



INTERNET TELEPHONY®

VOLUME 13/NUMBER 5 MAY 2010

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Getting a Read on the National Broadband Plan

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- Hitting the Big Time
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M&A Action Signals Some Level of Optimism

M&A activity is starting to pick up again.

As Nightly Business Report recently noted, 2010 has already seen \$500 billion in deals around the world, with Coca-Cola and Kraft alone spending billions. NBR says that's more than 20 percent ahead of last year's pace and should stay on track as the U.S. economy chugs ahead.

Simon Perry from Ernst & Young told CNBC in January that he expected as much, commenting: "I think 2010 is going to be a much better year than 2009." He added that although he expected the values of individual deals to top out at around \$5 billion: "Buyers who are in a position to be strategic will be strategic."

Although the economy tanked, the NBR report noted that many companies are cash-strong, and now have the opportunity to spend some of that cash to strengthen their positions. And NBR guest Paul Parker, head of global M&A with Barclays Capital, said that too much cash can make a company a target for others that want to deleverage.

Alas, for a variety of reasons, we're seeing a fair amount of deal-making in communications circles.

On March 19 Ciena closed its purchase of **Norrel**'s MEN assets – that is, the Ethernet and optical solutions of the former networking giant.

Tom Mock, senior vice president of strategic planning at Ciena, says the Nortel MEN purchase accelerates Ciena's strategy by two to three years. Not only does it expand Ciena's product portfolio, it also gives Ciena a larger customer base, of larger carriers, and a broader geographic reach, particularly in Asia and Latin America.

"When we're finished with this, from an optical networking perspective we'll be No. 1 in North America, and a pretty strong No. 3 worldwide," Mock told me just prior to the close, adding that post-merger Ciena will have a little more than 800 customers worldwide.

"When we're done here we'll serve about 75 percent of the world's largest service providers," he added.

Earlier in March, **PAETEC** revealed its purchase of U.S. Energy Partners LLC in a \$3 million deal. The privately-held company sells electricity to more than 3,500 customers in western New York State. (The deal followed PAETEC's acquisition last year of energy company VARO Technologies and a lot of talk by PAETEC leader Arunas Chesonis about how selling energy services could enable it to greatly expand its ARPU.)

Around the same time ABRY Partners signed a definitive agreement for an investment fund it manages to acquire **RCN** in a deal valued around \$1.2 billion.

Then I talked to **MegaPath** Chief Sales and Marketing officer Dan Foster, who told me his company would be "active" in the next six months. On the last day of March I learned what he meant, as MegaPath and Covad announced their intention to merge. The combination will create one of the largest managed service local exchange carriers in the nation, according to the partners, which will offer Ethernet, DSL, T1, security, VPN, and voice and Internet services.

While M&A can mean less competition (which can be good or bad, depending on where you sit) and, potentially the elimination of jobs, a wave of mergers and acquisitions can also signal some level of optimism about the path ahead.

So this is a good thing then. Right? **IT**

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FCC Ruling Could Inject Politics into News Delivery

A major court just killed the idea of net neutrality. Where do we go from here?

Early last month a three-judge panel unanimously tossed out the FCC's August 2008 cease and desist order against **Comcast**, which had taken measures to slow BitTorrent transfers, but which had voluntarily discontinued the practice earlier in the year.

Many of the organizations and companies that rely on open Internet access were appalled by the ruling and described how bad it will be for the competitive broadband market in the future. In other words, they believe this ruling will be bad for consumers. As a result, ISPs can now feel free to throttle bandwidth on specific applications and decide perhaps that VoIP traffic from a competitor is of a low priority.

Then again, it is very tough to fault Comcast for throttling BitTorrent, as the software is an absolute bandwidth hog, with its ability to send massive amounts of traffic and receive it at the same time as files are shared with other users in a P2P fashion. Many who follow Internet regulation closely will tell you what Comcast did in throttling a bandwidth-hogging application was likely good for VoIP providers as it ensured there was more bandwidth available for this and other latency-sensitive applications. In other words, Comcast did not follow the rules of net neutrality, but it was adhering to the principles of net neutrality by ensuring a bandwidth-hogging, latency-insensitive application was slowed. As a result, it was leaving more of the pipe available for voice and video applications, which after all are real-time in nature.

Where this gets interesting is when potential bias is introduced into the equation. For example, many television networks and newspapers are slanted to the right or left of the political spectrum.

Now that Comcast will become a majority owner of NBC, will a combined company alter packets in a manner where news sites and videos with an alternate point of view are slowed or blocked in some way? Will some sites get better quality of service than others because they agree with the political ideals of a corporation?

Our democracy relies on free and open information flow, and one wonders if we are entering dangerous ground as a result of this ruling. The Obama administration has stated publicly that it favors net neutrality, and the concern is that Congress will now act to give the FCC more power over Internet regulation.

But is this a good thing? This administration has publicly gone after at least one news organization, called it out and tried to restrict access this network had to information. In other words, the Obama administration already has shown bias to one network over another because of its slant on news coverage.

And even if this wasn't the case, does anyone trust the government to put rules in place that work? Well anyone who sees how much lobbying money is used to buy off our politicians on a regular basis knows that whatever the government will do will favor the groups with money at the expense of the organizations that are poor. As an example, the Obama administration and Congress decided to levy a tax on plastic surgery to pay for health care but the lobby "persuaded" the government to look elsewhere and as a result tanning bed owners who had little political representation now have a crippling 10 percent tax added to their service. This is the deliberate targeting of an industry -- and for no apparent reason.

When I think these ideas through I realize as a nation we are in the middle of a very dangerous situation where we must be very concerned about what our elected officials do to protect the open Internet. In other words, when you say the Internet needs to be open, you need to have someone police the idea. And we don't have an impartial police force as they can be bought off quite easily. **IT**

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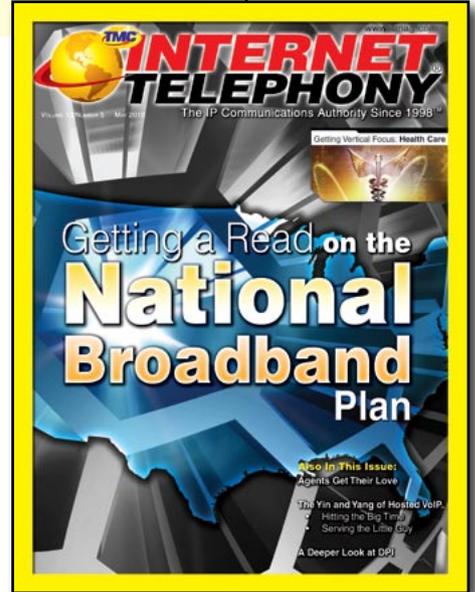
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The Rainbow Connection

New Network Provides Rehab Facility Cost Savings, Other Efficiencies

Healthcare providers' IT departments walk a delicate tightrope of supporting new technologies and bandwidth-intensive applications across dispersed locations while controlling costs. And Rainbow Rehabilitation Centers, which operates 45 treatment centers in the Midwest that provide services for individuals with brain and spinal cord injuries, is no exception.

Until recently, Rainbow Rehabilitation was operating and maintaining separate networks for each location. Performing manual processes and procedures relative to these separate networks created tremendous management challenges. In addition, the existing infrastructure did not support the bandwidth-intensive applications the organization needed to better support its employees and patients.

Rainbow Rehabilitation knew it needed to leverage cost-effective, advanced technology to deliver improved communications and streamlined processes, which lead to better quality patient care. It also needed to secure electronic medical records as they moved between locations. So it chose to implement a communications network to serve as the backbone of the organization's data operations and sought out key partners to help take the project to the next level.

After reviewing several options with its integration partner, Cygnus, Rainbow Rehabilitation selected Cavalier, a telecommunications service provider, to deliver a complete solution that integrates its 45 sites with an MPLS infrastructure, Internet access, VoIP service and PSTN voice lines, laying the foundation for current and future needs.

"We selected Cavalier as our telecommunications service provider and Cygnus as our network integration partner because both demonstrated their expertise and experience to manage this type of complex project," says Greg La Scala, director of IT at Rainbow Rehabilitation Centers. "Because our voice and data applications go through one connection, we were able to save money while gaining a robust, secure network."

The initial network integration is complete, and the company's scheduling application is up and running, which allows employees to provide availability, check time off, put in for vacation time, and request more shifts. The time and attendance application is scheduled for roll out later. Rainbow Rehabilitation also plans to implement additional patient care systems that will improve the efficiency of caregivers, enabling



them to collaborate and plan for patient care virtually and electronically.

With the infrastructure in place, Rainbow Rehabilitation is able to manage all data functions at all facilities from one central location. The new design allows for improved network speed and performance by shifting many of its shared applications to the network core by colocating servers at Cavalier's secure data center. This gives Rainbow Rehabilitation the needed space, unlimited bandwidth and the best possible network performance. For example, by centralizing its scheduling, time and attendance servers on the Cavalier MPLS backbone, Rainbow provides faster response to users and further empowers employees who previously couldn't access the application.

With Cavalier's integrated network solution, Rainbow Rehabilitation provides connections to internal applications without compromising the speeds needed to transfer electronic medical records. Cavalier's MPLS network also provides the highest level of security to maintain compliance with HIPAA privacy and security rules.

"We're layering additional services onto a network that previously was set aside for internal data applications only," says La Scala. "We have been impressed with the network and entire process, and the initial results show that our ability to manage operations is vastly improved. We have managed to create a positive impact on our employees and patients." **IT**

Lou Sommi is senior vice president of marketing with Cavalier (www.cavtel.com).

you unified

My NetVanta® UC Story.

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

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The **NetVanta UC** system also allows me to operate without the expensive "after hours" answering service. I can now say I can save lives

and save money at the same time. **NetVanta UC** helps me and my patients sleep better at night.



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In 2004, MCMC had about 100 employees and two locations in Boston, Mass., and Bethesda, Md. That year the company introduced a new technology-focused five-year plan that relied heavily on finding a partner to help it grow the communications infrastructure along with the company. Today MCMC has 450 employees and is committed to rolling out hosted VoIP service from Speakeasy at all of its 14 locations across the country as older voice and data contracts expire.

All of MCMC's locations, as well as employees working from client locations, needed reliable connectivity and phone maintenance and administration to send and receive huge PDF and video files. In the past the company had

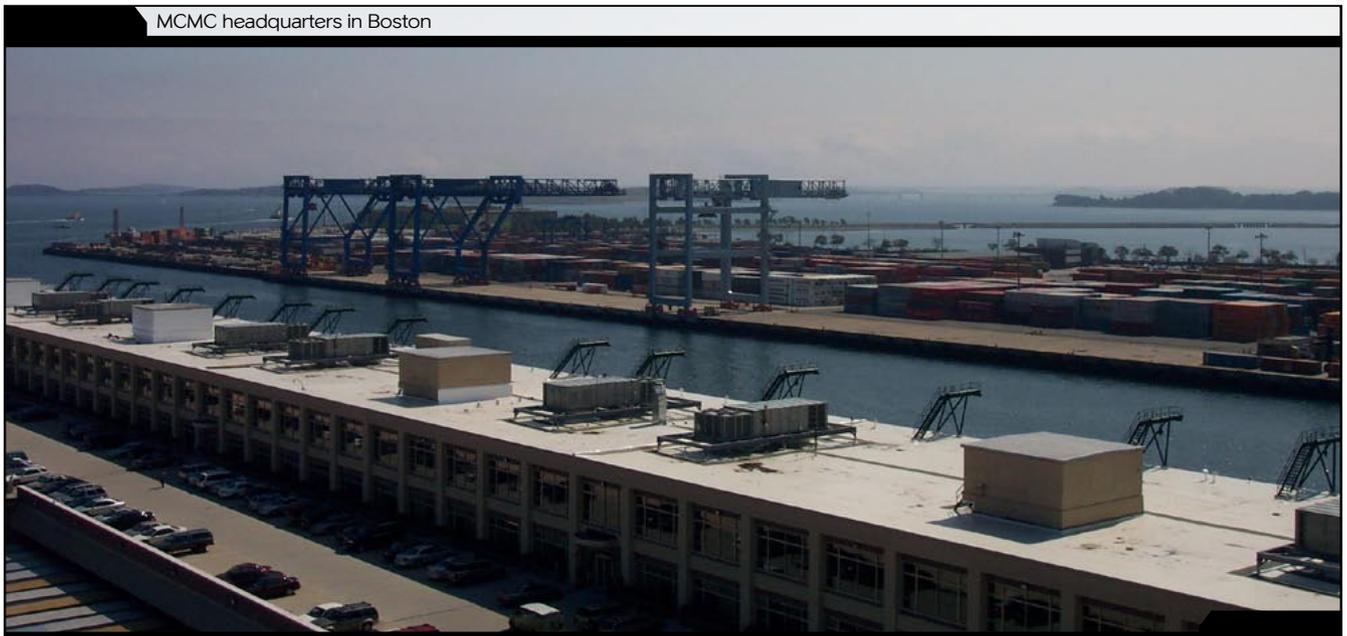
many issues with PBX maintenance and administration at the various locations, and managing the phone system was a distraction from the focus of its business.

As PBX contracts run out, MCMC is gradually moving all its offices to Speakeasy Hosted Voice, thus eliminating the need for on-site maintenance and introducing more flexible features with easier, Web-based, management. With Speakeasy Hosted Voice, MCMC has consistently saved 20 percent to 50 percent on start-up costs compared to competitor quotes. The company also has cut month-to-month costs by up to 50 percent, primarily because of savings on long-distance services.

Because MCMC can get all of its voice and data purchases from Speakeasy, it needs only track one bill a month for its communication services. And every time MCMC needs an Internet connection, it can easily find the right bandwidth for the location with Speakeasy's full range of ADSL, T1, bonded T1 and business Ethernet solutions. MCMC has found Speakeasy's business Ethernet service particularly appealing, given it gets a 10mbps connection for only twice what it had been paying for a 3mbps bonded T1. ■

Rich Pappa is CIO of MCMC LLC (<http://mcmcllc.com>).

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By Scott Siegler



LTE Has Arrived – But Don't Expect Too Much Too Soon

The Dell'Oro Group's Mobility Infrastructure 4Q09 Report has just been

released. Based on worldwide shipments from manufacturers during 4Q09, it includes detailed global and regional data and analysis on WCDMA, GSM/GPRS/EDGE, CDMA and WiMAX sales. For the first time, LTE sales are also featured in the report, with TeliaSonera deploying the first commercial LTE network in Oslo and Stockholm during December 2009.

It's exciting news, after all of the LTE buzz over the past two years, that we expect four more operators to launch LTE services later in 2010. Verizon Wireless alone plans to launch services in up to 30 markets by the end of 2010. As a result, the report forecasts equipment manufacturers will finally begin recognizing their initial revenue streams in 3Q10 (see figure). However, the very fact that LTE is now real means that it's time for realism. It is going to take time for the whole ecosystem – including the radio access network, the packet core network and the LTE-enabled handsets and devices – to be developed and rolled out.

That implies the classic chicken-and-egg situation: Without the infrastructure in place, there is little incentive to launch LTE-enabled equipment, and without a market there is less to be gained by pioneering the service. Of course the providers are well aware of this – it happens each time the technology advances – but in this case we should remember that the majority of operators currently planning to deploy LTE already have robust and extensive HSPA networks in place. Bear in mind that doing an LTE rollout entails purchasing new spectrum in addition to the brand new infrastructure, so it requires a major investment. Although our 5-year forecast, published in January this year, anticipates a strong future for LTE – especially in 2012 when European operators begin to deploy their first LTE networks – initial investment will be restrained because there are other attractive alternatives, with many operators planning to upgrade to HSPA+ as an interim, cost-effective measure.

With only a software upgrade to the current infrastructure supporting HSPA and using the existing 3G spectrum operators already

own, HSPA+ can support peak downlink rates of 21mbps. Spend a little more and operators can upgrade their HSPA+ networks to support peak downlink rates of 42mbps. The report's figures show that the overwhelming majority of WCDMA networks have already been upgraded to HSPA, with over half of these networks supporting peak data rates of at least 7.2mbps. And there are already more than 40 networks supporting HSPA+. So, on the one hand there is the prestige advantage of launching an LTE service; on the other hand there is the pragmatic short-term option of better ROI in existing infrastructure, and the report suggests that many will prefer the pragmatic option for the next several of years.

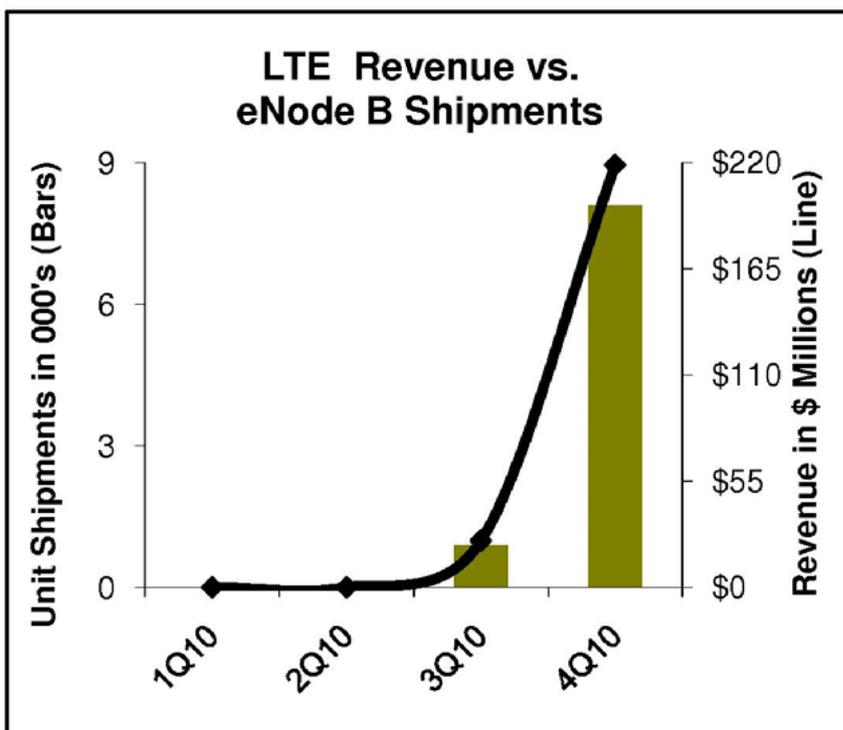
Our findings have made us skeptical of the somewhat aggressive timelines given for deploying initial LTE networks in 2010, but we have also gained a deeper understanding of the operators' situation. On the one hand in the five-year forecast report we increased our forecasted eNode B shipments for 2010 from the previous forecast report; on the other hand we lowered the forecasted shipments for 2011 and 2012 for the reasons given above. We do still maintain that the rate at which operators migrate their

networks from 3G to 4G will be more rapid than the 2G to 3G transition – especially after expected initial LTE deployments in China in 2012 and 2013 when the growth will accelerate significantly.

While we anticipate strong growth in the LTE market over the next five years, with average revenue growth of more than 100 percent, the 3G WCDMA market is going to be the most dominant driver of the mobile infrastructure market. Before the LTE market can really take off, the LTE device ecosystem will need to become more mature. Initial LTE devices will be targeted toward mobile data access via PC connectivity, with initial LTE handsets expected in 2011. Although revenue will start to come in toward the end of 2010, we are not expecting the market to experience its inflection point until 2012.

These and other results are detailed in our latest Mobility Infrastructure 4Q09 report – together with some surprising findings on the GSM and WCDMA markets. ■

Scott Siegler is senior analyst of mobility infrastructure market research at Dell'Oro Group (www.delloro.com).



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By Brough Turner



How Skype will Dominate Enterprise VoIP

After years of little or no traction with enterprises, [Skype](#) is now poised to dominate business communications services. It's the company's Skype for SIP service that will turn the tide, but not quite the way most people expect.

Skype is already the world's largest carrier of international voice traffic (12 percent of all such traffic in 2009) and the dominant platform for person-to-person voice and video everywhere. But this is based on individuals. Skype remains a no-no for most IT directors. There are several issues.

The primary issue is Skype's peer-to-peer technology. P2P technology allows Skype to scale with almost no cost. It also connects calls despite firewalls and network address translation. As a result, Skype just works, where other VoIP services have configuration and support problems. So P2P is a critical advantage for Skype.

Unfortunately, the term P2P has nefarious connotations, and the idea that Skype can penetrate firewalls goes against basic IT precepts.

The related issues are security and privacy. Here the problem is mostly perception, as Skype calls are substantially more secure than most other phone calls, TDM or VoIP. But perceptions are important, and changing minds can take years. Initially, VoIP was less than toll quality, and lingering perceptions took years to overcome.

Today, fear of VoIP is largely behind us. New PBXs support VoIP, and service providers have begun offering SIP trunking. But SIP trunking is still fairly difficult to deploy – features vary and configuring firewalls or installing session border controllers can be complex. Here's where Skype sneaks in.

Skype for SIP is simplistic – voice only and PSTN numbers only. The company doesn't even call it SIP trunking, although it is. But it's low cost – perfect for IT departments on a tight budget, in other words, all IT departments!

Then Skype's simple installation makes it easy to trial, and importantly, easy to deploy as a secondary service – avoid the TDM vs. SIP decision. Once Skype is in the door, its competitive advantages will win it an ever-increasing share of the enterprise's communication minutes. Low cost and actually works wins business. But once the IT department stops fighting Skype, Skype's rich communications on PC clients will capture the rest of an enterprise's internal communications – first individuals, then departments, and then the whole enterprise. Why invest in specialized video gear when Skype video on PCs is easy to use and free?

Skype for SIP is simple and limited to voice, but that's the key for Skype to penetrate enterprises and then take over enterprise communications. **IT**

Brough Turner is co-founder of Ashtonbrooke Corp. (<http://ashtonbrooke.com>), a startup involved in wireless infrastructure.

Enterprise View

By Max Schroeder



A Reseller Educational Series: Spring Planting

Business cycles are similar to seasonal cycles with autumn being the start of a recession, winter the mid-point and spring signaling the start of a recovery. In the March issue of INTERNET TELEPHONY, Executive Editor Paula Bernier's Top of Mind editorial referenced comments by Cisco leader John Chambers that the economy has entered a new "phase of the recovery." He added that Cisco was planning to add 3,000 new employees in the coming quarters. It looks like spring is here and time for resellers to plant this year's crop.

Business buying patterns are based on the mental attitude of senior management, and most managers are still in recession mode. Purse strings are loosening, but the lessons the recession taught are still prominent. Two key selection criteria will be the ROI and how the solution can improve a company's competitive position. Fortunately, VoIP, unified communications, FoIP and other IP technologies can satisfy these criteria and much more.

Companies may still be in recessionary mode, but they are also anticipating and looking forward to additional revenue growth.

Just like Cisco, they will have to add and outfit new employees yet sustain efficiencies to remain competitive. Farmers plant crops they expect to grow and harvest one or more times. You can do the same by marketing products that will grow with your customer's needs. The net effect will be new sales today and recurring revenue later.

Looking for ideas? If you were planting vegetables, you would go to the Burpee seed catalog. If you want the latest ideas in IP technology, go to the [TMC](#) Web site as I did when researching this column. A good example is one of my favorite technologies – unified communications. Go to www.tmcnet.com and select "Publications" at top center, then Unified Communications on the pull-down menu, then Table of Contents, and The UC 2010 Buyers' Guide. This is ultimate catalog of the leading equipment, software and service suppliers in the UC space. But don't stop there. Surf the entire site and pay special attention to the TMCnet Channels for added ideas.

Have a bountiful harvest. **IT**

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

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NETWORKS

By Jeremy Chapman

The Enterprise Value of Social Networks

Online social networking is exploding. In February, [Facebook](#) announced 400 million users, surging past Yahoo as the No. 2 most popular site in the U.S. And, in

just a three-year period, Twitter reports that tweets have grown from a mere 5,000 per day in 2007 to an estimated 50 million tweets today. Access to social networks via mobile browsers also is growing, with Facebook reporting a 112 percent increase and Twitter 347 percent.

So with the meteoric rise of social networks, it's no surprise that employees increasingly are expecting to see and use this familiar concept from inside their workplaces. However, while this may be a challenge to CIOs and CTOs concerned with security and privacy issues and the risks associated with public social networks, new enterprise social software, or ESS, is making it possible for companies to leverage the benefits and potential of social networking applications behind the protection of their own firewalls. As a result, many companies now are realizing the business value these networks provide as an enterprise collaboration and communication tool.

With the adoption of ESS, companies can create communities around expertise, business processes and technologies, share knowledge, quickly find expertise, and accelerate decision making. Creating blogs can enable employees to share information without overloading e-mail inboxes. Employee profiles can include pictures, expertise tags, current project listing, and can be synced with the corporate directory. In addition, activity feeds can be implemented that provide team members real-time project updates reducing the need for formal communication methods. And a mobile and/or remote workforce can use ESS to stay better connected to headquarters and quickly find expertise within the organization.

As more forward-looking companies consider adding social networks to their intranets, they are realizing their value and the positive impact they can have on the bottom line through increased productivity and efficiency. As a result, enterprise social networks are seen as a competitive advantage that can help drive innovation, tighter process integration, and increased collaboration. **IT**

Jeremy Chapman is unified communications product manager at Forsythe Technologies (www.forsythe.com).

Packet Voice Over Wireless

By Michael Stanford

Smartphone Voice over Wi-Fi – Still Not Quite There

AT&T recently opened up its 3G data network to VoIP. Some people were excited about this, but it really isn't such a great benefit. The 3G data connection is unreliable and prone to long latencies, which can

make a phone call unpleasant. If you are going to talk on the cellular network you might as well use the connection designed for voice, unless your billing plan makes that punitive.

VoIP on the Wi-Fi connection is a different matter. Consider that you spend most of your time at home or at work, both of which places have high-quality Wi-Fi connections. Particularly at home, the Wi-Fi is usually lightly used, and even if four or five people use it for phone conversations simultaneously it won't get overloaded. Using Wi-Fi for calls made at home and work brings a considerable reduction in billed minutes of use.

Going to voice over Wi-Fi when it's convenient can bring benefits beyond savings. First, you can use a superior codec. Cellular calls always use a high compression codec, which is why they sound so horrible. Voice over Wi-Fi calls often use G.711, yielding about the same sound quality as a land-line

call. Second, you can use the same SIP login on your cell phone as your desk phone, so they ring simultaneously and you don't need to get yet another phone number. Third, your VoIP service provider is able to provide innovative services like presence.

It's easy to talk about this stuff, but the reality is still lagging. All new smartphones have high performance, power-efficient Wi-Fi, but few do voice over Wi-Fi well. The [iPhone](#) can't do background processing, so it's impractical to use it to receive Wi-Fi calls. Nokia phones that have VoIP built in are difficult to set up for VoIP and bad at associating with Wi-Fi access points automatically. [Android](#) still doesn't have good APIs for media handling. But something has to come together soon. What we need is a smartphone that associates with Wi-Fi networks as easily as the iPhone, that has good physical acoustic design, a microphone and speaker capable of wideband performance, and adequate media and network APIs for developers. **IT**

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

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<http://ipcommunications.tmcnet.com>



By Alan Murphy



Virtual Appliances: Easy Access for Everyone

A few years ago VMware created a site called the VMware virtual marketplace, a place where VMware users could find and download pre-built virtual machines with specific applications or designed for specific needs.

Back then the most common virtual machines on the marketplace were pre-packaged Linux systems with pre-configured applications and tools such as Gallery, iptables and MySQL. The marketplace concept and these pre-packaged tools were built on the idea that virtual machines were portable, easy to build and distribute, and someone somewhere had probably already done what you were trying to do. For those of us that needed quick open source tools and were well accustomed to running VMware, it was the first place we looked for systems before we built them from scratch; it made life easier. Someone who isn't a regular Linux user can be quite intimidated by building a complete system to host pictures with Gallery, yet installing VMware, downloading a pre-built Gallery virtual machine, and getting it up and running and serving pictures is trivial and relatively painless. The virtual machine marketplace gave IT a reason to start playing with virtualization (if they weren't already).

Fast forward to the present and VMware is still running that same virtual marketplace, although now the marketplace is under a larger VMware Virtual Appliances umbrella that includes services and other tools. In the current marketplace, however, the available virtual machine choices are a far cry from the simple Linux machines we used to download (although those are still available and plentiful). Today you can download and purchase full-blown enterprise-class virtual systems, ranging from virtualized storage adapters to e-mail systems and security scanning software to data center management applications. In particular, one class of virtual machines that is becoming more popular is the virtual hardware appliance. This is a traditional hardware solution that has been encapsulated in a virtual machine and is available as software to run on VMware's virtualization platforms.

Typically hardware appliances in the data center run very specific tasks, such as security (anti-spam, network firewalls, application firewalls) and networking (application delivery controllers, load balancers, routers) appliances. Hardware requires up-front planning; it's not something someone can simply download and start evaluating on a whim. If an enterprise wanted to test these appliances, they had to work with a vendor or a VAR to get loaner or demo hardware and use that hardware for both learning a new system and for testing the features in their environment. Once deployed, using this hardware for internal development, test and QA environments required either using production hardware for testing (never a good idea) or purchase of additional hardware (doubling the capital expense for both production and test) to clone the production environment.

The cloned architecture dilemma becomes most apparent when rolling out a new application within an enterprise. Before applications are available to end users they traverse a long series of internal steps known as the application lifecycle. The

application lifecycle starts with design, moves through development and test, and finally moves to production. This lifecycle holds true whether an enterprise is building its own application or purchasing and integrating an application from external vendors. Historically it's been a challenge to incorporate hardware appliances in this lifecycle due to the double hardware overhead. Virtual appliances change that, however, granting access to typical hardware solutions via virtualized software to all departments in the enterprise and throughout the entire application lifecycle. Now IT can simply download the appliance and start testing right away throughout the enterprise.

Virtual appliances for networking tasks, such as virtualized load balancers, are excellent examples of how to use virtual appliances throughout the application lifecycle. Once deployed, applications in the data center will sit behind multiple application hardware appliances, be they load balancers, firewalls, authentication devices, etc. These devices are very rarely available during design and development, and the end result is typically an application that has been designed for one type of networking environment yet is ultimately deployed in a completely different environment. By using virtual appliances throughout the entire application lifecycle, virtualization is literally bringing these tools to the masses. The architecture group can begin designing and developing the new applications with the virtual appliances from day one, streamlining the application lifecycle from creation through deployment.

Virtual appliances for networking tasks, such as virtualized load balancers, are excellent examples of how to use virtual appliances throughout the application lifecycle.

Regardless of whether you're downloading virtual machines to play with or downloading production-ready software versions of hardware appliances, the idea of pre-packaged virtual machines for a particular task is an excellent example of why virtualization has become so prevalent throughout the enterprise: It removes the barrier to entry for much of IT. Ease of access and deployment of virtual appliances are turning regular people into IT administrators and allowing groups throughout the enterprise to use the same dedicated hardware IT had deployed in production in their own micro dev and testing environments. **IT**

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

Optimize Your Data Center Performance, while Reducing Risk and Lowering Costs

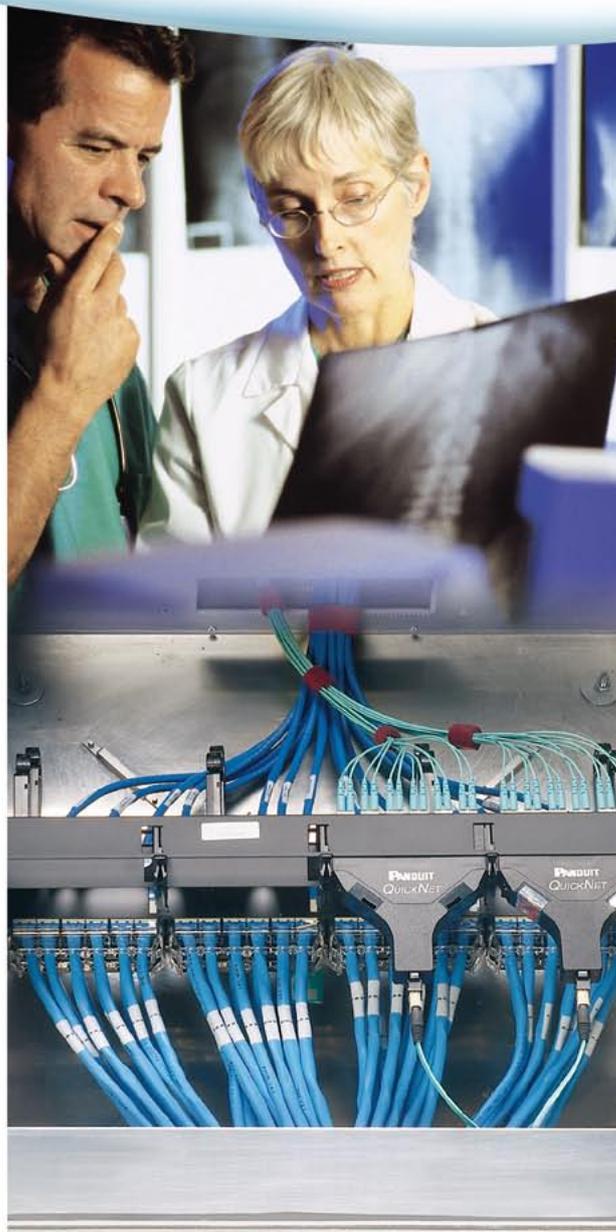
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By Bud Walder



SRO at SIP Trunking Sessions

At a recent conference on enterprise communications, the SIP trunking panel sessions were described as “SRO” – standing room only. This could mean either the rooms were too small, or there is a lot of interest in this topic. (It was probably both.)

It was also noted that many of the major PSTN carrier brands were well represented on the panels, as opposed to the smaller, competitive ITSPs that have frequently carried the banner in SIP trunking sessions at past conferences. You could conclude that this service has hit the mainstream, is ready for prime time, and consistent deployment and provisioning methodologies have been well established.

Much of that is true, but there are still some outstanding issues that may need to be addressed – such as how to handle fax transmissions over SIP trunking (implementing T.38 FoIP) and how to ensure a smooth cutover to SIP trunk turn up experience on the customer premises.

On the fax issue, it is well documented that the circuit-switched fax protocol, T.30, does not fare well on an IP packet network where SIP trunks live. Packet loss and jitter are

unkind to fax image data when it is treated as an in-band pass through audio transmission using SIP and RTP. Failure rates grow at an increasing rate as individual fax document lengths increase, and those failure rates are generally deemed unacceptable for any production fax environment where images are part of an automated workflow. Yet ensuring support for the T.38 protocol, which enables reliable FoIP, is frequently a lower priority in the race to offer SIP services to the enterprise.

As for delivering a consistent deployment and provisioning process, there are mixed reports from the front lines. Interoperability, security, network address translation and firewall traversal, legacy switch integration and demarcation are all areas that should be resolved prior to deploying new services. If a comprehensive connectivity plan is left unresolved by the service provider going into deployment, it can result in a hit or miss experience for the enterprise customer. These are legitimate concerns for enterprise customers. Fortunately, many industry players are working hard to address them to accelerate adoption and increase satisfaction rates. **IT**

Bud Walder is enterprise marketing director at Dialogic Corp. (www.dialogic.com).

UC Unplugged

By Mike Sheridan



Drinking the UC Kool-Aid

Many of you are now developing your own UC story. For me, it's hard to believe a year has passed since [Aspect](#) began the global deployment of Microsoft Office Communications Server R2. What's even harder to believe is that there was life before OCS. The company has seen benefits on many levels, and we expect more to come.

Among our 2,000 employees, we completed more than 1.7 million calls, with almost 12 million minutes of talk time during this first year. Aspect's instant message sessions have totaled over two million sessions, and we have held more than 138,000 conference calls, with what seems an astonishing 33 million minutes of participant time. The conference calls hosted externally have dropped 97 percent from 300,000 million minutes the week the system went live, to less than 7,000 minutes. Conferencing savings total more than \$100,000 each month.

These stats validate that UC clearly was the right direction for us, but it goes beyond numbers. What has made this UC journey interesting are the “softer” outcomes that have provided us with a wealth of insight, including:

- Voice contact did not increase, but communication channels did through IM, conferencing, desktop sharing, etc. showing that each employee is finding his or her own communication preference.
- UC has enabled a greater degree of collaboration within Aspect through cross-regional improvements, such as communicating better with our co-workers across the world. The utilization of the tool sets of IM, conferencing, and desktop share has helped us facilitate that cross-regional dynamic.
- The importance of real-time in today's world has become increasingly evident. Single-click escalations from e-mail to IM to voice are a very common occurrence for me and my colleagues.

What started as a technology project continues to teach us that organizational and regional boundaries increasingly don't matter. This happened far faster and bigger than ever anticipated and is a changing dynamic for Aspect. Our accomplishments in 2009 related to UC were significant, but with the new focus on collaboration, 2010 is a year to be excited about and my guess is we won't be the only one telling that story. **IT**

Mike Sheridan is executive vice president of worldwide sales with Aspect (www.aspect.com).

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By Hunter Newby



Skype and AudioCodes Unite for VoIP Peering

The concept is not necessarily new given the ability for any enterprise to establish SIP trunks to others and directly peer VoIP traffic, but Skype and [AudioCodes](#) recently made an announcement that adds a couple of new dimensions to the process. They announced that the AudioCodes Mediant 1000 Multi-Service Business Gateway has been certified as interoperable with Skype for SIP. Skype for SIP is a new offering from Skype that enables a business to use its existing SIP gateway to send calls directly in to the Skype VoIP cloud as well as receive calls from it.

AudioCodes, acting as the bridge between the two worlds of TDM and IP, can help deal with varying protocols for the Skype interface so that it is not left up to the small businesses to do it themselves.

From the announcement:

This will enable the majority of the world's small and medium-sized businesses, who are still using legacy TDM PBXs and key systems to communicate more efficiently by directing their outbound calls to mobile phones and landlines around the world through Skype. It will also allow them to receive inbound calls from Skype users.

Interoperability with Skype for SIP means that small businesses can take advantage of the cost savings provided by Skype's low-cost global calling rates when their employees call landlines and mobile phones around the world. A company can also receive inbound voice calls from any of the more than 521 million registered Skype users around the world via a global click-to-call button on its Web site.

In addition to the low-cost calling, businesses have access to other features such as the ability to purchase local access numbers in any country where they are so that others can call them and only pay local rates.

This announcement is important for several reasons. First, it accelerates VoIP peering in the Skype cloud. This is no longer a trend, but rather a major, permanent shift away from the PSTN, TDM and the legacy revenue model of minutes. Second, it allows old school telco gear to stay in the small business phone closet with a slight modification. This adjustment lets them continue to amortize their investment but also lets them take advantage of VoIP peering now. In addition, and probably most helpful from a technophobia sense, with AudioCodes acting as the bridge between the two worlds of TDM and IP they can help deal with varying protocols for the Skype interface so that it is not left up to the small businesses to do it themselves. This insures a smooth integration and resolution of issues if and when they arise.

Haim Melamed, director of corporate and channel marketing at AudioCodes, had this to say, "AudioCodes already interoperates with numerous PBXs and key systems, and the Mediant 1000 Multi-Service gateway is now Skype for SIP certified. This makes inbound and outbound calling possible through Skype. The development of the bridge we create means that any business using the AudioCodes gateway can peer with the 521 million Skype users."

Of course any business using the AudioCodes gateway can peer with other users of the same gateway using dedicated SIP trunking, but it is too binary and becomes unmanageable. For the full benefits of the Skype relationship to be realized the business users need to register with Skype for Skype for SIP on the Skype server. This requires them to get a Skype ID, or Skype number assigned to them directly from Skype for end-point resolution to and from the Skype VoIP cloud.

The assignment of unique Skype identifiers is essential to the success of the service. Matt Jordan, enterprise business development manager for Skype, states, "Since we are not a carrier we do not do number portability." This allows Skype to avoid the issues around who actually owns the telephone numbers that the businesses are using today. Since they do not get ported, or used in any way, they do not become an actual part of the Skype cloud.

This is truly an entirely new calling system with a full and complete break from the PSTN and its proprietary numbering scheme. The drain plug on the PSTN has been pulled, and the drain is now getting wider. ■■

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

Visit the Voice Quality Community

On TMCnet

While the cost-saving benefits of VoIP are well documented, voice quality has emerged as one barrier to adoption, for businesses and consumers alike. Now, consumers have access to a device from Ooma that provides free U.S.-based telephone calls and advanced telephony features for superb voice quality.

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By Peter Radizeski



Are You a Net-Head?

As we make the transition from the TDM world to all-IP, there will need to be a shift in mindset as well. It's not just about AT&T unplugging the PSTN. This move means a Bell-head acting like a monopoly provider

has to start thinking like a Net-head, an innovative, flexible company enhancing the productivity, communications and employees at SMB companies that are your mainline customers.

Net-heads think about apps, systems integration, and data. Voice is just an app. Your IP phone is a smartphone – a computer.

The growing demand for IP means that CLECs have to find a way to expand past the T1 level. This will be the Achilles' heel for many CLECs. Without a way to deliver 10MB to small businesses with 50 to 99 employees, CLECs will be relegated to NxT1 service to 10 to 50 employee businesses at a more expensive rate than metro Ethernet service.

The good news is that the small business market is relatively untapped. Managed services, security and hosted applications

are solutions that small business owners are educating themselves on for future purchase as they streamline operations and look for ways to cut costs, get efficient, and be flexible.

Unfortunately, customer acquisition costs are similar for SMB regardless of size. To offset the acquisition expense, providers must look at retention and lifetime customer value.

The key is on-boarding, the many steps that are required to bring a new customer on to your service platform. If the on-boarding process is exceptional and able to properly deliver on expectations, that is the first step toward customer retention – and profitability.

Up-selling the customer to other services like security, data storage and other apps is easier in an IP solution sale than in a TDM replacement transaction. Here again, the mindset has to shift to delivering productivity and easing the pain of technology for the end user. We live in a data-centric world. Put your Net-head on. **IT**

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

<http://tmcnet.com/25901.1>

The Conference Group Adopts Reseller-only Program

Audio and Web conferencing company, The Conference Group, is switching to a reseller-only based program. The TMCnet interview with Greg Plum, the company's director of business development, is available at the above link.

<http://conferencegroup.com>

<http://tmcnet.com/25902.1>

NEC Uses Metaphor

Metaphor, a provider of hosted IVR on-demand for mid-market and small businesses, and NEC Corp. of America, a provider of IT, network and communications products and solutions for carriers, have signed a reseller agreement for online IVR applications. As part of the pact, NEC will offer Metaphor's hosted, packaged IVR system to organizations throughout the United States through its direct sales force.

<http://metaphorivr.com>

www.necam.com

<http://tmcnet.com/25904>

Sonoma Drinks in Success

Chicago-based Sonoma Partners, a reseller and customizer of Microsoft Dynamics CRM, says it's seeing big business gains. In this economy that's something to write home about.

Despite many competitors reporting flat outlooks, Sonoma Partners officials say the company's consulting revenues increased 44 percent in 2009.

www.sonomapartners.com

<http://tmcnet.com/25905.1>

Telus to White Label Digital Signage, SaaS Offers

Telus has signed a reseller agreement with The MediaTile Co., a provider of 3G and 4G cellular digital signage and software-as-a-solution offers. The Canadian telco will resell MediaTile's cellular digital signage platform under its own brand name throughout Canada. Telus will have access to MediaTile's full line of Digital Sign in a Box solutions as well as the Web-based MediaCast System that provides

centralized control, media delivery and playlist scheduling.

www.mediatile.com

www.telus.com

<http://tmcnet.com/25906.1>

MicroAutomation, Convergys form Alliance

Through a new alliance, MicroAutomation will offer clients the full Convergys suite of solutions, such as the Intelligent Self-Service Solution; the platform-independent On-Demand Voice Authentication solution to authenticate agent-assisted and self-service IVR and mobile transactions; and Convergys' flexible Hosted Self-Service Solutions to optimize the customer experience while also reducing operations cost. With the integration of these two offerings, customers can take advantage of the power of speech and Web-based standards, in addition to enterprise-wide policy management to enable contact centers to provide a more personalized and relevant experience for their customers.

www.convergys.com

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Agents Get Their Love Master Agents, Carriers Express Their Appreciation for the Channel



As noted in last month's cover story, it's well understood that agents have not been getting their love lately – at least not from some of the large incumbent providers. But that's not to say no one is sweet on the channel.

At least a handful of master agents, service providers and others have proclaimed their dedication to the channel during recent interviews with INTERNET TELEPHONY. Here's what some of them are doing to show they truly care.

Intelisys: Come Fly with Me

If you are a top-producing agent Intelisys Telecom Solutions may just be the partner for you. The company, which has been a master agent since 1994, has relationships with something like 36 service providers, including big names like AT&T, Level 3, Verizon, XO and many others.

Christina Dumlao, marketing director at Intelisys, says the company offers its agent partners a wide variety of solutions to help them capture and keep customers. That includes a technical expert that can help agents close the deal, a telecom asset management solution, mobility services, churn-control tools and strong back-office capabilities.

And Intelisys, which has about 300 agent partners, is not shy about expressing its appreciation to its best producers by offering some really awesome trips, Dumlao adds.

The Intelisys Top Performing Champions Club, a.k.a. Club TPC, rewards Intelisys sales partners with free travel to and accommodations at Channel Connect and the Club TPC trip. Channel Connect, an Intelisys golf, wine and business fair, this year will take place Oct. 6 to Oct. 8 in Napa Valley. The Club TPC trip, meanwhile, is in the Dominican Republic.

Membership in Club TPC requires agents to produce \$100,000 or more of business per month. The first Club TPC member to hit platinum status, which is \$1 million in revenue a month, will get two tickets to anywhere in the world, says Dumlao.

NTT Communications: A Level Playing Field

Shuichi Ikeda, vice president of sales and business development for global IP network at NTT Communications, says his company has what he describes as a "channel neutral" program. But that's not to say channel partners will be neutral on its ap-

peal. That's because the thrust of the program is to put channel partners on even footing with NTT's inside sales staff.

That means the channel has the same pricing as the direct sales staff, explains Ikeda. He adds that NTT Communications also facilitates communications between channel partners and its global account managers to foster an environment of cooperation rather than competition.

Kevin Francis, vice president of business development at SilentPartner, an agent partner of NTT Communications that specializes in data center-related solutions, says NTT Communications is a flat organization, which provides its partners with better visibility and faster decision making.

NTT Communications has a three-pronged approach to the channel. It offers a referral program, through which a partner can get a one-time split; an agent program, which is the most popular, through which the agent gets a fee for the lead and a recurring payment if the deal closes; and a reseller program, through which partners can white label NTT services.

TNCI: Money in the Bank

In case you missed last month's cover story, TNCI, which has more than 350 direct agent partners, allows agents to build equity in TNCI via the Agent Equity Plan.

"The AEP is truly a unique program in the channel because it contemplates TNCI building to a transaction, [and] recognizes and rewards individual agent partner-generated revenue with equity value that is determined based upon the revenue developed by the entire channel as opposed to just an individual partner," explains TNCI President Brian Twomey. "[T]hen [it] applies the equity factor to each individual agent partner's applicable revenue at the time of a TNCI transaction, while also providing evergreen earning protection for the agent partners.

"Not only is the program unique in that it establishes these benefits in advance of a transaction, but the program and its terms were entirely developed jointly by TNCI along with the Agent Alliance," he adds. "[T]he ongoing results of the program are jointly managed and tracked on a monthly basis by both groups based upon full review of all related results. The AEP also has an advisory council comprised of several members of the Agent Alliance along with several independent TNCI agent partners. This group also meets to review results/growth, progress toward a transaction and the business direction of TNCI." **IT**

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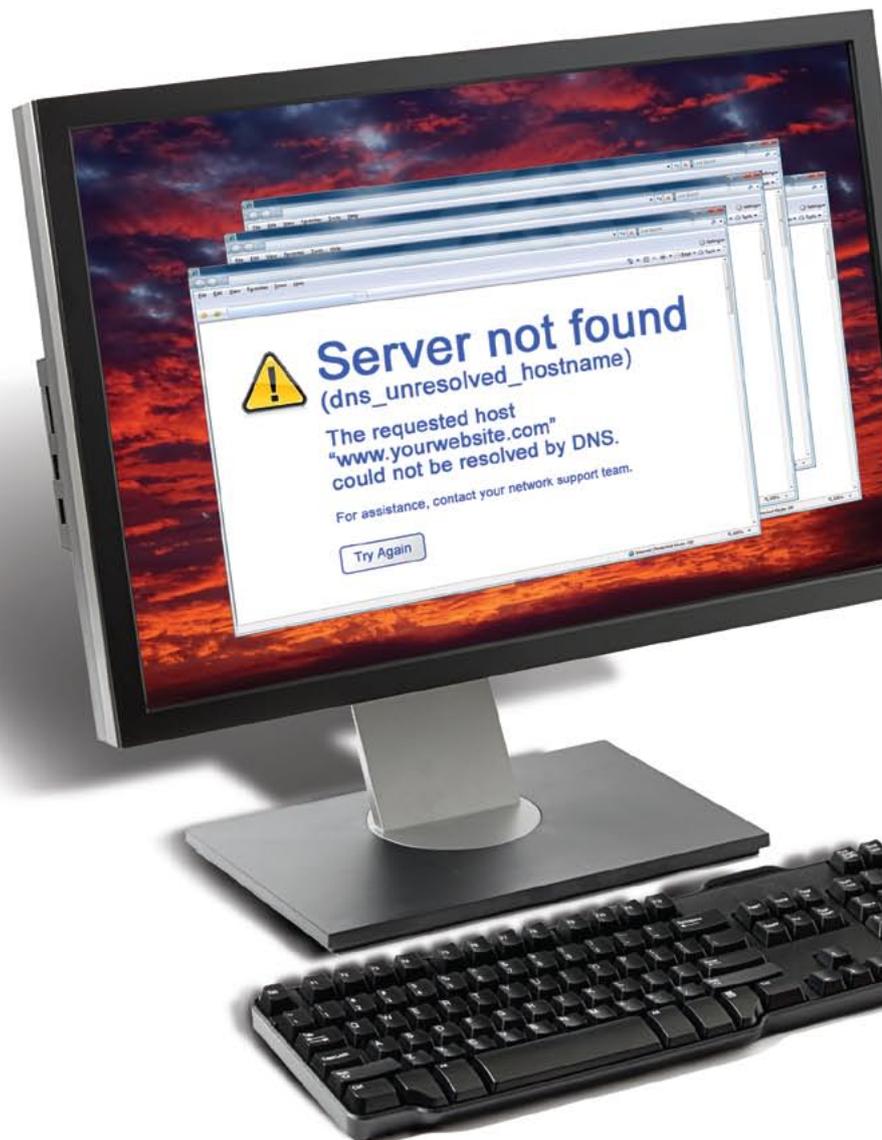
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HTTP://DNS.TMCNET.COM

By Larry Levenberg



Software-Based Communications for the SMB

On-Premises Solutions May Deliver Greater ROI than Hosted

Hosted IP communications solutions have the potential to deliver significant value when compared to on-premises, appliance-based solutions. As a business grows to a certain size, an upfront capital expenditure and a lifetime of ongoing maintenance and upgrade costs for hardware-centric systems can be more expensive than a simple, neat recurring monthly service fee with all the bells and whistles rolled in.

But the tables turn when we compare hosted to software-based solutions. Software-based IP communications inherently alleviate many of the challenges associated with the traditional, hardware-centric approach. While it may not be the choice for all SMBs, some organizations will find that software-based communication delivers far greater value and cost efficiency over hosted solutions.

While hosted solutions have the potential to reduce capital expenditures, they don't eliminate them. Hosted solutions still come with up-front costs for IP phones and service-access hardware. These costs can be significant, depending on SMB's specific organizational business goals and requirements. What's more, hosted solutions tend to have higher, ongoing service provider costs. Software-based solutions can reduce both initial and ongoing costs and provide significant value over hosted models. Some software solutions available today will waive the up-front cost of gateways and terminals for direct-finance customers. This further reduces the cash outlay SMBs pay with hosted solutions. It also eliminates the investment risks associated with owning equipment in a rapidly changing technology environment. SMBs pay a predetermined, monthly payment with a financed software-based IP solution. This alleviates the risk of fee increases and higher ongoing costs from a hosted service provider. It also enables them to completely refresh their technology at the end of the contract.

Software-based solutions require minimal hardware, simplifying management and significantly reducing burden on SMBs IT and network staff. As software, the solution is downloaded onto the network and managed just like any other application. The ideal software-based solution integrates the IP PBX and other applications like voice-mail, auto attendant, unified messaging and conferencing solutions, which further reduces the need to manage and integrate additional equipment. Centralized management and administration allows SMBs to support easily an increasingly remote, disparate workforce. What's more, since

software-based solutions are abstracted from the network, there is no need to coordinate upgrades to network IOS, routers, switches and firmware to do an upgrade or introduce new features. It's all automatic.

Software-based solutions that leverage Web services further reduce costs and simplify management. By fully integrating call and network functionality, companies can expose communication functions to any number of business applications and deliver even greater value.

Software-based solutions also address SMB concerns of redundancy with hosted solutions. As a softswitch, some software-based communications solutions can automatically load balance across multiple servers. As a company grows and needs to add a location, it simply adds another server, providing geographic redundancy. This type of auto load balancing not only increases system resources but provides full redundancy, fault tolerance and failover without additional cost.

In addition to simplifying cost, management and redundancy, on-premises software-based communications solutions give SMBs back the following advantages they might have given up by going with a hosted solution:

- control of every detail of the network, including cost and complexity;
- mobility, conferencing, collaboration and business-process integration as a basic, on-premises offering;
- innovation beyond hosted offerings to get the solution that best matches business needs;
- data security and integrity;
- and compliance with privacy laws and regulations

SMBs have leveraged hosted solutions in the past because no viable alternative was available. Software-based IP communications are gaining strength – even among the SMB segment – providing the benefits of a premises-based, IP solution while foregoing the challenges associated with more traditional models. In making the choice between a hosted and on-premises software-based solution, SMBs should weigh the cost and value of each to determine which variable (IT staff, existing infrastructure, future business direction, etc.) delivers the most ROI for their given organization. **IT**

Larry Levenberg is vice president and general manager of national channels at NEC Corp. of America (www.necam.com).



Introducing the Global IVR Community

Evolving standards and speech technologies are driving the business case for companies to deploy new speech applications to create additional revenue streams, increase customer satisfaction, and trim costs. Voxeo's IVR Global Online Community on TMCnet is the industry destination for tools, information, and resources for building and deploying enhanced IVR and VoIP applications.

- Hosted and on-premise IVR
- VoIP Platforms
- Free developer tools
- VoiceXML, CCXML and SIP Standards

<http://ivr.tmcnet.com>

The screenshot displays the TMCnet website interface. At the top, there's a navigation bar with links like 'Home', 'About TMCnet', and 'Contact Us'. The main content area features a large banner for 'Zip. Nada. Nothing.' with the text 'That's what it costs to start building great IVR applications using Voxeo.' Below this, there's a section titled 'Global Online Communities' with a grid of categories including 'SD-Wire', 'SIP', 'IPTV', 'TEH Substantia', 'VoIP Services', 'Mobile VoIP', 'Small Business VoIP', 'Hosted Communications', and 'Green Technology'. A sidebar on the right contains a search bar, a 'Log In' button, and a list of columnists. At the bottom, there's a 'Powered By: TMCnet' logo and a 'Sponsored By: VOXEO' logo.

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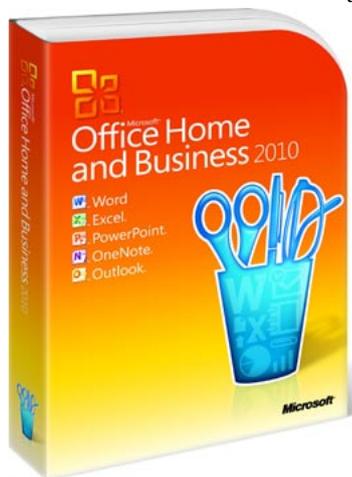
<http://tmcnet.com/25907.1>

Microsoft Opens Office 2010

Microsoft is moving forward with the upcoming debut of Office 2010 by setting a release date and free upgrade pricing for certain buyers. The folks in Redmond announced recently that the new Office edition will be available to the business world starting May 12 and to the general public in June.

Also on stage for the May and June launch dates will be Visio 2010, Project 2010, and SharePoint 2010.

www.microsoft.com



and Medianet, a family of solutions that helps business take advantage of video applications to transform workforce interactions.

www.cisco.com

<http://tmcnet.com/25909.1>

NAS Gets an Upgrade from NTT America

NTT America, a wholly owned U.S. subsidiary of NTT Communications, announced enhancements to its portfolio of managed storage and recovery services with an upgraded network-attached storage service. This latest offering

from NTT America combines storage technology from Hitachi Data Systems with NTT America's flexible, scalable and cost-effective storage infrastructure.

<http://tmcnet.com/25911.1>

BrightCom CEO: Cisco CRS-3 Could be Revolutionary

Bob McCandless, CEO of BrightCom, says the carrier and wholesale cost-savings



projected for the Cisco CRS-3 Carrier Routing System could change the face of IP communications if they're passed down to individuals as well as businesses. "Also, if that new bandwidth is available, with 300 percent more speed, then for a backbone provider, core costs should go down for access to bandwidth, which in theory would be passed on to customers," McCandless tell INTERNET TELEPHONY.

www.brightcom.com

www.cisco.com

<http://tmcnet.com/25913.1>

The Case Store Finds VoIP, FoIP Pays

Virtutone Networks, a supplier of Internet-based voice and fax solutions, has landed a contract from The Cash Store Financial Services Inc., The Cash Store Australia Holdings Inc., and The Cash Store Financial Limited UK. Under the contract, Virtutone will provide a private network that will interconnect the company's head office and more than 500 retail branches in three nations with VoIP and fax over IP.

www.virtutone.ca

<http://tmcnet.com/25914.1>

Nemertes: UC Deployment Growing

A recent issue paper from Nemertes Research states that UC deployments "are rapidly growing, with 60 percent of IT practitioners saying they are implementing unified communications. Those deploying are seeing tangible, quantifiable benefits such as increased sales, reduced travel, more efficient use of field support personnel, and greater contact center optimization, in addition to gains in productivity." As the "SIP-O-Nomics; Saving Money and Simplifying Architecture with the Session Initiation Protocol" paper points out, SIP provides the "glue" that is used to integrate these disparate communications systems (phone, e-mail, Web chat, fax, conferencing, etc.) into a single unified architecture.

www.nemertes.com

<http://tmcnet.com/25915.1>

IDC: Videoconferencing Set to Accelerate

International Data Corp. expects enterprise adoption of videoconferencing to accelerate, driving revenues for videoconferencing equipment from \$1.9 billion in 2009 to more than \$8.7 billion in 2014. The company, better known as IDC, believes that the following factors will shape the enterprise videoconferencing market over the next five years: technology capability and market awareness; bandwidth availability; and interoperability.

www.idc.com

<http://tmcnet.com/25912.1>

Cisco Builds on Borderless Networks Architecture

A variety of new major product lines have been added to Cisco's Borderless Networks Architecture. Building upon the architecture it announced in October, Cisco now has unveiled EnergyWise, a product that harnesses network intelligence to help customers proactively control energy consumption and lower operating costs and carbon footprint; TrustSec, a security solution that allows customers to deploy security policies across all access technologies;

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<http://tmcnet.com/25887.1>

CustomCall Expands Reach to Touch Cablecos

Billing and back office software provider



CustomCall, which traditionally has focused its efforts on the competitive service provider set, has expanded its horizons to also serve cable companies. And the company's first cableco customer is none other than Comcast. CustomCall Chairman and CEO Frank Peregrine says his company has a pretty big advantage compared to big back-office companies like CSG Systems that target cablecos given such competitors' telephony products have not been a central focus for them.

www.customcall.com

<http://tmcnet.com/25886.1>

SLA-based Nationwide Ethernet Turned Up by Covad

Covad Communications Co. is launching nationwide Ethernet services, backed by service level agreements. "Ethernet is an important component of Covad's overall portfolio strategy," says Covad President and CEO Patrick Bennett. "What will differentiate this product in the market [is] the integrated QoS and CoS options that give our partners immense flexibility in optimizing network performance based on their application requirements." The new service, available via more than 4,000 central offices nationwide, is offered at rates ranging from 1.5mbps to 35mbps.

www.covad.com

<http://tmcnet.com/25890.1>

Xtreme Network from RCN Metro Lights Up

RCN Metro Optical Networks last month expected to light its Xtreme Network, a high-capacity, low-latency fiber network between major financial data centers and exchanges within New Jersey and New York. Xtreme Network, which is based on ROADM technology to allow for fast provisioning and is backed up with service level agreements, will be available at 10 exchange and colocation sites in the New York/New Jersey metro area.

www.rcnmetro.com

<http://tmcnet.com/25891.1>

Arbor Networks: Google is No. 3 in Bandwidth

If Google were an Internet service provider, it would be the fastest-growing and third-largest global carrier, says Craig Lebovitz, Arbor Networks chief scientist. "Based on anonymous data from 110 ISPs around the world, we estimate Google contributes somewhere between 6 percent to 10 percent of all Internet bandwidth globally as of the summer of 2009," Lebovitz says. Over the last two years, Google has stopped relying on purchased transit services for a majority of its traffic and now moves its bits largely over its own internal networks.

www.arbornetworks.com

www.google.com

<http://tmcnet.com/25889.1>

Broadview Expands Relationship with Actelis

Business services provider Broadview Networks has expanded its deployment of Actelis' Ethernet in the First Mile



gear. "Actelis' EFM solutions enable Broadview to improve delivery of a variety of services, including our hosted IP phone solution, OfficeSuite, and ZOOM Dedicated Internet Access services," says Sanjay Patel, vice president of technology at Broadview, which has in place an Ethernet infrastructure to deliver services to businesses in such areas as Baltimore, Boston, New Jersey, New York, Philadelphia, and Washington, D.C.

www.actelis.com

www.broadviewnet.com

<http://tmcnet.com/25892.1>

What Is Demand for 100mbps?

The Federal Communications Commission wants 100mbps service provided to 100 million U.S. homes by 2020. Try and find any U.S. service provider offering

actual speeds of just 50mbps talking about the take rates for such services. If you cannot find any company willing to talk about take rates, that is likely because the take rates are so low.

www.fcc.gov

<http://tmcnet.com/25893.1>

Global Wholesale Side of Verizon Unveils Trio of VoIP Options

Verizon Communications now offers three new VoIP packages through its Global Wholesale division. That includes SIP Gateway Service; Dedicated T1 service; and a third offer, targeted at SMBs, that includes Internet access with an Ethernet connection at either 5mbps or 10mbps.

www.verizon.com

<http://tmcnet.com/25894.1>

Network USA Taps BTI Systems

Ottawa-based BTI Systems' optical gear has been selected for use by Network USA. The regional telecom service provider will use the vendor's BTI 7000 Series product to offer services throughout Louisiana. Network USA recently added the BTI 7000 Series packetVX modules within the Baton Rouge to Shreveport corridor to provide carrier Ethernet for enterprise and wholesale customers.

www.btisystems.com

www.networkusa.com

<http://tmcnet.com/25897.1>

IPSource to Ride Again

DSET plans to resurrect a data services provisioning product that it originally called IPSource, Jim Seigler, Americas director of sales at the company tells INTERNET TELEPHONY. The product will be re-introduced, likely under a name employing the company's ez branding, in the May/June time frame.

www.dset.com

<http://tmcnet.com/25898.1>

3q2010 to Bring Ethernet from 360

360networks expects to deploy Layer 2 Ethernet in the third quarter. That's the word from Nick Reifschneider, product director at the company.

www.360networks.com

Introducing the **Asterisk Global Online Community**

Open Source Telephony is taking the world by storm.

The Asterisk Global Online Community — sponsored by Digium and powered by TMCnet — is designed to serve as the information hub for the exciting world of Open Source Telephony based on Asterisk.

This online community features the latest information concerning Asterisk and Open Source Telephony and how it applies to enterprise communications.

The community showcases daily content updates highlighting:

- * Feature stories
- * Breaking news
- * Whitepapers
- * Case studies
- * Tutorials
- * Asterisk Developer Blog

Participants in this community will be better prepared to make the proper decisions when it comes to selecting enterprise communications solutions based on Asterisk.

<http://asterisk.tmcnet.com>



<http://tmcnet.com/25917.1>

ALU Straddles 3G, 4G with New Products



As noted in the March issue of INTERNET TELEPHONY magazine, although AT&T has announced its plans and vendors for LTE, the wireless provider also has made clear it aims to continue to leverage its 3G network investment for some time. Given Alcatel-Lucent is one of the two big awardees of AT&T's LTE business, it probably doesn't come as a surprise that ALU recently unveiled a variety of solutions aimed at addressing the mobile data explosion on both 3G and LTE networks. Even as AT&T last year publicly embraced LTE, it made new investments to upgrade 3G cell sites to HSPA 7.2 technology, for which it offers 10 end user devices.

www.alcatel-lucent.com

<http://tmcnet.com/25918.1>

ABI Research is Bullish on MMS

Global revenues from mobile messaging services including SMS and mobile e-mail from mobile business customers are forecast to reach \$48 billion by 2014, according to ABI Research. The company says that data access services revenues for handsets and computing devices will also not be far behind, reaching \$43 billion by 2014.

www.abiresearch.com

<http://tmcnet.com/25919.1>

Global Mobile Subscribership Continues to Develop

In 2000 there were 738 million global mobile subscribers. In 2010, there are 4.3 billion mobile subscribers, and most of those subscribers live in the developing world, according to the International Telecommunications Union. It took just four years to double the number of global mobility users, from 2000 to 2004, and just another four years to double yet again, from 2004 to 2008.

www.itu.int

<http://tmcnet.com/25920.1>

Wearable Computing Expert Joins Apple

Richard DeVaul, a veteran of the wearable computing field and co-founder of AWARE Technologies, a technology company focused on creating

products for the fitness and wellness markets, has come on board the Apple team as a senior prototype scientist.

www.apple.com

www.awaretechs.com

<http://tmcnet.com/25921.1>

Sprint Signs on Four MVNOs

At COMPTTEL in 2009, Sprint unveiled a turnkey back-office solution for companies that want to offer wireless services under their own brand but without the investments in spectrum, networks and related support systems. At this spring's COMPTTEL in Nashville, Sprint followed up on that with news that four companies have now signed on to use the solution. These customers are South Carolina-based cable operator Baja Broadband, Chicago-based business-to-business telecom company Call One, switchless reseller Long Distance Consolidated Billing Co. and Missouri-based NPG Cable.

www.sprint.com

<http://tmcnet.com/25922.1>

Apple to Enable Multitasking for iPhone

The operating system for the iPhone to launch this summer will support

multitasking, according to reports stemming from an AppleInsider story. This has required Apple to address both security and user interface issues with the iPhone 4.0, the story indicates. However, it is unclear how Apple will address the battery power challenges of a multitasking solution.

www.apple.com

<http://tmcnet.com/25923.1>

CEO of Lenovo: Wireless is the Future

Lenovo, the world's fourth-largest personal computer maker, reportedly expects 80 percent of sales within three to five years to come from wireless Internet products. The company's CEO, Yang Yuanqing, expressed this belief in a recent interview. The company continues to focus heavily on China, which is responsible for about half of Lenovo's global sales.

www.lenovo.com

<http://tmcnet.com/25924.1>

Mobile Apps is Where the Jobs Are

As the employment picture remains flat, and hundreds or even thousands frequently show up to apply for one or just a handful of jobs, the hunt is on for areas in which job creation exists. One such area is apparently in developing mobile applications, according to reports. A recent CNBC story tells the tale of young Joe Hankin, who bypassed a law career to engage in the promising vocation of mobile application development. He got his start with the esteemed Baby Burp app, which turns the iPhone into an infant ready to be relieved of internal gas.

<http://tmcnet.com/25925.1>

E-books to Be Key for iPad

Apple, in readying the iPad for its April 3 launch, was adjusting its book categories and certification procedure for applications to work on the tablet device, according to reports. The company was apparently taking extra care related to these applications because the sale of applications are expected to be a key driver or revenue related to the iPad, the Forbes report indicates, noting that Broadpoint AmTech analyst Brian Marshall believes Apple will generate enough revenue from content sales to equal approximately 10 percent of iPad hardware sales by the end of 2010 and about 30 percent in 2011.

www.apple.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 Hosted VoIP phone service.



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Each NEWS snippet is more in-depth on our Web site. Point your browser to the URL above the story you wish to read.

<http://tmcnet.com/26438.1>

Rivermine: Visibility into Telecom Expenses is Key

Rivermine's white paper titled "Business Intelligence: The Key to Telecom Expense Visibility and Control," shows that to control expenditure it is very important to have visibility. If companies don't have a clear view of their telecom inventory and expenses they will eventually miss out on bigger opportunities in life. [Rivermine](#) offers telecom expense management software and managed services that help enterprises save millions of dollars each year.

www.rivermine.com

<http://tmcnet.com/26439.1>

Health Care Vertical Finds Appeal in Cloud-based Telephony

As the health care industry searches for ways to streamline operations and reduce overall costs, one technology is gaining traction: cloud-based telephony.

ny. For example, NewVoiceMedia's ContactWorld cloud telephony-type system enables Advantage Healthcare to manage telephone inquiries by distributing them to its 24 branches throughout the nation. ContactWorld automatically re-routes calls to the Telford head office and directs each call to the relevant handler.

www.newvoicemedia.com

<http://tmcnet.com/26440.1>

FreedomVOICE Delivers Toll Free Number Service

Encinitas, Calif.-based FreedomVOICE Systems provides businesses with VoIP phone systems that make communications more cost efficient and effective. In addition to its FreedomIQ, business VoIP PBX service, the company also offers FreedomVoice Toll Free Number Service, which makes it possible for customers to call a business from anywhere in the U.S.

and Canada without having to pay long-distance charges.

www.freedomvoice.com

<http://tmcnet.com/26441.1>

Juniper Research: Mobile VoIP Set to Pop

If recent findings by Juniper Research hold up, mobile network operators could compensate for falling voice revenues by forming partnerships with the VoIP provider community. Demand for mobile access to Web 2.0 applications and services will see related annual revenues from these services hit \$18.9 billion in 2014, a new report from Juniper Research has found. "Presence-enabled communities, such as mobile voice over IP, will be the primary market driver," Juniper officials say, "followed by rapid growth in the social Web – which encompasses social networking, user-generated content and mobile dating, chat and professional applications."

www.juniperresearch.com

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IP-4G	WAN	4xGSM	BRI/FXO/FXS
IP-2G4A	WAN/LAN	2xGSM+4xFXO/FXS	
IP-04	WAN	4xFXO/FXS	MMC
IP-08	WAN/LAN	8xFXO/FXS	MMC,USB
IP-BRI	WAN	4xBRI	MMC,EC module(option)

IP-02



IP-04



IP-08



IP-BRI



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On TMCnet



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<http://tmcnet.com/25973.1>

Yealink, Xorcom Complete Interop Testing

Xorcom, a privately-held manufacturer of business telephony interfaces and appliances based on Asterisk open source software, and Yealink, a designer and manufacturer of IP voice and video phones, have completed interoperability testing. The testing was between Xorcom's IP PBX models and the full range of Yealink's SIP-T2x series HD IP Phones. Xorcom's appliances allow communication using both VoIP and traditional telephony protocols.

www.xorcom.com
www.yealink.com

<http://tmcnet.com/25974.1>

Skype SIP Open Beta Adds Grandstream

Grandstream's GXE IP PBX is now compatible with the Skype for SIP open beta

program, making it the third VoIP vendor to test interoperable in the program, following Cisco and ShoreTel. The significance of the announcement is that now small- to medium-size businesses using Grandstream's SIP-enabled GXE IP PBX with integrated FXS and FXO gateway features can reap additional cost savings and improved communications by directing their outbound calls to mobile phones and landlines via Skype at competitive termination rates. Plus, they can do all this without the need for any additional hardware or software.

www.grandstream.com
www.skype.com

<http://tmcnet.com/25975.1>

ALU Intros First Cloud-based API Bundles

Following up on its recent cloud-based API news, Alcatel-Lucent has introduced

its first packaged API bundles on this front. That includes three bundles to enable the creation of mashups in the social gaming, advertising and virtual goods arenas. APIs involved are SMS, advertising, location, virtual goods, credit card and billing.

www.alcatel-lucent.com

<http://tmcnet.com/25976.1>

SugarCRM Scores Five New Customers

Officials of open source CRM provider SugarCRM say "a number of high-profile companies" have selected SugarCRM's cloud-based CRM services. The organizations include BancVue, BLS Telecom, Robin Hood, SkyScanner and The Utah Flash, a fairly diverse group spanning different industries and geographies.

www.sugarcrm.com

Channels Corner

www.tmcnet.com/channels

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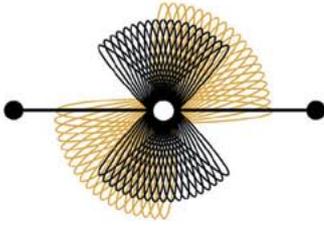


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Getting a Read on the National Broadband Plan

The National Broadband Plan – or at least the first draft of it – has now been revealed to the world. And, as Vice President Biden might say, this is a big (fill-in-the-blank) deal.

The plan, which the Federal Communications Commission was assigned to put together per the American Recovery and Reinvestment Act, is meant to be the nation's blueprint for making broadband more widely available, affordable and accepted within the U.S., as well as useful in meeting national goals related to the economy, education, energy, health care and more.

“The big take away for me from reading through and studying the plan is that it provides a balanced approach that is holistic and comprehensive in nature,” says Kevin Morgan, director of product marketing for **ADTRAN**, an equipment company that has been active in educating its customer base, legislators and regulators about broadband and the federal government's efforts related to it. “The FCC could have delivered a more targeted plan that focused just on broadband networks. Instead, they went above and beyond the call by tying in the entire broadband ecosystem. This is the biggest development to hit our industry since the 1996 Telecom Act, and the plan serves as the ‘starting gun’ that will guide our industry for the next decade.”

The National Broadband Plan lays out six long-term goals for the country. According to the FCC, at least 100 million U.S. homes should have affordable access to actual download speeds of at least 100mbps and actual upload speeds of at least 50mbps. The United States should lead the world in mobile innovation, with the fastest and most extensive wireless networks of any nation. Every American should have affordable access to robust broadband service, and the means and skills to subscribe if they so choose. Every American community should have affordable access to at least 1gbps broadband service to anchor institutions such as schools, hospitals and government buildings. To ensure the safety of the American people, every first responder should have access to a nationwide, wireless, interoperable broadband public safety network. And, to ensure that America leads in the clean energy economy, every American should be able to use broadband to track and manage their real-time energy consumption.

“Affordability is a key theme of this plan and competition is absolutely necessary to make this happen,” Teresa Mastrangelo, principal analyst of broadband trends of The Windsor Oaks Group LLC, tells **INTERNET TELEPHONY**. “Even though the plan calls for a comprehensive review of wholesale competi-



tion – its focus is primarily to increase competition to small business and enterprise, not the consumer market that makes up the majority of broadband consumers. The FCC does focus on encouraging wireless-wireline competition for low-end packages, but there [are] few recommendations that would increase competition for services that support the 100-squared goal.”

And despite all the hub-bub over the FCC's “100-squared” plan to bring 100mbps downstream access to 100 million homes, the universal broadband goal is to facilitate the delivery of 4mbps downstream and 1mbps upstream “actual speeds” by 2020. The FCC also aims to implement a program to ensure no state lags significantly behind the 3G wireless coverage national average.

The FCC calls for the creation of the Connect America Fund to support the 4/1mbps effort, and the establishment of a Mobility Fund related to the above-noted 3G goal.

According to the commission, the Connect America Fund could get at least part of its money from the Universal Service Fund. The



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Government Can Influence the Broadband Ecosystem in Four Ways

1. Design policies to ensure robust competition and, as a result, maximize consumer welfare, innovation and investment.
2. Ensure efficient allocation and management of assets government controls or influences, such as spectrum, poles, and rights-of-way, to encourage network upgrades and competitive entry.
3. Reform current universal service mechanisms to support deployment of broadband and voice in high-cost areas; and ensure that low-income Americans can afford broadband; and in addition, support efforts to boost adoption and utilization.
4. Reform laws, policies, standards and incentives to maximize the benefits of broadband in sectors government influences significantly, such as public education, health care and government operations.

Source: The National Broadband Plan

FCC in the National Broadband Plan suggests that \$15.5 billion over the next decade should be shifted from the USF to the CAF. The commission also gingerly notes that Congress might consider allocating additional public funds for broadband.

“If Congress wishes to accelerate the deployment of broadband to unserved areas and otherwise smooth the transition of the Fund, it could make available public funds of a few billion dollars per year over two to three years,” the FCC writes in the National Broadband Plan.

Additionally, the FCC indicates it would like to issue an order to implement the voluntary commitments of Sprint and Verizon Wireless to reduce the High-Cost funding they receive as competitive ETCs to zero over a five-year period as a condition of earlier merger decisions.

“Sprint and Verizon Wireless received roughly \$530 million in annual competitive ETC funding at the time of their respective transactions with Clearwire and Alltel in 2008. Their recaptured competitive ETC funding should be used to implement the recommendations set forth in this plan,” the FCC says. “This represents up to \$3.9 billion (present value in 2010 dollars) over a decade.”

The FCC also hopes to require rate-of-return carriers to move to incentive regulation, and to redirect access replacement funding known as interstate access support toward broadband deployment.

“... the conversion to price-cap regulation would be revenue-neutral in the initial year of implementation, assuming that amounts per line for access replacement funding known as Interstate Common Line Support would be frozen,” according to the National Broadband Plan. “Over time, however, freezing ICLS would limit growth in the legacy High-Cost program on an interim basis, while the FCC develops a new methodology for providing appropriate levels of CAF support to sustain service in areas that already have broadband. This step could yield up to \$1.8 billion (present value in 2010 dollars) in savings over a decade.”

The FCC also calls for long-term intercarrier compensation reform aimed at eliminating distortions created by recovering fixed network costs through per minute rates for the origination and termination of traffic. That, the commission suggests, should involve moving carriers’ intrastate terminating switched access rates to interstate terminating switched access rate levels in equal increments over a period of two to four years.

“The FCC has authority to establish a new methodology for ICC, but Congress could make explicit the FCC’s authority to reform intrastate intercarrier rates by amending the Communications Act in order to reduce litigation and expedite reform,” the commission writes.

Additionally, per minute charges should be incrementally phased out between now and 2020, according to the FCC, which adds that to offset ICC revenue decreases there should be gradual increases in subscriber line charges.

The National Broadband Plan also talks a lot about how the FCC will continue to collect information about where broadband is available, with what performance and at what prices. And the FCC in the plan calls for broadband service providers to be clearer on what exactly they’re selling. It suggests service providers need to move away from marketing their services with “up to” broadband rates and instead advertise the “actual” rates.

“Fixed broadband consumers ... have little information about the actual speed and performance of the service they purchase,” according to the plan. “Marketing materials typically feature ‘up to’ peak download and upload speeds, although actual performance experienced by consumers is often much less than the advertised peak speed.”

Mastrangelo says she’s very pleased with the FCC’s recommendation to significantly increase its metrics related to data collection, including location-specific subscriber data such as advertised price vs. paid price, churn, provider, speed, termination fees, contract lengths, bundles and promotions.



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“In addition, they recommend collecting information on mobile broadband, although they do not provide specifics on measurements,” she says.

“This type of collection will enable the FCC to better understand competition at a local level, to understand how operators in one market can offer significantly different packages and prices than in another, perhaps smaller market,” Mastrangelo adds.

She also expresses her appreciation for the FCC’s recommendations associated with disclosure of broadband performance and the concept of a digital label.

“However, we are disappointed that the FCC is making no recommendations regarding metering – such as requiring ISPs to provide a capability to consumers that will enable them to better understand their usage,” continues Mastrangelo. “In fact, the entire concept of bandwidth metering was not addressed at all in the plan.”

What the FCC does suggest, as Mastrangelo alludes to with her mention of a digital label, is that broadband service providers should be required to provide consumers with a better idea of what’s inside their packages, just as automobile manufacturers do with their miles-per-gallon vehicle stickers and the food industry does via nutritional labels. The FCC suggests that it should work with the National Institute of Standards and Technology to establish and update over time broadband measurement standards and methods. Key characteristics that might be measured under this new effort include actual speeds and performance over a broadband service provider network as well as end-to-end performance of the service; actual speeds and performance both at peak hours and over a set time period; and actual speeds and performance tested against to-be-decided future standard protocols and applications.

However, it’s worth noting that the FCC does not focus this transparency discussion solely on fixed broadband for consumers. The commission recommends the development of broadband performance standards for mobile services, multi-unit buildings and small business users as well.

Speaking of wireless, the National Broadband Plan also talks about freeing up and allocating additional spectrum for unlicensed use in an effort to foster innovation and more competition in broadband services.

“Currently, the FCC has only 50mHz in inventory, just a fraction of the amount that will be necessary to match growing demand,” the commission writes. “More efficient allocation and assignment of spectrum will reduce deployment costs, drive investment and benefit consumers through better performance and lower prices.”

That said, the FCC recommends that government officials make 500mHz of spectrum available for broadband within 10 years, and 300mHz available for mobile use with five years. It also talks about being more flexible with how it allows spectrum to be used, and it discusses an interest in updating rules around wireless backhaul spectrum use to increase capacity in urban areas and range in rural areas. The FCC also wants to promote wireless expansion and adoption by expediting action related to data roaming.

Another interesting part of the National Broadband Plan is the language around how the FCC and other regulators might make basic infrastructure like conduits, poles, rights of way, and rooftops more affordable and accessible for those who build new broadband networks.

“Ensuring service providers can access these resources efficiently and at fair prices can drive upgrades and facilitate competitive entry,” the FCC writes.

Plan recommendations to optimize infrastructure use include establishing low and more uniform rental rates for access to poles, and simplifying and expediting the process for service providers to attach their facilities to poles; establishing best practices around rights of way and related fees; and implementing “dig-once” policies so broadband service providers’ new network deployment efforts are coordinated with federally-financed highway, road and ridge projects when it makes sense.

Of course, all of the above is just the tip of the iceberg in terms of what is discussed on the National Broadband Plan.

As Mastrangelo notes, while the comprehensiveness of the plan is notable, it’s also a pretty long to-do list.

“In general, I was impressed by the comprehensive nature of the plan, but I am concerned that it is too much to try to accomplish simultaneously,” she says. “There are many dependencies in this plan, in which any change could have a drastic effect on its implementation. It will have to be carefully and skillfully managed.”

Indeed. And although the plan is at once ambitious and lacking in some details (such as, according to Mastrangelo, clear definitions on what is considered robust, affordable, and high-quality), it seems like a pretty good place to start.

The National Broadband Plan as it now stands opens the dialogue on how to address some very complex challenges such as how to make broadband more accessible and appealing to a larger part of the U.S. populace, and how to reform the Universal Service Fund and intercarrier compensation, among many other important issues. It is a lot to take in all in one document. But, then again, if not now, when? **IT**

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The Yin and Yang of Hosted VoIP

Hosted VoIP Hits the Big Time

Hosted VoIP can be a great match for small business owners like Karen Kanir (whose communications tale is told in the story to the right). But, increasingly, larger businesses are flocking to the service as well.

“Hosted IP telephony platforms have come a long way over the past 10 years and can provide flexibility, risk avoidance and economic scalability for enterprises looking to implement advanced IP communications capabilities,” says Elka Popova, North American program director for Frost & Sullivan. “According to our research, hosted IP telecommunications deployments have been embraced most by enterprises with a variety of geographically-dispersed locations such as government, education and retail organizations.”

Joan Citelli, director of corporate communications at 8x8 Inc., says the hosted VoIP provider has seen this trend as well. She explains that, as noted by Popova, in many cases that’s because large companies are also widely distributed companies – with several branch offices and sometimes telecommuters, and the functionality of hosted VoIP enables all those locations to be served from the cloud easily and affordably.

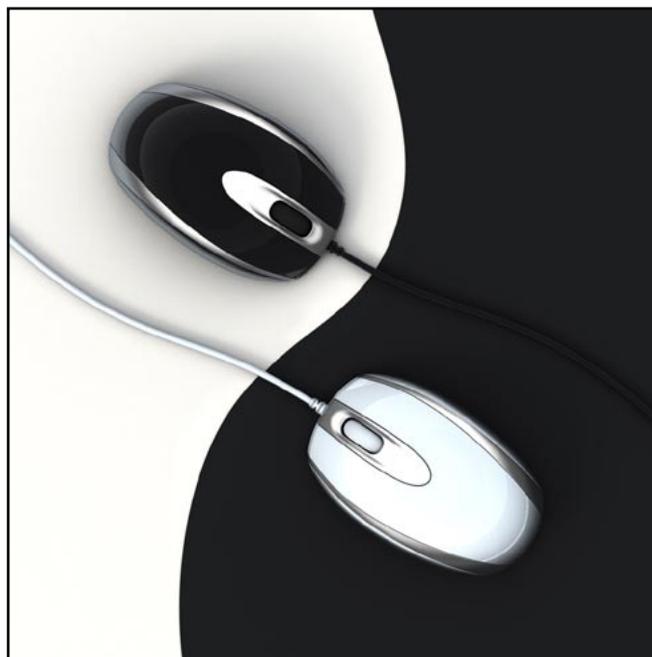
Debbie Jo Severin, chief marketing officer at 8x8, adds that the fact that the company recently forged a relationship with New Edge Networks to deliver an integrated solution in which its hosted VoIP services run over New Edge’s MPLS network is just another indicator of the trend. Running hosted VoIP over MPLS provides some large businesses with the added functionality, quality and security they may need to justify a move to cloud-based telephony, explains Severin.

Cardi Prinzi, president of New Edge Networks, says not only does MPLS allow companies with multiple sites to pull them together on a single network and with class of service, it also enables them to address their security concerns relative to cloud computing.

“So [the hosted VoIP space] becomes kind of a distribution channel for us to sell more network,” he adds.

In addition to working with New Edge Networks to market and deliver integrated MPLS/hosted VoIP solutions, Severin adds that 8x8 has a deal in place with Level 3 Communications. The two companies in December announced Level 3 would bundle the 8x8 service into select government contracts on which it bids. 8x8 recently went live with its first government installation served via this Level 3 partnership.

Meanwhile, New Edge has a second relationship in place with a hosted VoIP outfit. It’s also working in concert with XCast Labs, with which it had two customers signed as of mid March.



How Hosted VoIP Can Help the Little Guys

Karen Kanir has 23 years of experience working in sales and sales management with such leading companies as Fidelity Investments, Gartner and Xerox. So when a friend of hers opened an Allstate agency, she thought starting her own insurance franchise might be a good idea too. Kanir already had been exposed to the insurance industry while at Fidelity, and she really enjoyed it.

So Kanir started to set plans to make the transition from a big company with corner offices and massive resources to a little company near the corner with limited resources. Although Allstate sits at the 81st position on the Fortune 500 list, as a franchisee, Kanir was on her own in deciding which communications solution would best fit the bill – and supporting to whatever extent needed and paying for that solution going forward.

With the proliferation of wireless devices such as smartphones, tablets and netbooks, more end-users are turning to mobile VoIP technologies such as xMax for reliable and affordable communications.

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Cliff Rees, CEO of XCast, offers his perspective on what his company's relationship with New Edge signals: "What to me it means is that hosted VoIP is becoming much more accepted, generally speaking, as a fundamental telecommunications tool rather than [be looked] at with suspicion or derision from corporate IT managers."

XCast expected to announce a relationship with a smaller, regional MPLS provider soon, likely before this magazine hits the street.

In yet another recent move pairing MPLS and hosted VoIP, [MegaPath Inc.](#) this spring launched a hosted VoIP offer of its own, called Duet Hosted.

"The big messaging here was trying to put the quality back in voice," says Dan Foster, MegaPath chief sales and marketing officer.

The fact that Nortel Carrier VoIP and Application Solutions Business, a leading provider in the IP voice space, recently unveiled gear to enable hosted VoIP services targeted squarely at enterprise customers is another notable development signaling large businesses' interest in cloud-based telephony services. According to estimates by Nortel CVAS, hosted IP communications can be deployed at 30 percent lower cost of ownership than an on-site IP PBX solution and can increase enterprise productivity by \$500 per employee, per year.

"Our solution scales from thousands to millions of lines and offers powerful carrier-grade reliability and geographic survivability, which are essential in today's fast-paced business environment where effective communication and collaboration tools have a direct impact on the bottom line," says Samih Elhage, president of [Nortel CVAS](#), whose assets [GENBAND Inc.](#) on Feb. 24 announced its intention to acquire.

The Nortel CVAS Hosted IP Communications solution already is deployed in several enterprises, including a carrier-hosted deployment with BT in the U.K. That installation involves 1,000 locations, 3 million calls per day and 20,000 call center agents.

But whether it's an enterprise, a small or a medium business that's shopping for a phone system, hosted VoIP has clearly become one of the options sitting squarely on the table.

"Everyone is offering it now" from a service provider perspective, notes Bob Duggan, director of the sales telephony division at B2B Computer Products, a value-added reseller.

"[For] any small company with five to 100 people upgrading a phone system, hosted PBX is in the conversation," says Micah Singer, CEO and founder of VoIP Logic, a provider of wholesale VoIP-related services. "It's one of the options."

Adds Jim DaBramo, executive vice president of field operations at Airband, a fixed wireless provider that offers integrated hosted VoIP services: "From a market trend perspective, we're seeing adoption of hosted VoIP services by larger SMBs due to the tight capital markets. More and more businesses are deploying hosted VoIP instead of buying on-site phone systems." **IT**

After she and her IT guy reviewed the pricing and functionality of several communications options, they zeroed in on a hosted VoIP solution from M5 Networks.

As this article was being written in late March, Kanir was still waiting for her Cincinnati office space to be ready for occupation. But even before the staff was able to settle in, the insurance agency was up and running using the hosted VoIP solution, which enables Kanir's employees in the tri-state area to work remotely and still have the same calling functionality (including the ability to transfer calls between extensions, for example) and business caller ID appearances as they would were they all in the same physical location.

Heather Bennett, vice president of marketing at M5 Networks, says the product Kanir is using is called the M5 Call Conductor. What's great about it, she adds, is that it lets companies look big and resource-rich even before they actually get to that point.

"When you're getting started the last thing you want to do is look like you're just getting started," she says.

While the new Allstate office was expected to open by mid April, Kanir says the fact that employees can work at home via the M5 service and Cisco IP phones gives everyone more flexibility and allows her the option of not spending as much on office space. And because the M5 Call Conductor can be configured to present callers with either a live person or an automated attendant, it offers upstarts like Kanir's the option of doing business without a receptionist.

While some hosted VoIP providers may provide straight dial-tone for less, Bennett says that for about \$40 per person M5 bundles unlimited domestic calling and a wide variety of features, adding that because M5 developed the Call Conductor in house it can be more flexible than other hosted VOIP providers that rely on solutions such as BroadSoft.

M5 delivers such features such as voicemail-to-text translation (marketed under the name M5 Scribe), which Bennett says is a great time saver for many business people. M5 customers can also opt to have simultaneous ring on both wireline and cellular phones. M5 Hosted Connect enables businesses to connect their phone systems to their other applications to let them do to things such as look at the average call length of their employees, for example. And M5 also uses tools and technicians to play an active role in helping its customers troubleshoot and prepare for growth as it relates to their communications service. **IT**



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A Deeper Look at DPI

Packet Inspection Converges with Other Solutions to Address Mobile Data Boom

Cellular networks are flooded with data traffic, so it's probably no surprise that this is where the action is when it comes to deep packet inspection. DPI, sometimes paired with policy management, can help wireless operators figure out what's what traffic-wise on their networks and, based on that, decide what to do with it.

A study called "MobileTrends: Global Mobile Broadband Traffic Report" released in February by Allot Communications Ltd. indicates that worldwide mobile data bandwidth usage increased by about 72 percent during the second half of 2009 alone. P2P is the major cause of cell congestion in the top 5 percent of cells. HTTP streaming, meanwhile, is the fastest growing application with a 99 percent increase; its global mobile broadband share grew by 50 percent between the second and fourth quarters of 2009. Facebook, Skype and YouTube are driving much of this mobile use.

That said, there's little doubt that wireless network operators need to do something to address the heavy loads on their networks.

There are a variety of ways they can do that, explains Randy Fuller, vice president of business development at Camiant Inc., which Infonetics Research has crowned the industry leader in policy control and whose solution Verizon Wireless plans to use in its LTE network.

"Although both [DPI and policy control] are used to manage broadband services more carefully, policy servers and DPI are different systems that are sometimes deployed together and sometimes deployed separately," explains Fuller.

DPI analyzes data traffic, which runs through a deep packet inspection device, to determine what applications are involved. It can then trigger a particular action, such as traffic shaping, for various applications, he says. Meanwhile, a policy server works with network equipment to coordinate what enforcement actions need to occur and in what instances, he says, adding that traffic does not run through the policy server.

"As for what system gets used when, the answer is of course: It depends. If the enforcement actions are simple and always the same for all subscribers all the time, DPI can be used alone. If the enforcement does not require DPI-level analysis, a policy server can work with an access gateway without a DPI. If DPI-level analysis or enforcement is required, or the enforcement actions are complex or span more than one enforcement



device, then DPI and policy are often deployed together. Then there can be combinations – sometimes only some of the traffic is steered into the DPI, but not all traffic," says Fuller, who declined to comment as to which scenario matches up with the Verizon Wireless LTE deployment.

According to Jonathon Gordon, director of marketing with Allot, whose products employ DPI technology, the mobile space is heavily focused on using deep packet inspection to help with policy and enforcement. In fact, Allot in late March was expected to unveil CellWise, a cell-aware monitoring capability giving wireless network operators an intelligent understanding and awareness of what is happening at the cell level. The idea is to enable operators to know precisely why the network is congested, and which subscribers and applications are generating the traffic. Allot also will provide cell-aware policy enforcement as part of the solution, enabling mobile operators to control congestion, ensure fair use and deliver quality of experience to all subscribers.

Gordon says Allot has significant partnerships in place with such companies as Camiant, Hewlett-Packard and 724 Solutions to ensure its gear works with their traffic prioritization and policy offers. The policy companies, he says, have the tools to access information about subscribers, where they are, what services they pay for, and the like. The job of traffic enforcement, Gordon says, is to make sure subscribers get the amount of bandwidth they're supposed to get and can otherwise implement the carrier's policies. However, in a mobile network, he adds, it's the job of the DPI to do the enforcement of the policy.

The discussion of the integration/convergence of DPI with other functionality might lead one to wonder whether that could result in M&A on this front. Gordon points out that Sandvine Corp. gave that a try with its purchase of a policy company a couple

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years ago (in fact, Sandvine in June of 2007 announced plans to acquire both CableMatrix Technologies Inc. and Simplicita Software Inc.). But, according to Gordon, the policy solution piece in that case was not good enough to stack up against those offered by Camiant and other leading vendors in the space.

Convergence and integration also is happening on the DPI front across wireline and wireless networks as companies like Ericsson move to combine their DPI solutions to address both types of networks and services. Robert Haim, senior product marketing manager at [Ericsson](#), says the company's two different DPI products will converge sometime later this year.

Currently DPI functionality is available in a card that fits into Ericsson's SmartEdge Multi-serve edge router. Because DPI is already a function of this edge router, Haim says, service providers don't have to backhaul the data to a separate box, which would in that case take up additional ports on the router. Ericsson also has DPI functionality in its gateways.

Regardless of where the deep packet inspection functionality resides, however, Pablo Molinero, strategic product manager for DPI at Ericsson, says, it can be used "to trigger changes in the quality of service."

That will enable service providers to deliver add-on packages. For example, a wireless operator might decide to offer its subscribers that option of paying an extra \$6 a month to get a higher-quality connection for particular content.

By the time this magazine is published at least a couple of wireless service providers will be doing this type of thing, says Molinero. One of those wireless operators is in Western Europe and has about 3 million subscribers, he says; the other is a 100 million-subscriber service provider in Southeast Asia. In both cases, he says, they are offering add-on packages so certain URLs and select applications like streaming get higher priority and better bandwidth.

Of course, playing a role in the delivery of quality of service is just one application for DPI. Another is security.

Security is the Juniper's big DPI push, explains Brian Lazear, senior director product management of high-end security systems at the company. Juniper offers DPI through various platforms, including its SRX Series Services Gateways, to do both intrusion detection and prevention on enterprise and carrier networks, and to allow service providers to get better visibility into the applications running on their networks.

While much of this article is dedicated to how DPI can be applied to help wireless service providers address growth in wireless traffic, the boom in mobile data and social networking also creates significant new security challenges, Lazear indicates. He notes there's a need for strong security and tight audit control over applications like Facebook because they have so many widgets (like, in the case of Facebook, FarmVille, for example), and the more applications and the more users involved, the more possible security breaches. **IT**

Qosmos Offers DPI Building Blocks

By Paula Bernier

We've heard a lot about outsourcing over the years.

Companies across many industries have outsourced their call centers, manufacturing and other functions. Corporations and even service providers are embracing outsourcing and handing off the management of their networks to others. These are just a few examples.

In all cases, of course, outsourcing is about lowering costs and enabling companies to hand off certain functions so they can better focus on their core competencies.

Now the outsourcing trend has made its way onto the DPI scene.

Erik Larsson, vice president of marketing with Qosmos, says DPI solution vendors like Allot (which uses Qosmos technology as part of its VoIP fraud management solution) are turning to his company to get some of their DPI and related network intelligence building blocks. Using service development kits and probes from Qosmos, he says, allows equipment suppliers, software creators and systems integra-

tors to accelerate their time to market, and dedicate more of their resources to building higher-level functionality.

There are still a lot of entities developing DPI solutions in house, he adds, but increasingly people see that it puts a drain on their R&D and staffing resources, given all the new protocols and Web applications they need to support.

"That's a big pain point people are running into," he says.

"Another big pain point," he adds, "is running into the bandwidth."

At 200-500mbps, he explains, DPI works just fine. But once you get into gigabit-level bandwidth, he says, things gets a bit more challenging. For example, he says, one customer of Qosmos sells quality assurance solutions for mobile operators. That company used to do statistical sampling to check for quality, but Larsson says the company couldn't do statistical sampling once it got into the gigabits. So Qosmos provided the technology to allow the application to work even as network bandwidth increases. **IT**

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New Strategies, Developments Could Help Propel M2M Forward

Berg Insight, an analyst firm based in Sweden, reports that globally, operator revenues for wireless machine-to-machine communications were \$4.3 billion in 2008 and are forecast to rise to \$12.9 billion in 2012.

Meanwhile, a study released by Juniper Research in January indicates that revenues of the M2M and embedded devices industry will increase to almost \$19 billion globally by 2014, driven most heavily by utility metering, mobile-connected buildings, consumer and commercial telematics, and retail and banking connections.

“The most widespread category will be connections related to smart metering, driven partly by government initiatives to reduce carbon emissions,” says Anthony Cox, senior analyst at Juniper Research.

But, as INTERNET TELEPHONY reported in its November 2009 issue, the M2M opportunity applies to everything from ATM machines to heart monitors. In fact, telephone companies have been talking about the promise of M2M for more than a decade. But early on the telcos used the word telemetry to describe this concept. However, this idea is making a big comeback due to the widespread availability of cellular networks, a move by some players in the communications industry to provide businesses with more customized solutions, and the growing availability of gear that is built for this kind of thing.

Verizon Wireless, [Vodafone](#) and nPhase, a Verizon Wireless/Qualcomm joint venture, announced in February they aim to accelerate the adoption of M2M by simplifying the remote management and monitoring of devices in European and U.S. networks. That, they say, will make it easier for Verizon Wireless and Vodafone customers to activate, monitor and pay for devices that are deployed across both European GSM and U.S. CDMA and GSM networks.

“M2M technology is playing an increasingly key role in helping firms to deliver more customized services to their customers, but the difficulties of managing devices on a global level was stopping the sector from realizing its true potential,” says Erik Brenneis, global head of M2M at Vodafone. “Through this alliance, we

are making it even easier for firms to roll out M2M technology to their customers, wherever they may be.”

This seems to fit into the trend identified by Krzysztof Kwiatkowski, BSS product manager for the telecommunications business unit at Comarch.

“Currently operators are trying to do something more than only delivering M2M connectivity,” says Kwiatkowski. “But they don’t know how to do this. It seems that the market is more promising for M2M enablers who, in cooperation with many MNOs (and also ISPs), deliver services for various M2M operators.

“Will operators – especially those with international and multi-networks – enter this enablers area?” he posits. “We will see.”

Daphna Steinmetz, chief innovation officer at [Comverse](#), which provides value-added services, billing and customer management solutions to large telcos, says a lot of M2M connected devices are SIM-enabled, so afford service providers the opportunity to offer services involving monitoring the devices for such parameters as signal strength, location, availability and battery power. Service providers, adds Steinmetz, will make their money by providing developers of M2M applications with open APIs to their networks.

“The field of M2M is expected to grow significantly with the increasing number of Internet-connected devices,” says Steinmetz of Comverse, which earlier this year at Mobile World Congress in Barcelona, Spain, staged a fleet management M2M demonstration with Intel that illustrated the value of reliable real-time data communication between a home base and vehicles, regarding location and alerts to operational problems.

“This demonstration using [Intel](#) technology shows how operators can empower the M2M application domain and build a significant offering in the M2M arena,” says Steinmetz. “As a major innovator of human



M2M will advance in part by falling prices for radios. Other promising technology-related trends on the M2M front are the availability of MEMS-based sensors that eliminate the need for calibration, and the emergence of a greater amount of edge intelligence, which allows data to be assessed in real time.

Numerex CTO Jeffrey Smith

communication experiences, Comverse is excited to offer new value in the expanding market of M2M applications.”

Jeffrey Smith, executive vice president and CTO of Numerex, a 12-year-old pure play M2M company, says M2M will be propelled forward in part by falling prices for radios. He says about five years ago radios used in M2M devices cost a couple hundred dollars. Within the next 10 months, however, M2M radios will come available that cost less than \$10. He says now that the M2M market is getting much bigger, it doesn’t have to rely on the sophisticated radio modules used in mobile phones, which creates major savings for this sector.

Other promising technology-related trends on the M2M front, according to Smith, are the availability of MEMS-based sensors that eliminate the need for calibration, and the emergence of a greater amount of edge intelligence, which allows data to be assessed in real time. **IT**



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Creating Video Quality for the Advent of New Mobile Applications

Telecommunications products and services over many years were based on the tenet “if you build it, they will come.” Product designers and service providers led customers to new applications. More recently, however, customer-defined applications are driving product and service offerings. Video telephony is a case in point, and it’s quite clear that mobile video is not far behind.

In fact, a recent Infonetics report, “IMS Plans: Global Service Provider Survey,” published in August of 2009, found that more than half of the service provider respondents plan to deploy video telephony and converged mobile/fixed-line services over the next 12 to 18 months. So while we’ve seen a first wave of video services being offered, within one or two years we should see a deluge of new products as competition from network operators increases.

Smartphones are making it possible to share or access video content on the go. For such services to really take off, it must be very easy for the consumer to get video from the mobile device onto the Internet. Conversely, when viewing video content on a mobile device, the video quality must be as good as on the desktop.

The key success factors for these video gateways are the quality of experience, the ease of use, and the affordability for the end user.

Applications Driving the Market

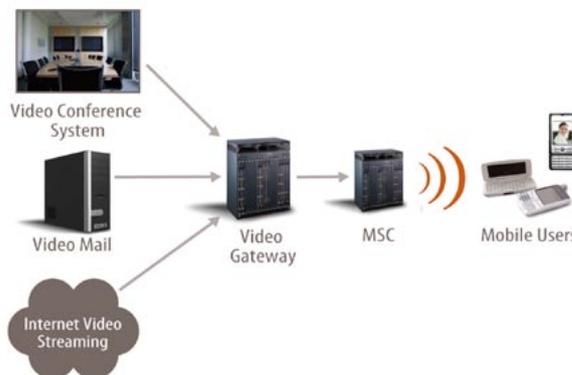
As the mobile video market matures, the number of applications will increase. The first applications to market were videoconferencing (over 3G-324M) and over-the-air television, appearing as early as 2003 and 2005 respectively. OTA television actually operates without using any network bandwidth. Phones that support standards such as DVB-H, T-DMB, 1SEG or [Qualcomm’s](#) MediaFlo decode a broadcast RF signal in the UHF or VHF bands.

So, what are the applications that will drive demand and deployment in the market?

With the coverage of 3G networks increasing, new applications are taking over due to the large increase in downlink bandwidth. The most prevalent application is video streaming. Consumers want the [YouTube](#) experience on the go, and it’s now possible over 3G networks.

Mobile videoconferencing will get another chance, but it likely remains a business-only application where a structured face-to-face

Adapting Content For Mobile Devices



meeting has the most value. What is more likely to take off with consumers is video sharing, also known as “see what I see,” which has much more potential. This is because it can be coupled with social networking and has the potential to grow in a viral fashion. People from the younger demographic already are snapping photos everywhere they go and uploading them to their favorite social networking sites, not to mention uploading videos. Imagine the potential if this could be real-time. Teenagers instantly will show their friends and family what they’re doing, what they’re looking at, whether it’s a rock concert or something funny that happened at the beach. Ultimately, everyone with a mobile video phone could have an always-on TV station, broadcasting to other mobile phones or the Internet. Web sites like [www.Qik.com](#) have already enabled this with today’s technology.

Last but not least is messaging – adapting multimedia messaging service messages to the target device. This also includes video mail and video ringback tones. Since MMS always has been a paying service, network operators have deployed systems to perform message adaptation. This has led to an increase in successful delivery rates and increased overall usage. The main difference between messaging and other applications is that it is non-real-time, and needs to support a very broad range of formats. For example, an H.263 video sequence can get converted to an animated GIF to make it compatible with a lower-end feature phone.

Barriers to Success: Cost and Quality

The most important roadblock to mobile video services is still cost. Video gateways installed in carrier networks are still too costly. Today, as with many emerging markets, stand-alone systems were designed to address these new video requirements. These dedicated systems have often been built using PC servers, which allowed visionaries to get to market very quickly.



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As this market matures, the video processing function will be integrated into the core media gateways that currently are processing voice streams.

DSP-based solutions offer the highest area density and lowest power consumption per channel. But the real cost savings come from DSP solutions that can perform both voice and video processing on the same device. This will lower the price per port to a level at which operators will be able to attract a large audience. DSP-based solutions also provide other benefits such as low-latency processing.

The most power-efficient solution on the market today can process 5 channels per watt in common intermediate format resolution at 30 frames per second.

The second problem is related to video quality. Even if mobile video services were free, if the quality of experience is not up to par, it will not be adopted by consumers. No one wants to watch a jerky video that is not properly formatted for the mobile screen, that is blurry, or that gets cut off before the end.

If DSP-based solutions are the only way to reduce cost to an acceptable level, how does one select the right DSP solution? The two most important points to consider are: power consumption and quality of experience.

Power consumption is probably the most important selection criteria. This will translate directly into the number of channels that can be supported on a system blade, and therefore is key to lowering system cost. The most power-efficient solution on the market today can process 5 channels per watt in common intermediate format resolution at 30 frames per second. This is more power efficient than standard PC hardware by a factor of between 100 and 200 times. By 2010, this number will exceed 10 channels per watt. The reason for this huge increase in performance is the emergence of new DSP devices that take advantage of both multi-core and innovative self-clocking architectures.

Having the most cost-effective solution is worthless without providing a high QoE, however. The difficulties in delivering high QoE in the mobile world are related to the broad spectrum of disparate mobile devices and varying network resource availability. To address the broad range of endpoints, the video gateway must be able to change dynamically things such as the video codec, frame rate, image resolution and even bandwidth consumption.

While most solutions can handle effectively the codec and format conversions, adjusting the video quality to available bandwidth is a much more difficult task. In the case of mobile video, bandwidth is quite limited. Also, available bandwidth can change dynamically during the session as the network becomes more or less congested. The video gateway has to be able to adjust dynamically to the varying bandwidth constraints.

While most voice codecs address constant-bit-rate streams, video streams are variable bit rate. This means that if a sequence of images is encoded at a fixed quality level, the amount of bandwidth consumed varies according to the complexity of each frame. Therefore, to transmit a video sequence over a channel with relatively fixed bandwidth, it is important that the video encoder adjust the quality level at each frame. Video encoder algorithms include a component called the bit-rate controller which is responsible for determining dynamically the quality level.

A lot of research has gone into bit-rate controllers, and there are different approaches for different applications. Therefore, the algorithm used for encoding a Hollywood movie onto a DVD is quite different from that used in real-time communications for mobile video. The DVD encoding can be done using multi-pass encoding, where the encoder can make multiple attempts at encoding the whole movie before selecting the best approach. When operating in a real-time environment, decisions can only be made based on past information and heuristics.

What's Next?

We are finally seeing the deployment of video services to consumers. Driven by the deployment of 3G networks, high-performance smartphones and the market pull from social networks, video is definitely the next battleground for network operators. Unlike voice services, where poor quality leads to customer churn, video services are still a novelty, and therefore poor quality may simply hinder adoption. As carriers work to increase their average revenue per user, providing high-quality video services is the only way to get customers on board.

After the first wave of video services is deployed, what will we see next? Once again, the next wave will be driven by the increased performance of endpoints and the latest Internet trends. High-definition video encoding and decoding will be available on endpoints, meaning that video gateways will have to support ever-increasing resolutions. Pico-projectors embedded in cell phones will increase video consumption further as it will become even easier to share media at anytime on any surface. Last but not least, when 4G networks deliver on the promise of 50 to 100mbps uplink rates, we may see HD videoconferencing on the go within a decade.

In the next wave of the applications evolution, not only will service providers have to upgrade their networks, but media gateway manufacturers will need to seek out best-in-class video DSP solutions that will deliver the QoE consumers demand, while providing the cost savings and flexibility necessary for an ever-changing mobile landscape. **IT**

James Awad is a product manager with Octasic (www.octasic.com).



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Mobile VoIP

Skype, Verizon Deal is Hot Topic

Ask just about anyone what's new and exciting in the area of mobile VoIP, and you hear mention of the new relationship between Skype and Verizon Wireless.

The VoIP services and wireless industry leaders at Mobile World Congress in February announced an arrangement through which Skype will be supported by Verizon Wireless. The Skype client was on nine Verizon Wireless smartphones when the companies launched their joint effort in March.

"I've been focusing on driving innovation in a few key areas for us – video, mobile, and the Web," Jonathan Rosenberg, Skype's new chief technology strategist, recently told INTERNET TELEPHONY. "Skype has already been incredibly successful in the area of video. Already, 34 percent of Skype-to-Skype calls include video, and that has peaked at a little more than 40 percent during holidays like Christmas or New Year's Day. That's just huge, and it means that the 'network effect' – which has really prevented real-time video from taking off in the past – has been achieved.

"We have also been very successful in the mobile sector, with deep integration with 3UK, which has now carried over 1 billion Skype-to-Skype minutes over their network, and now Verizon Wireless," adds Rosenberg. "Plus, we launched Skype for iPhone, one of the most popular apps ever. My goal is to build on those leads and drive them even further."

Skype CEO Josh Silverman in a press release issued this spring says "Verizon Wireless will give U.S. consumers the best Skype experience on mobile phones..."

That would seem to indicate that not only is Verizon Wireless supporting at turn up the Skype client on its phones, but it's also giving Skype traffic some kind of priority on its network. However, the companies in the announcement declined to elaborate on that part of the deal or what the financial arrangement between the partners involves.

In any case, Jonathon Gordon, director of marketing with Alot Communications, notes that what's interesting about the relationship between Skype and Verizon Wireless is that early reaction by incumbent service providers was to try to stop applications from running across their networks – or at least de-prioritize them. This deal, however, shows that Verizon Wireless is now prioritizing traffic from over-the-top types like Skype. As a result, operators can potentially advertise their data packages saying "if you're using Skype, come to us" because it works best over our network, he says, adding that Skype is the undisputed champion in mobile VoIP, with nearly 80 percent market share.

But since many mobile plans include large buckets of calling minutes, why do customers need over-the-top voice services for mobile calling at all?

How the Partners Are Positioning Their Effort

Skype mobile gives Verizon Wireless 3G smartphone users with data plans a simple new way to stay in touch with friends, family and business colleagues around the corner and around the world while on Verizon Wireless' network. Skype mobile users can:

- make and receive unlimited Skype-to-Skype voice calls to any Skype contact around the globe;
- send and receive unlimited instant messages with other Skype users;
- manage the Skype contact list directly from the mobile application; and
- call international phone numbers at competitive Skype calling rates.

Cliff Rees, CEO of hosted VoIP provider XCast Labs, notes it's because some users might use all of their regular monthly mobile calling minutes and still have a need for more.

"The mobile companies absolutely rob you blind if you go over," he says.

Rees adds that over-the-top VoIP services also can allow mobile users to make international calls much more affordably – like for a penny and a half a minute vs. a dollar a minute to call the U.K.

Chris Carabello, director of marketing with Metaswitch Networks adds that partnering with an over-the-top type like Skype also is "a lower-cost way for the operator to deliver voice."

Adds Carabello: "I think we've seen some pricing pressure on the wireless side, so it's not surprising they're doing everything they can to manage those costs."

While Verizon Wireless noted in announcing the deal with Skype that the service would run over the wireless carrier's existing 3G network, it's worth mentioning that the network operator this year will launch its first LTE markets – and that the first iteration of this 4G network will support data only. So the relationship with Skype could potentially be a way for Verizon Wireless to support voice services over LTE right out of the gate.

When you have a high-speed network like LTE with all this data, and you look at voice revenue going downward, you have to question whether it makes sense for Verizon Wireless to run two parallel networks – one for voice and one for data, notes Ajay Joseph, CTO of wholesale international VoIP provider iBasis. **IT**

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The IP PBX is in the Building

On-Premises Solutions Have Their Benefits, But Challenges Loom

We're told that large companies are growing more comfortable with cloud-based computing, and in some cases even embracing it. Still, keeping the PBX on premises does provide a business with a certain level of flexibility and peace of mind.

At least that's the opinion of Bob Duggan, director of the sales telephony division at B2B Computer Products, a value-added reseller.

Duggan says most of the businesses B2B works with have multiple sites with hundreds (or more) users. He says he's not seeing hosted solutions playing in that environment. Instead, he says, medium and large businesses want on-premises VoIP. An IP PBX on site enables IT teams to make moves, adds and changes how and when they want. While some hosted PBX providers offer portals that let companies make such changes, Duggan says they typically offer only limited functionality.

However, companies with up to 50 employees and one office are the ones often considering hosted VoIP and for which that cloud-based solution is probably a better match, according to Duggan.

Whatever the case, Eric Knaus, president of RonEK Communications, says hosted and premises-based IP PBX solutions are starting to look a lot more alike. Manufacturers like Cisco, NEC and Toshiba, he says, are doing this in response to deflation in the price of PBXs. To make on-premises solutions more appealing, he explains, IP PBX companies are offering gear that can be remotely accessed without VPNs. Knaus of RonEK, an interconnect company that sells voice-related products and services for SMBs, says that VPNs require a lot of IT resources to set up and maintain. So instead, he says, IP PBX companies are building solutions that employ NAT traversal to public IP addresses that then loop back to the PBX.

While the hosted VoIP service providers are pushing the angle that their solutions require fewer on-premises IT gear and resources, and can allow employees to more easily work remotely, Knaus adds that on-premises IP PBXs are in a favorable position given the acceptance of premises-based solutions and the fact that IP PBX manufacturers can develop their own hardware faster.

Another recent development that could have an impact on the PBX space is the recent introduction of the Microsoft Communications Server 14, which is expected to be available in the second half of 2010.



The unified communications solution, which was first introduced in 2007, brings click-to-dial functionality, ad-hoc conferencing and presence to Microsoft Office, SharePoint and Exchange. It can be used with existing PBXs and IP phones – but the PBX is no longer required, as IP phones can now be integrated directly with the software to arrive at a complete unified communications system supporting voice, e-mail, chat and conferencing.

The new version of OCS gives companies a more complete communications solution, including enterprise telephony, that works with what customers already have and allows them to embed communications in any application.

Office Communications Server has grown by double digits every year for the last three years, and is one of the fastest growing servers at Microsoft, according to the software giant. More than 70 percent of the Fortune 100 companies have OCS as well as seven of the top 10 pharmaceutical companies, eight of the top 10 aerospace companies, and nine of the top 10 banks.

Initially, Microsoft marketed OCS not as a replacement for legacy PBXs but as a way of enhancing an existing PBX's functionality. Essentially OCS brought unified communications features such as presence to legacy, TDM-based PBXs. However, Microsoft ended up changing its strategy and messaging around OCS: You could continue to use your existing PBX, if you wanted to, but it was essentially obsolete. **IT**

Patrick Barnard, senior Web editor at TMCnet, the online entity of INTERNET TELEPHONY magazine's parent company, TMC, contributed to this story.



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By Erik Linask

Turning Peak Energy into Anytime Energy

We've heard an awful lot about smart meters as part of an increasing number of Smart Grid initiatives that are being developed to help offset rising energy costs, the growth in energy demand

that will, at its current pace, soon see utility companies unable to meet requirements, and an increasing negative impact on the environment. In fact, if you were fortunate enough to be in Miami for the Smart Grid Summit, you saw firsthand the interest Smart Grid technologies are generating.

The migration from older analog to newer digital smart meters will allow utilities to measure usage wirelessly in real time, as opposed to taking monthly aggregate readings, which allows them to better predict and accommodate peak usage periods. It also means they can implement time-of-use billing strategies, which ArcAngel Technologies' vice president of sales and marketing Joe Jackson points out is something with which we are all familiar through peak and off-peak minutes from our cellular carriers.

The principle is exactly the same with energy consumption – users pay a premium per kWh during peak demand periods, and significantly less during off-peak demand periods. But, what if you were able to take your off-peak energy and turn it into peak energy – think Anytime Minutes on your cell phone plan.

ArcAngel has taken that principle to heart and developed technology that will allow businesses to leverage lower rate off-peak periods, typically the overnight hours, during the daytime, or peak demand hours.

It has developed what it calls an Intelligent Power Controller, called Energy Harvester, which fundamentally performs a very simple task: It collects and stores off-peak energy that can then be used during peak periods, reducing the amount of peak demand energy that is required for businesses to function.

The Energy Harvester itself is a relatively small unit, approximately two feet tall and a foot wide, which sits between the power meter and the A/C distribution panel in a building, routing all the power coming into a facility through the controller. The unit works in conjunction with a storage subsystem, effectively a large battery pack that stores the energy overnight for use the next day.

The Energy Harvester determines when off-peak periods are in effect and collects energy at those times, which it stores in its subsystem and, the next day, explains Jackson, blends that stored energy from the battery with grid power.

"The net effect is it takes the energy stored during off-peak hours and releases it back into the office during periods when rates are higher," he says. "This can reduce net cost for electricity 20, 30, or even 40 percent per month."

According to Jackson, the monthly savings the Energy Harvester creates results in a quick ROI on the unit, typically 6-12 months.

Then there's the Green factor. By using less energy during peak periods, businesses can reduce the demand on power plants during peak periods, instead harnessing energy produced during low production periods for use later. The typical storage capacity for a single unit can provide power to a business for 2-5 hours. Imagine the impact on peak demand production if every business was able to reduce its power draw by 3 hours' worth each day.

But, the Energy Harvester doesn't stop there. Many businesses are ideal candidates for deploying renewable energy sources, such as solar panels or wind turbines. ArcAngel has included direct inputs for both solar and wind energy units, so those energy resources can also combined with stored and grid energy, further reducing the strain on the grid and reducing costs. In fact, each Energy Harvester also includes a third input for future expansion for other alternative energy sources, like wave or hydrogen energy.

The controller unit constantly monitors and manages all of the available energy sources, blending them into a single, regulated, and seamless output into the building.

Of course, the other benefit of stored energy, especially a source that can power an entire business of building for up to five hours, is to eliminate the impact of power outages. If power goes out, the controller unit recognizes a lack of supply from the grid and immediately starts drawing from its battery subsystem. Jackson notes that for those businesses that might require more stored energy for longer backup supplies, adding additional battery subsystems is simple and inexpensive, making it an ideal option for telcos and ISPs, for instance, who will be able to ensure network uptime even during power outages.

Jackson says the primary target today is the SMB market, though he predicted there are also plans for a lower density, lower cost model that will be an ideal solution for smaller IT and residential applications.

During a trip to Dallas a few weeks ago, I had the chance to sit down with him in the Stoneleigh Hotel in Dallas. Check out the video interview (<http://tmcnet.com/27462.1>) and, if you're an electrical contractor interested in learning more and possibly becoming an ArcAngel channel partner (Jackson says the company is taking the Energy Harvester to market purely through the channel), please contact the company through its Web site (www.arcangeltech.com). And don't miss the next Smart Grid Summit, collocated with ITEXPO West in Los Angeles, October 4-6, 2010. **IT**



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.



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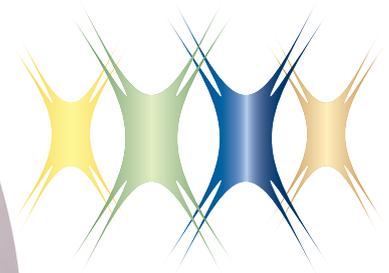
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