” of the French market in 2006, France’s consumers are rapidly migrating from traditional circuit-switched fixed lines to IP communications.

Many consumers have never taken the VoIP plunge because of concerns over voice quality. A 2007 study from Keynote Competitive Research of San Mateo, California compared the PSTN, Packet-Cable and VoIP phone services in the New York and San Francisco markets. The study reveals that while packet cable “digital voice” and VoIP services still aren’t quite as good as the PSTN, they are actually “turning out to be highly competitive” with conventional PSTN service providers.

Moreover, users in some countries have taken to IP communications as the proverbial duck takes to water. A report by VoIPGizmos.ca (www.voipgizmos.ca) and other Canadian VoIP providers in Canada estimates that 1 out of every 12 Canadians currently uses VoIP. Canadian VoIP adopters are attracted by both a cost reduction in long distance calls and the features it brings, such as PBX (News - Alert)-like call control, auto attendant, call queuing, and voicemail.

As IP adoption increases, the line between consumer and business communications becomes blurred. Broadband IP telephony and Voice-integrated Instant Messaging (VoIM), long associated with residential users, are now increasingly being taken up by businesses of all sizes. Also, the cell phone or similar handheld device is becoming a vital part of the lifestyle of increasingly mobile business users. This follows in the wake of its immense popularity among consumers. Amazingly, 88 percent of 10-year-olds in Norway have a mobile phone, according to Opinion Research (www.opinionresearch.com). Even as far back as 2004, 52 percent of 10-year-olds had a mobile phone, and 71 percent of 9-year-olds owned or had access to a mobile phone, compared with 57 percent in 2006. And Deloitte (News - Alert) & Touche reports that 36 percent of their respondents in a recent survey consider their cell phone as an entertainment device,



using the IP wireless data services to send and receive pictures and download music. (4G phones will have both packet voice and data).

Of the three major delivery mechanisms that can deliver VoIP to consumers (Cable, Telcos/service providers and Voice-integrated IM), research by The Yankee Group (News - Alert) indicates that majority of U.S. residential VoIP subscribers will subscribe to triple and quad-play bundles from cable companies by 2011. They also see great potential in VoIP traveling over Fiber-to-the-Home (FTTH), mostly as a result of major efforts by Verizon (News - Alert) with FiOS and AT&T with U-verse.

Despite the popularity of VoIP among consumers – particularly among cable triple-play subscribers – the current (2008) bearish economic phenomena, mostly influenced by the U.S. subprime mortgage industry debacle, may end up having an effect on the daringness of consumers to adopt something as radical as VoIP. Not so long ago Comcast (News - Alert) cut revenue and increasing spending forecasts, blaming things on “an increasingly challenging economic and competitive environment.” (It also doesn’t help that FCC Chairman Kevin Martin has wanted to essentially cap Comcast customer base of around 60 million.)

Even so, traffic on the Voice Peering Fabric, that great peer-to-peer Layer 2 Ethernet virtual network and “minutes exchange” constructed specifically for VoIP interconnections, continues to increase rapidly, according to its parent, Stealth Communications (News - Alert) of New York City. The network’s run-rate has passed more than 200 billion minutes a year, up from the 100 billion minutes last measured in October 2006. So certainly IP traffic is not disappearing.

Skype (News - Alert) is still incredibly popular (220+ million users) among those users who have generic IP connections and no “mainstream” VoIP service, though the online auction colossus eBay (News - Alert) is still puzzling now to get back the US\$2.6 billion it spent on purchasing Skype Ltd., a company dedicated on delivering free communications to people.

So there you have it: more user-directed mobile multimedia, a blurring of the line between consumer and business services, more triple and quad play bundles, and more people looking to save money. . . IT

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

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Mobile Enterprise Innovations

By: Richard “Zippy” Grigonis

The Enterprise’s increasing love affair with mobility is finally being served by inventive vendors and service providers. The technology ranges from simple but effective voicemail distribution to Fixed-Mobile Access technologies such as dual-mode phones that allow roaming between WiFi and cellular worlds, or even the transfer of PBX ([News](#) - [Alert](#)) capabilities to any remote device as needed.

In some cases these systems were developed out of actual immediate demand. For example, take SkyMail (www.skymail.net) an application launched by Pacific DataVision (www.pacificdatavision.com) better known as PDV. SkyMail allows the mobile worker to wirelessly dictate documents and share information with an individual or group from a mobile phone by simply making a phone call and speaking.

John Pescatore, President and CEO of PDV, says, “PDV’s founder, Peter J. Lasensky, was in commercial construction. The technology and the application were developed to solve a field documentation problem. He had a growing construction business in San Diego that was hired for a job involving a lot of change orders. At the job’s conclusion, he presented the invoice to the customer, who replied that he wasn’t going to pay for the change orders. ‘I didn’t authorize you to do the work,’ the customer said. The dispute went into arbitration, but at the end of the day, there was literally no documentation on the change orders.”

“So Lasensky was about to lose his case,” says Pescatore. “He was looking at his Nextel phone, and it dawned on him that if he had a way to record his notes or a conversation from the job site, using push-to-talk and then have it stored with a date/time stamp by the network, then he could put it in a project folder and transcribe it or what have you. He explained the idea to the arbitrator, who remarked, ‘I’ve been doing dispute resolution for 30 years. It’s always about documentation. If you had something like that, your case would have been a whole different story.’ So Lasensky developed this technology and had it working over Nextel, and then we got involved in the company a few years ago. We helped him do his first deal. You can use it in the U.S. under Sprint ([News](#) - [Alert](#)) Nextel’s NextMail brand. It’s also a commercial service in Mexico under the PushtoMail brand from Nextel de Mexico.”

“Now, these are all push-to-talk products,” says Pescatore. “Our SkyMail release is a circuit-switched cellular product. The value of what we provide is the ability to increase productivity of field-based workers by enabling easy, clear, and fast communication from the mobile user or workforce back to the office or anywhere in the world, without typing or writing. It shouldn’t matter whether you hit the push-to-talk button or the ‘send’ button. It’s the ultimate value that is key. So we launched SkyMail, which is quite easy to use. If a disaster occurs, for example, I can scroll to a contact in my address book that might be labeled ‘urgent system outage’. I’d press the send button. It dials a phone number and I speak a message, such as, ‘There’s been a disaster; let’s meet up at the office,’ which is instantly routed to one or up to 50 people as an audio email. SkyMail’s customized email subject lines like ‘Service Outage — Critical’ or ‘Job Closed Out — Non Critical’ can spotlight the message’s significance so that the recipient can listen to the most important messages first. The recipients receive an email containing a link to the voice message and a text reply box, so that the recipient can reply with a text message delivered directly to the sender’s phone. All SkyMail messages are time-and-date stamped for documentation and stored on a secure password protected website for tracking and record-keeping purposes.”



SkyMail thus increases the speed and accuracy of communications from the field, freeing up mobile workers to focus on their primary tasks, which could involve selling, driving, hauling waste or installing cable TV service. Aside from prioritizing and documenting communications from the field, customers can use SkyMail to report expenses, send reminders to themselves and quickly communicate status reports and directives. SkyMail messages can always be transcribed if necessary, obviating hand written paperwork and any potential for error.

GSM, WiFi ([News](#) - [Alert](#)), Picocells and DECT

Some vendors and network operators believe that the future belongs to extending PBX services to mobile devices. A specific hotly debated subcategory of this are dual-mode phone devices, which allow a user to start a call over a corporate WiFi system in the office and then seamlessly handoff the call to a cellular network when the user walks outside, and *vice versa*. Early dual-mode efforts focused on WiFi-GSM roaming, such as Motorola’s ([News](#) - [Alert](#)) CN620 clamshell handset that could speak 802.11a and GSM cellular and which could tie into a system that provides key features of the desk phone virtually anywhere, including one phone number, one voicemail along with IP PBX features such as call hold, conference calling, and multiple simultaneous active calls. Another similar device that followed it was Nokia’s ([News](#) - [Alert](#))’6136 UMA (Unlicensed Mobile Access) device, which can also switch seamlessly between any of GSM’s four bands (85, 900, 1800 and 1900 MHz) and WLAN networks, thus enabling

users to make calls via the Internet. It also has a 1.3 megapixel camera and an FM radio.

With all the hubbub over WiFi, few Americans are aware of DECT (Digital Enhanced Cordless Technology), the great European cordless phone standard popularized with immense success by Siemens ([News - Alert](#)). But now DECT is entering the world of U.S. enterprise mobility, since the technology was recently ratified by the FCC for use in North America. Take Avaya ([News - Alert](#)) (www.avaya.com), which undoubtedly has its share of WiFi-based handsets such as the rugged Avaya 3641 and 3645 Voice over WLAN (VoWLAN) handsets, for use in warehouses or hospitals and the more stylish Model 3631 for office settings, having WiFi 802.11 b and g WLANs. But Avaya also now offers the Avaya 3711 IP DECT ([News - Alert](#)) Handset too. Avaya DECT handsets, being voice-optimized, target businesses that don't want to co-mingle voice and data on the same wireless network, while providing high-quality mobile voice communications.

RadioFrame Networks ([News - Alert](#)), Inc. (www.radioframe.com) took a different course, expanding the possibilities of what you can do indoors with your existing cell phone, by creating picocell and femtocell base stations for GSM/GPRS and EDGE based on 3GPP standards. Designed for the home or the small- to-medium business (SMB), these small IP backhauled cellular base stations use a low-cost broadband (e.g. DSL) connection from the subscriber site to the carrier's network. The device, built by RadioFrame Networks, is delivered and maintained through an OEM such as Nokia to a Mobile Network Operator (MNO) and thence to the customer. Turn it on indoors and you immediately eliminate the need for traditional land line telephone service, since you now enjoy both a strong cell signal as well as IP-over-GSM.

A RadioFrame picocell includes a 1-TRX transceiver (the femtocell includes half-TRX transceiver), all required service logic, and a multiple-switched-ports router with firewall security and web services to provide the MNO remote fault management and configuration capabilities. The transceiver performs start-up provisioning and authentication and supports necessary functions: airlink processing of all communications as well as BTS radio control, Quality of Service, IP tunneling, encryption and management functions.

Pulling PBX Functionality Out of the Air

A more flexible (though technologically challenging) approach is to extend PBX services to any mobile device.

Ascendent Systems ([News - Alert](#)) (www.ascendentsystems.com), a subsidiary of Research In Motion, provides enterprise voice mobility solutions (both customer premise and carrier-based) founded on single number reachability, real-time notification and conferencing, and voice continuity. Ascendant's Ascendent Voice Mobility ([News - Alert](#)) Suite extends the identity and functionality of a user's business PBX-based desk phone to any other device, such as a RIM BlackBerry, cell phone, smart phone, laptop, home phone, hotel phone, etc.

Recently, Ascendent worked with Verizon to deliver a new Fixed-Mobile Convergence ([News - Alert](#)) (FMC) service for large business customers. Called PBX Mobile Extension, it also converts any phone or mobile device into a mobile extension of a desk phone. Ascendent is doing similar deals with Sprint and other carriers.

Heather Howland, Ascendent's Senior Marketing Manager, says, "What we do is similar to what the BlackBerry does for email, but we do it for voice. It's like having 'pushed voice' technology. Your BlackBerry ([News - Alert](#)) or your cell phone becomes a true mobile extension of your enterprise PBX so it acts and functions just like my desk phone. The end user has the flexibility to use whatever device is most convenient to them at the time. If you're a mobile worker, sometimes you're in locations where you don't have coverage or your battery dies, but you still need to get work done, and this gives you the flexibility to be able to work from a different phone if you need to. It's about being able to pick up a phone and have that become 'the device'."

"With the BlackBerry," says Howland, "we've integrated the features directly into the device, so it's really a seamless, elegant user experience. You can literally toggle between two lines. You can use it as a conventional cell phone or you can put it into enterprise mode where you dial the phone and you can dial a colleague using extension dialing or dial one of my customers and when they answer my call they'll actually see my caller ID and if they're a colleague they'll see your extension pop up. So you don't have to do anything differently. You just use the phone as you normally

Nortel likes the term "hyperconnected world", which pretty much sums up what the ideal business communications system should be capable of.

would. It's a very seamless integration with the BlackBerry. With other devices, we can still enable the functionality there too, the only difference is that, to access features, you have to do things such as a star command, or something like that."

"We work with legacy PBXs, new IP PBXs, or a mixed environment," says Howland. "Often enterprises have a mix of equipment within their infrastructure to which they'd like to deliver these functions. We have a health care customer that has IP in one location and TDM in another, and they want to be able to offer this solution to all of their users, and have it provide that same experience. They can do that with Ascendent. They don't have to worry about having a homogenous network that's all-Cisco ([News - Alert](#)) or all-Avaya."

"Our software sits on a server and interfaces with the PBX. Each user has a profile on the system. In my profile, I have multiple devices active there at any given time: my desk phone, my BlackBerry, my personal cell phone, my home phone. When I entered the office today I decided that I would remain in the office, but I wanted my BlackBerry and desk phone active. So when somebody calls me it simultaneously rings me on both of those devices, and then I answer on whatever is more convenient for me. If I'm out to lunch but an important call comes, I'm able to answer it on my BlackBerry. It doesn't have to go to one or more voicemail boxes."

Major companies such as Nortel ([News - Alert](#)) (www.nortel.com) are also charging into this space. They recently unveiled their "Unwired Enterprise", the purpose of which is to set up businesses with all-wireless offices, using next-gen technology and devices. This builds upon the offerings Nortel already provides, which make it possible for employees' wireless phones to work inside their office buildings over WiFi, and once outside the building, to continue working over a wireless mesh.

Nortel likes the term “hyperconnected world”, which pretty much sums up what the ideal business communications system should be capable of. One key component Nortel has identified to bring this world about is MIMO/OFDM, the transmission and modulation technologies behind the latest and greatest version of WiFi, the 802.11n standard (that supports up to three times the bandwidth of current WiFi devices) as well as longer-range 4G mobility solutions like WiMAX ([News - Alert](#)), which service providers worldwide are starting to deploy. Expect to see products in this area throughout 2008. Nortel has also already begun enhancing its Ethernet Routing Switch portfolio and other data products to improve real-time wireless application performance.

Mobility and Unified Communications ([News - Alert](#))

Enterprise mobility and Unified Communications (UC) have a sort of symbiotic relationship. If you extend a bunch of services to a remote device with a single friendly user interface, then that implies that the applications should already be capable of working together in a unified or integrated manner.

Mobile workers often work in vertical industries and have specific business requirements. This opens up opportunities for companies such as Hewlett-Packard ([www.hp.com](#)). HP Services collaborates with their partners, Avaya, Ericsson ([News - Alert](#)) and Nortel, to deliver an appropriately formulated UC solution for each customer. For example, HP Services works with Avaya to extend the value of Avaya communications applications with Microsoft ([News - Alert](#)) enterprise productivity and UC solutions, creating an intelligent, real-time communication and collaboration environment. HP Services also works closely with Ericsson to provide software solutions, including the Ericsson Enter-

prise Mobility Gateway ([News - Alert](#)), resulting in a PBX-agnostic, carrier-agnostic global communication solution based on HP Blade System c-Class enclosures. Moreover, as a Nortel Global Solutions Partner, HP Services leverages Nortel’s Innovative Communications Alliance ([News - Alert](#)) with Microsoft to optimize and enhance customers’ existing communications infrastructure.

Increasingly, the “workplace” is not in the office. It may not even be stationary. But enterprises are now able to choose from among various exciting platforms to maintain productivity, regardless of their employees’ location. **IT**

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

The following companies were mentioned in this article:

Ascendent Systems

[www.ascendentsystems.com](#)

Nokia

[www.nokia.com](#)

Avaya

[www.avaya.com](#)

Nortel

[www.nortel.com](#)

Hewlett-Packard

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Pacific DataVision

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Voice over IP Telecommunications

Unified Communications is on a Roll. . .

By: Richard “Zippy” Grigonis

Despite the fact that no two people can agree on what it is exactly, Unified Communications ([News - Alert](#)) (UC) is rapidly being adopted by businesses everywhere. The simple, deskbound unified messaging systems of long ago have now given way to advanced solutions that enable the increasingly mobile workforce to take their services and PBX ([News - Alert](#)) functionality with them wherever they go.

Brian Beutler, CEO and founder of Alianza Global Communications Services (www.alianza.com), says, “Alianza provides the first hosted, fully-integrated IP-based unified communications platform — the PowerPlatform. It includes VoIP, hosted PBX, IVR, integrated messaging, conferencing, and much more. The PowerPlatform also enables Broadband Service Providers to launch private-labeled solutions in less than 30 days, with no capital expenditures.”

“In 2008, we are going to see Unified Communications applications adding more value to developing markets; so much so that I expect that the revenue from applications will continue to increase while revenue from the actual broadband service will decrease,” says Beutler.

“Moving forward in Unified Communications, we are not too far off from where web and voice mashups will flood the Internet,” continues Beutler. “We will be in a world of applications that will make our life easier, like clicking on a phone number listed on a website so that it immediately makes the call through your desktop phone without you having to dial.”

Defragging Your Business with UC

In the summer of 2007, Siemens ([News - Alert](#)) (www.siemens.com) commissioned Toronto’s Insignia Marketing Research (www.insignia-research.com) a full-service consultancy, to conduct a comprehensive online survey among 517 participants in the U.S., Canada and Europe, covering ten aspects of collaboration. The participants worked in customer-facing sales and service roles.

The survey revealed that an amazing 94 percent of participants are experiencing unacceptable times “waiting for information” from colleagues who weren’t available when needed. The average length of this delay, directly attributable to the use of disjointed communications systems, is 5.3 hours per week, resulting in an average annual cost of over US\$9,000 per user. Moreover, business travelers estimated they spent 11 days during the previous year on unnecessary or avoidable business travel, itself an annual waste of at least US\$3,400 per person. Lack of parity in communication services reduced the productivity by an average of 7.8 hours a month for respondents who reported spending at least 10 percent of their time working from remote locations. And 75 percent incurred incremental communication costs on up to 4 business trips within the last six months, with an average expense of US\$186 per trip, resulting in an average annual cost of US\$1,488 annually, per business traveler, in additional expenses for communications while traveling, on top of typical travel expenses.

Siemens’ solution to alleviate much of this is to resort to unified communications, which eliminates distance, complexity, and helps ensure that



one person can immediately get in contact with another. Siemens’ own UC solution — OpenScape, is a major entry in the UC system category. It’s a multimodal real-time communications application suite that’s open, presence-aware and designed to quickly synchronize people and information to facilitate action or decision-making. With OpenScape you can now be reached via one number, and all of your messages can be retrieved and managed from a single inbox, regardless of media, device or location. It can help you contact any co-worker so you can reach them with the first phone call. Also, the system can start conference calls by calling the participants at their telephone of choice.

Grace Tiscareno-Sato, Global Marketing Manager for Siemens OpenScape, says, “You’ll also be seeing an increase in system integrators seeing the potential of UC as a new revenue stream, and so they’ll approach customers not just in terms of adding applications. They’ll be saying, ‘I can integrate UC capabilities into what you already have’. I read an article recently about Avaya ([News - Alert](#)) recruiting thousands of developers to do this. So eyes are opening all over the place. Whether you’re a system integrator, a vendor, or somebody who’s hosting applications, people understand that organizations that deploy unified communications directly into the applications they work with will achieve new competitive advantages. We’ll see more interesting case studies appearing. We’ve talked about these advanced functions for years, but now we’ll see the proof.”

The Buddy System

Hewlett-Packard ([News - Alert](#)) (www.hp.com), better known as HP, has an HP Services division that has entered the UC arena.

Jim O’Shea, Unified Communications Global Solution Lead, at HP Services, says, “We focus on the services aspect of UC. Unlike other people, our definition of UC includes collaboration. We felt that there



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was a collaboration area of interest and usability, and that includes web and video conferencing solutions, and a richer type of presence, such as the presence that you get with the Microsoft OCS ([News - Alert](#)) [Office Communications Server] integration. We use presence indicators such as 'Am I on the phone or in a meeting?' The system should automatically find me wherever I am. We were simply responding to customer needs. We also looked at the market, obviously. So we felt it was a viable business for us to get involved."

"Our vision of UC allows us to leverage the customer's existing investment in telecom equipment," says O'Shea. "So we developed an Assessment Strategy and Architecture service which is at our core. Then we developed different areas, and one of these was 'Migration to IP Solutions'. This is all about IP telephony, VoIP, PBX replacements and/or upgrades. With it you can make all the new stuff work along with network upgrades."

"Then we decided to make it possible to bring in the business functions and integrate them," says O'Shea. "We call that 'Integrated Business Solutions'. That ties together the front-end and back-end business processes. And of course, HP is very good at support services. We support what we build and sell. We've been doing that for years."

"Because of the broad nature of the industry and the size of HP, HP Services has as strategic partners Microsoft and Cisco ([News - Alert](#))," says O'Shea. "Both have different UC solutions; they approach it from different angles, but we're very adept in working with both these companies' technologies. Our partnership strategy not only involves

our strategic partners Cisco and Microsoft but also local partners as needed. By 'local partners as needed' I mean that every region in the world — sometimes every country — will have a different set of predominant local partners. Customers in a region have certain needs, and specific vendors often enjoy a local predominance and that drives decisions. So we have multiple partners in each area. But of course you always have your big names such as Avaya, Nortel ([News - Alert](#)), Ericsson, which are strong names in UC that we can support."

Kunal Ganju, Unified Communications Sales and Delivery Enablement Lead, HP Services, adds, "Cisco and Microsoft both tell the world independently that each has the correct way to achieve UC, which is expected. The role that HP plays is to come and try to be the integrator of choice between Cisco and Microsoft. We have a surprisingly large number of clients who have invested in both Cisco and Microsoft technology and they often struggle to integrate their respective platforms. That's where we believe we can play a fairly significant role, because we are platform/technology agnostic."

"Among the advantages we bring to the table is the fact that HP was the first Global Gold Certified Partner with Cisco," says Ganju. "We're also a prime integrator for Microsoft across the world. We have a large number of professionals that are both trained and certified on Microsoft and Cisco. In the case of Microsoft I would guess that the numbers are about 30,000 people; with Cisco it would be about 7,000 people. So we have the proper backing and people trained in these technologies."


"Our other investment we've made involves ensuring that a person working on Microsoft in the UC space should also be trained on what Cisco offers," says Ganju. "That training shouldn't necessarily be to the degree where they can completely deliver a Cisco solution, but just being able to understand how the integration works and to pull in the other technology when required."

"So we believe that what we do in the partnership space is a key differentiator for us," beams Ganju.

"There's a university hospital called St. Olaf's in Norway," says Ganju. "When the hospital was rebuilding itself, they decided to use advanced communications technology as a foundation for the entire organization. This was exciting because they wanted to build things up from scratch, not just add something to a pre-existing infrastructure. We worked with St. Olaf's in conjunction with Cisco, and what we've done is quite interesting. Now things such as patient registration and patient information access occur on various computer terminals, handhelds and computer screens available in the patient's room. Right from the time when a person enters the hospital they're greeted by a touch screen where they can learn more about various illnesses and they can also find the right doctor and things like that. It's a fairly new concept in the hospital space. Technology is even used to rush samples from the point of sampling to the lab. Medicines are also moved around between departments in the hospital using robotics."


"Since St. Olaf's is a university hospital, the limitation of having a certain number of students watching a surgery has been done away with, because we have installed advanced videoconferencing where students sitting in class can watch live surgery," says Ganju. "So the kind of work we've done with St. Olaf's is an ideal 'end state' where we all want to get to. Ideally we want to deliver these kinds of advanced integrated business solutions to all our clients, but of course different companies are at different stages in terms of adopting this technology. We view UC as being a journey, not just a destination. Our idea is to


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Beyond Personal Productivity

Cistera Networks ([News - Alert](#)) (<http://web.cistera.com>) offers the Cistera 1.6 IP communications application platform, which provides a single interface into and out of Cisco's Call Manager and Call Manager Express and can seamlessly integrate multiple application engines running on Cistera's own ConvergenceServer. Cistera's application engines include 1) event alerting and notification engines, 2) quality assurance and compliance engines, and 3) communications and collaboration engines.

Greg Royal ([News - Alert](#)), CTO and Executive VP of Cistera, says, "We didn't come from the TDM world — we started in IP Communications, first specifically creating solutions involving Cisco's Call Manager, which is one of the more open IP telephony platforms out there. We then progressed to dealing with somewhat more traditional systems, such as Nortel's CS1000 platform, which is a server-based IP PBX that has many features and supports unified messaging, customer contact centers, IVR, wireless VoIP and IP phones. Recently, we've added support for hosted environments, specifically for Sylantro's Synergy server that's IP telephony-centric, and is now an IMS application feature server too."

"We work in three core areas of telephony applications," says Royal. "First is event alerting and notification systems. Our technology binds different IP-enabled devices together to create large-scale notifications solutions. Our second area is quality assurance and compliance involving recording and monitoring systems. We have products that work in the traditional area of recording and monitoring for contact centers, and we mostly support Cisco's IPCC [IP Contact Center] product. These things have been around for a while, but IP communications have created the 'glue' to pin all of these supposedly disparate technologies together into a unified platform for our customers."

"Our third area is unified communications," Royal continues. "Our system sits in the middle of the various UC products. It's easiest for me to talk about Cisco, but what I say equally applies to Avaya, Nortel and others. We create some components that support using the 'base' UC products such as Presence Server, Conferencing, Voice-mail, and the IP telephony platform itself to create some compelling applications around 'teaming' which is a term we use. For example, we have a university customer that generates specific responses based upon activities that occur on the campus. In the event of an emergency, they have the ability to build conferences on the fly. Basically their system dials out looking for people, reaching out to IP phones, two-way radios, cell phones, analog phones and even IM, as it tries to find people and bring them into the conferences in real time. We call that our Team-based Services for Unified Communications."

"Our criticism with UC is that there's been an overt preoccupation with personal productivity tools," remarks Royal. "Microsoft, Cisco and everybody else is out there selling tools such as click-to-talk and unified messaging, integrated directories and things like that, which coalesce around both the desktop and what we call the 'mobile worker' or 'intelligent worker' infrastructure. Although there's been a lot of interest generated in personal productivity tools and the "Communicator" products from Microsoft, Cisco and others, people are actually sinking their money into things that help improve their business flow in terms of communications. We have cities large and small that use our notification systems

and our UC products and combine them into their existing conferencing capabilities."

"So what we're seeing is that there's a gap between what developments are occurring in communication and what's really needed to deal with the campus or in terms of public safety," says Royal. "Take an oil spill or an earthquake as examples. We see that organizations are taking a leap and codifying particular processes to deal with such things in their communications platforms. We've had a lot of success in resolving that particular piece of the puzzle, and taking components such as a Cisco or Nortel conferencing system and combining all of them together into something that can handle a particular business process. We're seeing more traction on that rather than personal productivity."

Kunal Ganju of HP: "...We view UC as being a journey, not just a destination. Our idea is to help our clients start from wherever they are and take them forward to whatever end state they've determined is good for them."

UC in the Contact Center

Contact centers rely on many 'channels' of communication with customers, and so it's not surprising that UC has an impact there as well. Recently, Aspect Software ([News - Alert](#)) (www.aspect.com) the world's largest company solely focused on contact center technology, announced availability of Aspect Unified IP 6.5.1, a Session Initiation Protocol ([News - Alert](#)) (SIP)-based VoIP unified contact center solution that provides Automatic Call Distribution (ACD), voice portal capabilities, predictive dialing, Internet contact, workflow management, multichannel recording and quality management for customer service, collections and sales and telemarketing business processes. Aspect Unified IP 6.5.1 now leverages server virtualization via VMware, and in 1Q 2008 users will be able to leverage the real-time reporting capabilities of Aspect's Unified Command and Control module for consolidated real-time reporting across multiple sites and apps through a friendly, graphical display.

Mike Sheridan, Aspect's Senior VP of Strategy and Marketing, says, "Contact centers straddle the line between IT and operations, probably more so than any other kind of application sale in the enterprise. Unified communications is another kind of 'straddling' technology and it would appear to be something that the contact center might be able to either influence or leverage in some way. The approach that we've taken in these early days is, as much as anything, educational in nature for our typical buyers."

"Contact center managers and executives largely don't have a notion of what UC is all about," says Sheridan. "That will change, especially in the light of things such as Microsoft's big UC launch back in October 2007 and the subsequent buzz that occurred as a result. Furthermore, I never thought I'd see TV ads about unified communications, but Cisco, for example, is promoting UC in the mass media. So UC will do more than just impinge on the world's CIOs and their staffs. UC is going to impact the contact center, and that's a good thing. From our perspective, Microsoft, Cisco, IBM ([News - Alert](#)) and the rest have really been looking and promoting UC as a tool to improve productivity of the 'intra-enterprise'. For example, I and my

colleagues could create a presentation for you in a much more rapid fashion, taking advantage of each other's presence and using Office Communicator to call one another, and taking advantage of Live Meeting so we could whiteboard ideas. That's typically the way we've seen UC promoted. But this scenario leaves people scratching their heads and asking, 'How do I quantify the ROI for my CFO?'

You could say, 'We're going to be able to put together that presentation 50 percent faster than we could before.' But in reality the enterprise CFO will look at it and say, 'Those are 'sunk costs' — costs that have been incurred and which cannot be recovered to any significant degree — and soft costs at that. How does it impact my bottom line?' You can extrapolate your way from there, but you have to jump through a couple of hoops to get to a reasonable explanation," says Sheridan.

"We would say, 'Think about how UC might improve your customer interactions, both helping to sell more to customers, helping you improve your service with customers, and helping collect money more quickly from them.' That's the way we see most contact center interactions — a sales, service or collections interaction," says Sheridan. "Your marketing group, legal group, financial group and product groups must be able to address those inquiries more quickly and on the first try. If there's a way to go about doing that, then you can show ROI around improved sales, better/quicker closing rates, more upsells, faster collections and all-around improved customer service."

"Technology-wise, UC is really taking advantage of the structure that contact centers have always brought to communications..."

"Technology-wise, UC is really taking advantage of the structure that contact centers have always brought to communications: How do you report on it? Where do you deliver this call? How do you queue it until it's delivered? And how do you extend it with such things as OCS 2007 or what Lotus provides, and be able to take advantage of the presence that those offer? Part of it involves considering the people in the back office, and the knowledge workers who have always been a part of some set of contact center interactions, and doing this in a more structured way," concludes Sheridan.

Moore's Law Helps

Dialogic ([News - Alert](#)) (www.dialogic.com) is the legendary computer telephony board and software vendor that paved the way for modern telecom platforms. Not long ago it acquired Cantata (itself formerly Brooktrout and Excel Switching).

Dialogic's Bud Walder ([News - Alert](#)), Enterprise Marketing Manager, says, "We're in close alignment with Microsoft in terms of their 2006 rollout of Exchange server with unified messaging and, more importantly, with their OCS introduction in 2007. We've worked with Microsoft for over 10 years in different areas of communications, but never more closely than now. In a lot of ways what we see happening here is very much fulfillment of the disruptive innovator aspects of the computer telephony industry as it was envisioned in the late 1980s and 1990s. In those days we were pushing for open standards and multimedia communications delivered on standard compute platforms. Certainly we enjoyed a lot of success with that and Dialogic

having been drawn into Intel ([News - Alert](#)) was part of Intel's drive to make that happen too, whether for service providers or enterprises. They looked to take what were fairly siloed systems and create more of an application play on standard platforms."

"We've been working our way around the block to achieve this vision and I think in a lot of ways the UC movement, Microsoft as a software provider coming into this space and IBM too, for that matter, are really bringing about the final fulfillment of this," says Walder. "Other things are also coming into alignment here such as the ultimate decline and disappearance of traditional PSTN connections. The network interfaces of telephony are in decline, while SIP is emerging is the standard VoIP and multimedia signaling protocol."

"The constant march of Moore's Law enables us to deliver more and better things such as advanced transcoding, and the ability to handle all of the different media types necessary to serve the modern world: everything from simple play-and-record functionality to complex, enhanced audio and video conferencing, all to be done in software without a lot of specialized hardware," says Walder. "Apps can immediately take advantage of dual core/multi-core processors on a standard platform. We're introducing software that will run up to 1,000 channels on a standard 1U-high rackmount server without any specialized DSPs. It's amazing what you can do these days."

Easing the Pain of Application Management

One of the more farsighted companies in telecom, Ensim ([News - Alert](#)) (www.ensim.com) offers solutions for both service providers and the enterprise. Their Ensim Unify Enterprise Edition is a systems management software solution for mission-critical applications, available for Microsoft Active Directory, Exchange 2003 / 2007, and the BlackBerry Enterprise Server (BES). Unify provides automated provisioning, accelerated change management, mobile and client device configuration and support, delegated administration, and resource optimization, all via a web portal.

François Depayras, Ensim's Vice President of Marketing, says, "We're basically a management center for unified communications applications, usually delivered by a service provider on a shared basis and we've recently released a product for the enterprise to be used internally. Right now we're focusing on Active Directory, Microsoft Exchange, the BlackBerry ([News - Alert](#)), and we're integrating everything with Microsoft's OCS and its UC capabilities, in early 2008. Much of this functionality appears in our vision of a shared infrastructure."

"We've seen various things happening in the industry," says Depayras. "First, there's tremendous customer interest in Exchange 2007's capabilities, specifically the unified messaging and unified communications capabilities, especially when you combine them with Microsoft OCS. There's been interest in this by both enterprises and our service provider customers."

"We've also discovered that medium-sized to large enterprises are very interested in outsourcing the management of some of their applications to third parties," says Depayras. "But companies have a mixture of things in their infrastructure. That's where we come in and help them manage everything under a single management 'control panel', if you will. So we're seeing this as the future of the enterprise: the ability to mix-and-

match not so much the applications *per se*, but the system of delivery of the applications.”

“Another thing, which is no surprise, is that the growth of UC at this point is fairly straightforward and obvious,” says Depayras. “Everybody is very interested in it. The gains in productivity are pretty straightforward. One big issue is that all of the various ISV applications for UC really focus on what sells, and what sells are end-user features. In terms managing these applications, this is often left to a complex methodology where the IT administrator must use a command line interface or a number of different tools to, say, provision a single user. Figuring out how to relieve the pain of the IT administrator is becoming important, especially in light of the existing workload that they have and that adding new applications creates more pain in terms of managing and providing such things as help desk capabilities to end users and so forth.”

The Service Provider Alternative

Many smaller enterprises and even some medium-sized ones can't be bothered with maintaining their own UC system.

Harprit Singh is the Founder, President, and CEO of Intellicomm Inc. (www.intellicomm.com) an enhanced communications service provider. Intellicomm is the developer of Innoport (www.innoport.com) a mobility-enhancing unified communications service. “Historically, UC has had its genesis in unified messaging, and that's what we started with,” says Singh, “providing such things

as fax-to-email, voicemail-to-email services, and so forth. To us much of what's happening is related to virtual phone services, where you can have a virtual phone and incoming calls can be routed anywhere you want. This includes find-me/follow-me, and a whole host of services and features, such as call screening and all of the 'good stuff'.”

“Our direction is in sync with what's happening with software - the service model,” says Singh. “We're more focused on communications as a service model, where people use unified communications services, through a provider which essentially manages the services for them. It's different than some of the noise you hear in the marketplace about UC, which is more related to integrating your customer premise equipment and making that a UC system. Many enterprises focus on that, and a lot of the large players who have recently entered the UC space are talking along those lines too. But our belief is that there's a huge market in providing these communications using a service provider model. That's what we focus on. Not a service provider in the traditional sense, but as mostly geared directly to the customers, so they can simply go to our website, sign up, and start using our services immediately.”

“It's especially important for small enterprises simply because it gives them a very affordable and convenient entry point into the space of UC,” says Singh. “It's still very new. When we speak about UC, people ask us what it means. Our fundamental definition of UC is one in which a service or a product can integrate multiple channels of communications, of which any don't necessarily need to be defined and set in stone at any given point. If you're communicating on multiple channels, and if a service or a product can integrate them and make your life simple, then that's essentially what UC is. Over time we've seen the transition from unified messaging to UC but we still have a ways to go in terms of how things can best be integrated from a communications standpoint. Part of the reason for that is that new options keep popping up: instant messaging, text messaging, video, and so forth.” **IT**

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

The following companies were mentioned in this article:

Alianza Global Communications Services www.alianza.com	Ensim www.ensim.com
Aspect Software www.aspect.com	Hewlett-Packard www.hp.com
Avaya www.avaya.com	Intellicomm www.intellicomm.com
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The Many Worlds of Video-over-IP

By: Richard "Zippy" Grigonis

Like voice, video was originally an analog technology. Advancements in digitization, compression and packetization technology have brought video into the digital and IP world. Digital video and audio signals can now be captured, digitized, compressed and streamed with a video codec (such as an MPEG-2, MPEG-4 or Microsoft [\(News - Alert\)](#) VC-1 transport bitstream), and then carried by an IP network such as the LAN, WAN or public Internet encapsulated in a stream of IP packets using RTP (Real-Time Protocol).

There are several forms of video-over-IP, each varying in function and quality.

Internet Video

As anyone who has visited YouTube [\(News - Alert\)](#) can attest, Internet Video is delivered over the public Internet to PCs (generally speaking) or mobile devices, but never to a TV screen (unless you've rigged some kind of special configuration). Since most Internet videos are not even of standard definition in quality, showing an Internet video on an HDTV would be not a great experience anyway. Most Internet videos are short, amusing (or revolting) items made by amateurs, though some are quite serious in nature. News organizations in particular now make Internet videos available.

Most Internet videos are streaming videos from a server, though in some cases one can download and run files, particularly in the case of higher quality/higher definition videos.

The highest quality form of Video-over-IP tends to be IPTV, since it's a full-featured pay TV service, the more elaborate successor to analog and digital cable TV.

Microsoft makes enabling technologies in this area, such as Windows Media Server used by many content companies to distribute streaming media or download-and-run files. Microsoft also makes the Windows Media Player client, which can be found in just about every PC in the world, and which even runs in set-top boxes and mobile phones and other devices. (Windows Media is usually preloaded on phones and PDAs running either Pocket PC Phone Edition or Pocket PC 2003.) Its longtime competitor is the RealVideo mobile player from RealNetworks ([www.realnetworks.com](#)). RealVideo is available for the Palm OS, Symbian [\(News - Alert\)](#), and Pocket PC phones. Various Nokia models are sold already equipped with the RealVideo mobile player.

IPTV

The highest quality form of Video-over-IP tends to be IPTV [\(News - Alert\)](#), since it's a full-featured pay TV service, the more elaborate successor to analog and digital cable TV. It offers hundreds of HDTV



channels and thousands of video-on-demand titles. It supports theatre-quality surround-sound, faster channel surfing, and all the niceties of Video-on-Demand [VoD] and digital video recording. IPTV systems have a rich electronic program guide that would make YouTube blush.

IPTV can be implemented in a digital video broadcast format - basically a cable TV-like environment with a personal video recorder (PVR), VoD and some interactivity, or else it can be implemented as a service under the auspices of IMS (the IP-based Multimedia Subsystem). This would occur if the IPTV service were part of a triple or quad-play services bundle (e.g. TV, Internet access, IPTV phone, mobile phone) which is a cinch for IMS as the service infrastructure.

Vendors of set-top boxes for IPTV include Backspace Communications ([www.backspace.tv](#)), Cellrun ([www.celrun.com/eng/](#)), Cisco Systems [\(News - Alert\)](#) ([www.cisco.com](#)), Eagle Broadband ([www.eaglebroadband.com](#)), Humax Digital ([www.humaxdigital.com](#)), Pace Micro Technology ([www.pacemicro.com](#)), Tilgin [\(News - Alert\)](#) ([www.tilgin.com](#)) and Wisembed ([http://wisembed.com](#)).

IP Videoconferencing

IP videoconferencing was once a rather primitive affair that a hobbyist rigged up between two PCs. (Yours Truly couldn't get a successful IP video connection throughout most of the 1990s.) That's why the U.S. government stuck with multiple ISDN BRI-based videoconferencing adhering to the ITU H.320 standard for so many years. Now, however, we have high bandwidth, high definition videoconferencing that operates over IP networks, first based on H.323 (in 1996) signaling and later on SIP (Session Initiation Protocol). Such systems include those by LifeSize [\(News - Alert\)](#) ([www.lifesize.com](#)), which can use your existing 128 Kbps to 1.5 Mbps broadband connection. The company's latest, most compact unit, LifeSize Express, offers 1280x720 resolution at 30 frames



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per second, is based on the H.264 standard and provides H.263, H.263+, H.235 and H.239 support for interoperability with many standards-based video communications systems. Its dual-stream support (H.239) is for sharing PC and multimedia content. It also offers IP-to-ISDN connectivity with the LifeSize Networker enhanced gateway. The system has a high definition microphone or optional integrated super wide-band speakerphone compatible with most IP PBX systems.

Companies formerly known for their audio conferencing expertise, such as Polycom ([News - Alert](#)) (www.polycom.com), have also entered the videoconferencing market. Polycom offers such devices as the ViewStation SP 128 and SP 384, simple integrated systems for small conference rooms, executive suites and professional offices. Small enough to sit on top of an S-video or composite monitor, the ViewStation SP 128 supports up to 128 Kbps over ISDN and up to 768 Kbps over IP. The ViewStation SP 384 supports videoconferencing at up to 384 Kbps over ISDN and up to 768 Kbps over IP.

For medium to large video conferencing rooms, Polycom's ViewStation 128 runs over ISDN at 128 Kbps or over IP at 768 Kbps. Polycom's ViewStation H.323 is exclusively configured over IP and can run at up to 768 Kbps. Finally, the Polycom ViewStation MP, a medium-to-large videoconferencing solution, can connect up to four locations at once; It supports ISDN calls up to 512 Kbps or IP calls at 768 Kbps and includes embedded web capacity and an Ethernet hub. Polycom offers various other models capable of IP-based video conferencing.

Perhaps the most ambitious form of video-over-IP is watching video (such as TV broadcasts) over mobile phones. This can be done by using one of four Mobile TV broadcasting standards: DVB-H, DMB, ISDB-T and MediaFLO.

Video Share

Video Share (VS) is also known as Push-to-Video (P2video or PTV). It's a service that enables a user in the process of making a voice call to stream live or pre-recorded one-way video from a handset to any another party on the call.

A form of this technology is Connect Push-to-Video by Movial ([News - Alert](#)) (www.movial.com) that combines Presence, Instant Messaging (IM) and multimedia. A user opens the wireless application and logs onto the system, and sees a list of online contacts that are available. A Push-to-Video dialog can be initiated to the selected person or persons, or a simple instant messaging dialog can be established. Using Push-to-Video and IM in tandem creates active dialogs among multiple users. Movial's Connect Push-to-Video is not only available for SIP/IMS, but also for existing presence standards such as IMPS, OMA and XMPP.

MobileTV (Out of Band Video)

Perhaps the most ambitious form of video-over-IP is watching video (such as TV broadcasts) over mobile phones. This can be done by using one of four Mobile TV broadcasting standards: DVB-H, DMB, ISDB-T and MediaFLO. The most popular of these is DVB-H (Digital Video Broadcasting — Handheld) an ETSI ([News - Alert](#)) standard for bringing broadcast services to handheld

receivers. It can work in an IP environment and with handheld, battery-powered receivers. It can call upon various audio and video coding schemes such as H.264 and it complements other existing broadcasting technologies.

DVB-H is part of the "IP Datacast" (DVB-IPDC) set of technologies designed to deliver any type of content to mobile devices over IP, in conjunction with broadcast network output reformatted for MobileTV reception. DVB-H and its accompanying protocol set are "radio agnostic" and could as easily work with CDMA services and handsets as with GSM.

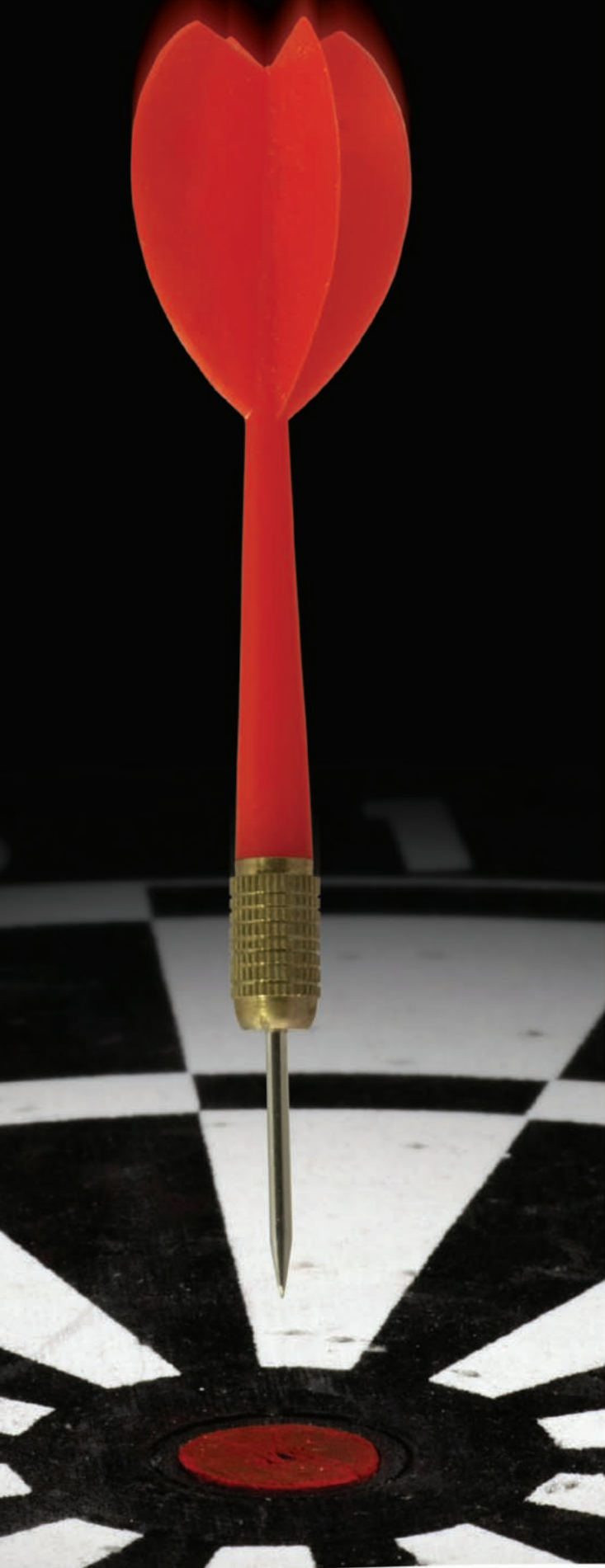
Envivio ([News - Alert](#)) (www.envivio.com) a technology provider of IP video convergence solutions ranging mobile to HD, in 2007 introduced its 4Stream IP gateway for IPTV and mobile TV service providers. The 4Stream IP Gateway is part of Envivio's all-IP Convergence ([News - Alert](#)) Generation video headend, which features the Envivio 4Caster C4 IP video encoders and the 4Caster M2 Mobile TV encoders both with IP input, as well as the 4Manager network management and redundancy system. This headend solution, supporting an all-IP infrastructure, provides a multi-service platform that can handle devices targeted by service providers who control both fixed and wireless networks. The complete solution offers flexible routing, simplified management and redundancy, requires little space and is easier to manage and deploy than today's traditional IPTV and mobile TV headends.

The 4Stream IP gateway is a dual receiver and demodulator which feeds IP video networks with video services coming from satellite, cable, terrestrial networks. Each 1U high rackmount unit is a gateway that receives encrypted MPEG-2 streams and can process two full transponders, replacing up to 24 professional decoders. The IP outputs are received by Envivio C4 and/or M2 encoders. The Envivio 4Manager manages and monitors the gateway as well as other components in the system via a comprehensive web browser. **IT**

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

The following companies were mentioned in this article:

Backspace Communications www.backspace.tv	Microsoft www.microsoft.com
Cellrun www.celrun.com/eng/	Movial www.movial.com
Cisco Systems www.cisco.com	Pace Micro Technology www.pacemicro.com
Eagle Broadband www.eaglebroadband.com	Polycom www.polycom.com
Envivio www.envivio.com	RealNetworks www.realnetworks.com
Humax Digital www.humaxdigital.com	Tilgin www.tilgin.com
LifeSize www.lifesize.com	Wisembed http://wisembed.com



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Will 2008 be “The Year of WiMAX”?

By: Richard “Zippy” Grigonis

A recent search of my inbox for “WiMAX” ([News](#) - [Alert](#)) lists 4,037 hits over the past couple of years’ worth of email newsletters. Surely WiMAX (Worldwide Interoperability for Microwave Access) is the hottest wireless broadband technology that you’re heard about yet haven’t used. Sprint Nextel ([News](#) - [Alert](#)) had teamed up with Clearwire Corp. to jointly build a \$5 billion WiMAX network that would reach its first 100 million subscribers by the end of 2008, but that deal fell apart. Still, after pondering whether to spin off its WiMAX assets, Sprint decided to soldier on. Sprint and its Xohm ([News](#) - [Alert](#)) Alliance of network partners continues to build the WiMAX network, with an upcoming test launch of pre-commercial service in Chicago, Baltimore and Washington, D.C., and with a bigger rollout planned to once again reach for those 100 million potential customers by year-end 2008.

Sprint even announced it was working with Google ([News](#) - [Alert](#)) (isn’t everybody these days?) to bring WiMAX mobile Internet customers search, interactive and social networking tools via an innovative new mobile portal.

The original Fixed WiMAX standard (IEEE ([News](#) - [Alert](#)) 802.16-2004) has given way to the IEEE 802.16-2005 standard (more commonly known as 802.16e) which adds mobility and other neat technologies such as Multiple Input Multiple Output (MIMO) for improved radio interface performance, along with better security and Quality of Service (QoS).

Certainly the potential market is immense for a genuinely high bandwidth (5 to 10 Mbps) wireless IP-based broadband service resembling a sort of long-range, super WiFi ([News](#) - [Alert](#)). Estimates of the Asia Pacific market suggest that the subscriber base there will grow to over 3.8 million by 2009, 45 percent of the world total, their WiMAX equipment spending equalling US\$1,988.2 million.

“Despite all of the ‘overhanging issues’ and the rumblings around Sprint and WiMAX, technically the Sprint/Xohm team is executing on schedule...”

As we were going to press, Asus, Intel ([News](#) - [Alert](#)), and Sprint made a joint announcement, with Asus debuting a new version of its diminutive Eee PC along with a bevy of Intel WiMAX chipsets for all sorts of next-gen mobile solutions.

Moreover, PC makers Acer, Asus, Lenovo, Panasonic ([News](#) - [Alert](#)) and Toshiba have expressed intent to embed WiMAX chipsets into their next-gen Intel Centrino-based laptops and ultra mobile PCs in 2008, to connect to the upcoming Xohm WiMAX network. Forthcoming Nokia Internet tablet devices will incorporate Intel WiMAX chips. Trellia Networks Inc. ([News](#) - [Alert](#)) of Montreal, Canada will provide



a multi-communication connection manager software client for Xohm network access devices.

And Motorola ([News](#) - [Alert](#)) announced their CPEi 100 WiMAX desktop device, a single data port, 2.5 GHz plug-and-play solution for WiMAX operators wanting to offer their customers wireless broadband Internet connectivity. The device sits on your desktop and serves as the interface between a PC and the WiMAX network. Motorola’s wi4 WiMAX solutions are designed to support fixed, portable, nomadic and mobile applications.

Behind Every Great Protocol is a Chipset

Long before Intel announced its WiMAX silicon, Beceem ([www.beceem.com](#)) was providing high performance chipset solutions for the Mobile WiMAX market, and was the first company to introduce terminal chipsets for the Wave 1 and Wave 2 WiMAX Forum profiles based on the IEEE 802.16e-2005 Mobile WiMAX standard.

Lars Johnsson, Beceem’s Vice President of Business Development, says, “Despite all of the ‘overhanging issues’ and the rumblings around Sprint and WiMAX, technically the Sprint/Xohm team is execut-

ing on schedule. To my best understanding, this has been the case for quite a while. In order to launch commercially in Q2 2008 they would be doing a softlaunch with a pre-commercial system at the end of 2007, and that's exactly what has happened."

"Our news relates directly to the Sprint news in that we have passed and met all of the Sprint requirements and tests for the network launch with our chipset," says Johnsson. "We received a quote and an endorsement from Sprint in that they've congratulated us on our achievement in being the first to provide our Mobile WiMAX chipsets. And that ties in very nicely with Sprint's own declaration of progress and readiness. We at Beceem have always felt very good about our enabling position in the terminal ecosystem with respect to Sprint. We have a more than two-year relationship with Samsung ([News - Alert](#)) going back to the WiBro demonstrations of 2005, when they chose our chipset. They've also invested in Beceem. We have a two-year relationship with Motorola, which is commercially using our chipsets to develop their own basestation and are doing interoperability testing, as is Samsung."

"So we have a tremendous amount of field experience in the Mobile WiMAX domain and we have it with some of the key OEMs in the space," says Johnsson. "Not only Samsung and Motorola, but also Alcatel Lucent, Nortel, NEC ([News - Alert](#)), ZT in China, Alvarion and some other companies. Any network built by any one of those OEMs can be served by our chipsets."

"The WiMAX ecosystem is very open and very competitive on many levels and there are other chipmakers out there such as Intel building a WiMAX chip," says Johnsson. "We, of course, are now in our third generation of chips. We have the world's first Wave 1, the first Wave 2 and now we're the first to pass Sprint testing. For the time being, our chip has been proven against Sprint's requirements and that has been publicly acknowledged by Sprint. That doesn't mean that they want equipment with our chipsets exclusively, though we would certainly like that. But this kind of validation does help us with our device vendor customers, because it makes it easier for them to select our chipset for use in their equipment."

"If you live in one of the 10 or 20 cities that will be covered by Sprint's WiMAX network in 2008, it will be like you can access WiFi anywhere," says Johnsson. "For those who think CDMA EVDO is better because it has more coverage, consider that we and others are working on dual-mode solutions. There will be devices that use WiMAX wherever it is available and then if it isn't available the device will revert to existing CDMA EVDO wireless broadband access. So you won't be 'hot' or 'cold'. You'll be either 'hot' or 'warm'."

"What Sprint is doing is to create a lot of excitement and energy in this market," says Johnsson, "and they'll accelerate the roadmaps as well as new device introductions that offer higher speed data capabilities and also a user interface that can take advantage of it. It's all actually coming together very nicely."

Companies such as Nortel ([News - Alert](#)) are ready for WiMAX, with its end-to-end solution. Regina Moldovan, Senior Manager for Nortel's WiMAX & Mesh Marketing Team, says, "At a macro level, I think this entire market is exciting and crazy all at once. There's no way to predict what will happen. But the one thing I can tell you is that there's still more of a rollercoaster to come. I would not be least surprised if there are new major entrants that take up the market very soon. 2008 should be very interesting."

"Nortel is basically hunkering down," says Moldovan. "2008 is the year that we're going to be delivering our products to customers. We're readying some launches for 1Q 2008. We continue to expand our work on the ecosystem front. That's an area that's really critical to make the business case for service providers and operators in this space. So we continue to work with our partners to expand that and we continue to aggressively expand our own plans in that space. So you'll definitely see more things appearing from Nortel. Our pride and joy concerns the access equipment. We have base stations and an ASN [Access Service Network] gateway ([News - Alert](#))."

Nortel's ASN Gateway supports fixed and mobile networks, centralized and distributed architectures, wide area and cross-technology mobility, and enables wholesaling of WiMAX services to tenants for incremental revenue opportunities.

Aricent ([News - Alert](#)) (www.aricent.com) makes the SigASN, a platform-independent Signaling Module and that forms the core component of a WiMAX ASN Gateway. Aricent's off-the-shelf solution enables Telecommunication Equipment Manufacturers (TEMs) to quickly develop WiMAX (802.16e) ASN Gateways. Indeed, in 2007, Aricent's SigASN WiMAX Gateway software was demonstrated running on a RadiSys ([News - Alert](#)) Promentum ATCA SYS-6010 rackmount computer, which was the industry's first generally available 10 Gbps platform for high-bandwidth network element and data plane applications, such as WiMAX ASN Gateways, 3G Radio Network Controllers/Base Station Controllers, IPTV infrastructure and IP Multimedia Subsystem ([News - Alert](#)) (IMS) compliant media gateways, application servers and media servers/MRFPs.

Starent Networks (www.starentnetworks.com) offers an ASN Gateway/Home Agent subscriber mobility access gateway for Mobile WiMAX radio access networks. Their ASN Gateway supports connection management and mobility across cell sites and inter-service provider network boundaries through processing of subscriber control and bearer data traffic. The ASN Gateway serves as the Extensible Authentication Protocol (EAP) authenticator for subscriber identity and acts as a RADIUS client to the operator's AAA servers.

One thing is certain. Vendors are serious about WiMAX. In 2007 wireless broadband pioneer SR Telecom (www.srtelecom.com) went so far as to sell its legacy SR 500 and Airstar product lines to the Duons Group in France so it could focus on developing and promoting its WiMAX Forum-certified symmetryMX product line. **IT**

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

The following companies were mentioned in this article:

Aricent

www.aricent.com

RadiSys

www.radisys.com

Beceem

www.beceem.com

Sprint Nextel

www.sprint.com

Intel

www.intel.com

SR Telecom

www.srtelecom.com

Motorola

www.motorola.com

Starent Networks

www.starentnetworks.com

Nortel

www.nortel.com

2007 Internet Telephony Product of the Year Awards

By: Richard "Zippy" Grigonis



Welcome to Internet Telephony magazine's annual feature where we highlight the most interesting and innovative products of the previous year, also known as the Product of the Year awards. Each year, the editors of Internet Telephony pore over hundreds of applications submitted over the course of the preceding several months. This year we received a record number of applications, totaling just over 500. And each year it becomes more difficult to select those products and services to include on the list.

Speaking of the list, in the view of our editorial brain trust, this annual inventory of the year's best and brightest has never been about selecting a single product. It is an impossible task to choose one product across multiple categories and multiple target audiences that should be considered "the best". For example how does one compare an IP PBX with a fixed-mobile convergence solution with an E911 solution with a development toolkit...?

There are too many different categories and classes of product. For us the list has always been about providing our readers with a group of products that merit their consideration. It's that simple. If one of our readers is in the market for a particular IP communications solution, then there will appear among this list of vendors several providers of such a solution. The purpose of this list is to provide a starting point for individuals seeking solutions that will help them achieve their goals, be it to save money, grow their business, or embrace the hottest telecommunications technology out there.

And so, we present to you the best of 2007. While hardly exhaustive, this list is a great place to begin your search for the solution that will ultimately serve to fill your unique needs. We remind everyone to do their homework, research these companies thoroughly, follow up, and most importantly: Check out those customer references! **IT**

— The Editors

Company	Web Site	Product
3Com	www.3com.com	3Com VCX Connect IP Communication Solutions
3CX Ltd	www.3cx.com	3CX Phone System for Windows
8x8, Inc.	www.8x8.com	Packet8 Virtual Office Complete Contact Center
8x8, Inc.	www.8x8.com	Packet8 Tango
911 Enable	www.911enable.com	Enterprise/Private PBX 911 Solution
Aastra Intecom	www.aastraintecom.com	Clearspan
Aculab	www.aculab.com	ApplianX Gateway for Microsoft Communications Server 2007
ADTRAN, Inc.	www.adtran.com	NetVanta 1335
Agito Networks, Inc.	www.agitonetworks.com	Agito Networks RoamAnywhere Mobility Router
AirMagnet	www.airmagnet.com	AirMagnet VoFi Analyzer 3.0
Alcatel-Lucent	www.alcatel-lucent.com	OmniAccess 3500 Nonstop Laptop Guardian
Alepo	www.alepo.com	Alepo Service Enabler
Alliance Systems	www.alliancesystems.com	AX-1200
Allot Communications, Ltd	www.allot.com	Allot Service Gateway, Omega Series
Allworx	www.allworx.com	24x
AnchorPoint	www.anchorpoint.com	AnchorPoint 6.1
Aplicor, Inc.	www.aplicor.com	Aplicor Enterprise
AppTrigger	www.appttrigger.com	Ignite Application Session Controller
Aricent	www.aricent.com	Aricent Service Continuity Server
ASC telecom AG	www.asctelecom.com	EVOip
Aspect Software	www.aspect.com	Unified Command and Control
ATCOM Technology Ltd	www.atcom.cn	IP-08
AudioCodes Ltd.	www.audiocodes.com	Mediant 1000 Open Solutions Network (OSN) Server Platform
Avaya	www.avaya.com	Avaya Distributed Office
BlueNote Networks	www.bluenotenetworks.com	SessionSuite Presence Service
Brix Networks	www.brixnet.com	Brix 4100 Verifier
BroadSoft	www.broadsoft.com	BroadWorks Anywhere
Centillium Communications	www.centillium.com	Entropia III-C
Challenger Mobile Group	www.challengermobile.com	WHITE-LABEL MOBILE VOIP PLATFORM
Communicado	www.communicado-inc.com	Communicado Streamline
Comverse	www.comverse.com	MyCall Converged Communications
Convergin	www.convergin.com	Accolade WCS - IPTV-Ready SCIM
CosmoCom	www.cosmocom.com	CosmoCall Universe 5

Company	Web Site	Product
Covergence	www.covergence.com	Covergence Session Manager
Critical Links	www.edgebox.net	edgeBOX Appliance
Cylogistics	www.cylogistics.com	TrueBill Version 2.0
Dalcon Communication Systems, Inc.	www.dalcon.com	Dalcon Communications Manager
Dialogic	www.dialogic.com	Dialogic Media Gateway 4000 (DMG4000)
DID World Wide, LLC	www.didww.com	Virtual number to Skype forwarding service
DiVitas Networks	www.divitas.com	DiVitas Networks Mobile-to-Mobile Convergence Solution
EagleTeleconferencing	www.eagleconferencing.in	Eagle Conferencing- India
Eaton	www.mgeops.com	Pulsar UPS Family
Edgewater Networks, Inc.	www.edgewaternetworks.com	EdgeMarc 4500T4 VoIP VPN
EMC Corporation	www.emc.com	EMC Smarts VoIP Performance Manager
Ensim Corporation	www.ensim.com	Ensim Unify Shared Edition 4.0
Envision Telephony, Inc.	www.envisioninc.com	Envision Analytics
Envox Worldwide	www.envox.com	Envox Communications Development Platform
FacetCorp	www.facetcorp.com	FacetPhone
FaxCore, Inc.	www.faxcore.com	FaxCore 2007
Fonality	www.trixbox.com	trixbox Pro
Foundry Networks, Inc.	www.foundrynet.com	FastTron GS Series
GENBAND	www.genband.com	GENBAND G9 Converged Media Gateway
Genesys	www.genesys.com	Genesys Meeting Center 4.0
Glance Networks	www.glance.net	Glance
Global Crossing	www.globalcrossing.com	Global Crossing VoIP Ready Access
Global IP Solutions (GIPS)	www.gipscorp.com	REX Softphone for PC and Mobile
GN	www.jabra.com	GN9350 OC
Grandstream Networks	www.grandstream.com	GXE502x
I.S. Associates, Inc.	www.isassoc.com	TeleCount Billing
i2Telecom International, Inc.	www.i2telecom.com	MyGlobalTalk
IneoQuest Technologies	www.ineoquest.com	IQDVx
InsideSales.com	www.insidesales.com	ResponseSwami – Lead Response Management Suite
Interactive Intelligence Inc.	www.inin.com	Vonex Enterprise Interaction Center (Vonex EIC)
Intertex	www.intertextdata.com	SurfinBird IX78
Intuitive Voice Technology	www.intuitivevoice.com	Evolution PBX
IPcelerate, Inc.	www.ipcelerate.com	IPsmartSuite
JDSU	www.jdsu.com	JDSU PVA-1000
Junction Networks	www.onsip.com	onSIP Hosted PBX
Juniper Networks	www.juniper.net	T1600 Core Router
Kentrox	www.kentrox.com	W1100 Wireless WAN Gateway
KoolSpan, Inc.	www.koolspan.com	KoolSpan TrustChip
LifeSize	www.lifesize.com	LifeSize Express
M5 Networks	www.m5net.com	M5 Sales Engine
M5T	www.m5t.com	M5T – C
MegaPath	www.megapath.com	Duet Phone and Internet
MERA Systems	www.mera-systems.com	MERA VoIP Transit Softswitch II (MVTs II)
Merced Systems, Inc.	www.mercedsystems.com	Merced Performance Suite Global Edition
Meru Networks	www.merunetworks.com	802.11n Product Suite
Microsoft Corp.	www.microsoft.com	Microsoft Office Communications Server 2007
Mitel	www.mitel.com	Mitel Intelligent Phone Applications Suite
Mu Security	www.musecurity.com	Mu-4000 Security Analyzer
Multi-Tech Systems, Inc.	www.multitech.com	SMSFinder
Narus, Inc.	www.narus.com	NarusInsight Secure Suite
NEC Unified Solutions, Inc.	www.necunifiedsolutions.com	UNIVERGE Mobile Client
Nuvio Corporation	www.nuvio.com	Nuvio nPBX
Objectworld Communications Corp.	www.objectworld.com	Objectworld Unified Communications Server
Occam Networks	www.occamnetworks.com	The BLC 6322 GPON OLT Blade
VozTelecom	www.oigaa.com	OIGAA
Packet Island Inc.	www.packetisland.com	VoIP Pro Field Services Kit
Paltalk	www.hearme.com	HearMe
Pannaway Technologies	www.pannaway.com	MAGNM-20
Paradial	www.paradial.com	RealTunnel Firewall/NAT Traversal 3.0
Parus Interactiv	www.parusinteractive.com	ParusOne Softphone
Patton Electronics, Co.	www.patton.com	S-DTA
Performance Technologies	www.pt.com	CPC6620

Company	Web Site	Product
Phone.com	www.phone.com	Phone.com Virtual Office Suite
PhoneFusion, Inc.	www.phonefusion.com	PhoneFusion One
Plantronics, Inc.	www.plantronics.com	CS70N Professional Wireless Headset System
Polycom	www.polycom.com	Polycom CX Product Family for Microsoft OCS 2007
Polycom	www.polycom.com	Polycom HDX 8000
Premiere Global Services	www.premiereglobal.com	Accounts Receivable Management (ARM)
Pronexus Inc.	www.pronexus.com	VBVoice 5.5
Protus IP Solutions	www.myfax.com	MyFax
Quanta Computer Inc.	www.syspine.com	Digital Operator Phone System
RADVISION	www.radvision.com	RADVISION SIP Server Platform
Radware	www.radware.com	AppDirector 6000
Redback Networks	www.redback.com	SmartEdge 1200
Redwood Technologies Ltd	www.redwoodtech.com	RedResponse – Mass Calling for Digital, Wireless and VoIP Networks
RightNow Technologies	www.rightnow.com	RightNow Voice
Ring Carrier	www.ringcarrier.com	Ring Provider Web Ver 2.0
RingCentral, Inc.	www.ringcentral.com	RingCentral
Samsung Business Communication Systems	www.samsung.com/bcs	OfficeServ 7100
ShoreTel, Inc.	www.shoretel.com	ShoreTel 7
SightSpeed Inc.	www.sightspeed.com	SightSpeed 6.0
Sigma Systems	www.sigma-systems.com	Sigma Residential Voice Service Package
SignalSys, Inc.	www.signalsys.com	SP120-PL IP phone
snom	www.snom.com	snom 370 IP phone
Star2Star Communications	www.star2star.com	StarSystem
Stratus Technologies	www.stratustelecom.com	ENTICE 3.0
Strix Systems	www.strixsystems.com	Strix Access/One Edge Wireless System (EWS) 150
Sumitomo Electric Lightwave - Future-FLEX Airblown Fiber Division	www.futureflex.com	FutureFLEX Air-Blown Fiber Infrastructure
Sunrise Telecom	www.sunrisetelecom.com	CM2000
Sutus	www.sutus.com	BC200
SysMaster Corporation	www.sysmaster.com	CellNode M100
TANDBERG	www.tandberg.com	Video Communication Server
Tango Networks	www.tango-networks.com	Tango Abrazo
Taqua	www.taqua.com	TaquaWorks
Tekelec	www.tekelec.com	TekCore Session Manager: SIP Signaling Router (SSR) Functionality
TelCentris, Inc.	www.telcentris.com	TelCentris VoIP Service Delivery Platform
Telco Systems, Inc.	www.telco.com	T-Marc 300 Series
TelcoBridges	www.telcobridges.com	TMG3200 Media Gateway Platform
Telcordia Technologies, Inc.	www.telcordia.com	Telcordia Real-Time Charging 3.0
TeleCommunication Systems, Inc.	www.telecomsys.com	RAVE911 Real-Time Address Validation Engine
TELEFORMIX	www.teleformix.com	ECHO
Teleperformance	www.teleperformance.com	Enhanced Screen Pop (ESP)
telx	www.telx.com	telxvision
Toshiba America Information Systems, Telecommunication Systems Division	www.telecom.toshiba.com	Toshiba Strata MicroMAS
TouchStar	www.touchstar.com	TouchStar Virtual Call Center 5.7.1
Transera Communications, Inc.	www.transerainc.com	Seratel
U4EA Technologies	www.u4eatech.com	U4EA Fusion 400 Series Multi-service Business Gateway
uReach Technologies	www.ureachtech.com	Intelligent Call Manager
Veraz Networks, Inc.	www.veraznetworks.com	ControlSwitch User Services Core (USC)
Verint Systems	www.verint.com	Impact 360 Quality Monitoring
Vertical Communications, Inc.	www.vertical.com	Wave IP 2500 Business Communications System
vertico software	www.vertico-software.com	STARFACE
VirtualLogix	www.virtuallogix.com	VirtualLogix VLX
VIXXI Solutions, Inc.	www.vixxisolutions.com	VIXXI Geospatial E911 Routing System
VOCALCOM	www.vocalcom.com	HERMES.NET
Vocalocity	www.vocalocity.com	VocalocityPBX 2.0
VoiceObjects, Inc.	www.voiceobjects.com	VoiceObjects 7
VoSKY	www.vosky.com	VoSKY Exchange Pro
Voxeo Corporation	www.voxeo.com	Voxeo Prophecy 8
Vyke Communications	www.vykecorporate.com	Vyke Mobile Pro
Whaleback Systems	www.whalebacksystems.com	CrystalBlue Voice Service
XO Communications	www.xo.com	XO SIP
Zeacom	www.zeacom.com	Zeacom Communications Center v4.1
Zultys Technologies	www.zultys.com	Zultys MX Version 3.2



The Voice Peering Fabric ("VPF") is a private Internet that expands to major U.S. cities and abroad, uniting domestic and international telecom providers to bring the most secure and quality experience for the exchange of voice, video and data. It is a unique environment for enterprises and carriers to buy, sell and peer communications services on their own terms. Businesses now have control over and choices about their communications needs.

Communicate with Choice

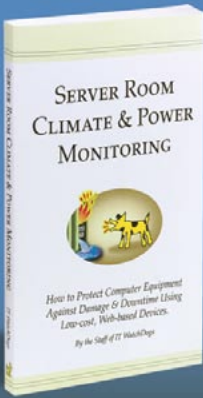
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SIP & SIP Trunking Set to Soar in 2008

By Greg Galitzine

SIP and SIP Trunking are clearly hot topics in the IP Communications industry these days. Why, the cover story of this very issue is an in-depth conversation with Andre Temnorod about what he and his colleagues at Broadvox ([News - Alert](#)) are doing with regards to SIP Trunking. And in recent interviews with TMC, other leading voices in the SIP and SIP Trunking space have shared their opinions.

Steven J. Johnson is President of Ingate Systems, Inc. ([News - Alert](#)), and a well-respected figure in the IP communications industry. According to Johnson, "We are seeing a strong adoption of SIP in enterprises of all sizes and this adoption has been accelerated by SIP trunking as a service from multiple ITSPs."

And while Johnson says that the true benefits of SIP trunking "seem to be most pronounced in organizations of up to 500 people," he also noted several interesting other services that are being delivered over SIP-based networks including "video for the hearing impaired and unified communications, which is revolutionizing the way enterprises communicate."

"There is a strong need for accurate information about SIP, security and IP communications in general," he [Johnson] believes.

Greg Rothman is director of SIPconnect Development for Cbeyond ([News - Alert](#)), and he is bullish on the opportunity created by SIP-based IP communications.

"We believe the small business market will continue to adopt IP-based solutions that give them access to tools that help them compete with larger enterprises, and that SIP Trunking will capture a much larger piece of the pie in 2008," Rothman told TMC.

Broadvox, the subject of this month's cover story, is also excited by the prospects of SIP Trunking as we head deeper into 2008. Mark Bresler ([News - Alert](#)), the company's Vice President of Channel Sales believes that the SMB market is "virtually untapped" and ready to grow with regard to IP communications.

"There has been an expansion of open source IP PBXs and new application software, which is having a tremendous impact on IP communications," Bresler says. "Innovators are

building and releasing a broad range of SIP applications, moving away from standalone systems to integrated applications that solve key business needs.

"As we look forward, we expect to see accelerated growth in the adoption of IP communications, particularly in the SMB market," he concluded.

One thing all three of the executives mentioned above agree on is the need for expanding the understanding of the benefits of SIP Trunking throughout the marketplace.

Bresler believes that education is key area that needs to be addressed. "Educating the reseller channel is paramount. It's a dire need. It's absolutely essential."

Rothman agrees. One of the biggest hurdles that need to be overcome for SIP Trunking to continue to rapidly grow is that of VAR Education. "It is critical that VARs understand voice and data on the customer premise," he says.

Johnson too, realizes that one potential threat to the growth of this technology is a lack of communication. "There is a strong need for accurate information about SIP, security and IP communications in general," he believes.

In other related news, the SIP Forum ([News - Alert](#)) recently announced changes to the group's leadership. Eric Burger, deputy CTO at BEA Systems has been elected the Chairman of the SIP Forum Board of Directors. Other appointments include IP communications industry consultant and analyst, Marc Robins as the Forum's new Managing Director and two new additions to the Forum's Board of Directors in Mark Enstrom, Product Manager at BroadSoft ([News - Alert](#)), Inc. and Richard Shockey, Director of Technical Staff at NeuStar, Inc.

The SIP Forum is an IP communications industry association that engages in numerous activities that advance and promote SIP technology, such as the development of industry recommendations, the SIPit ([News - Alert](#)) interoperability and testing events, and general promotion of SIP in the industry.

I'd like to personally congratulate Marc Robins and wish him well in his new role at the SIP Forum. As many of our readers are aware, Marc served as Vice President of Publications and Trade Shows, Associate Group Publisher and Group Editorial Director at TMC from 1998 to 2003. **IT**

Greg Galitzine is TMC's Editorial Director.

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