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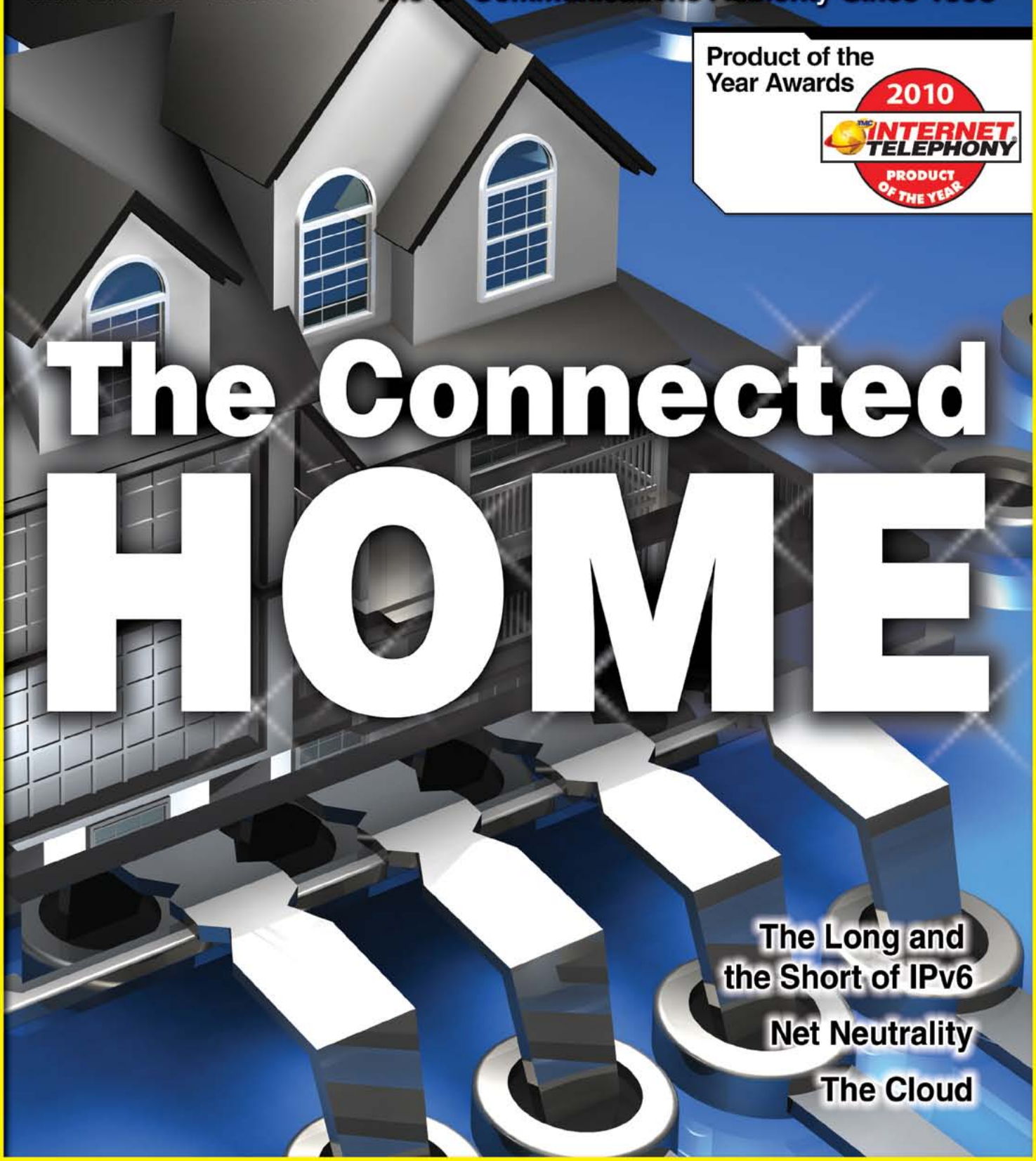

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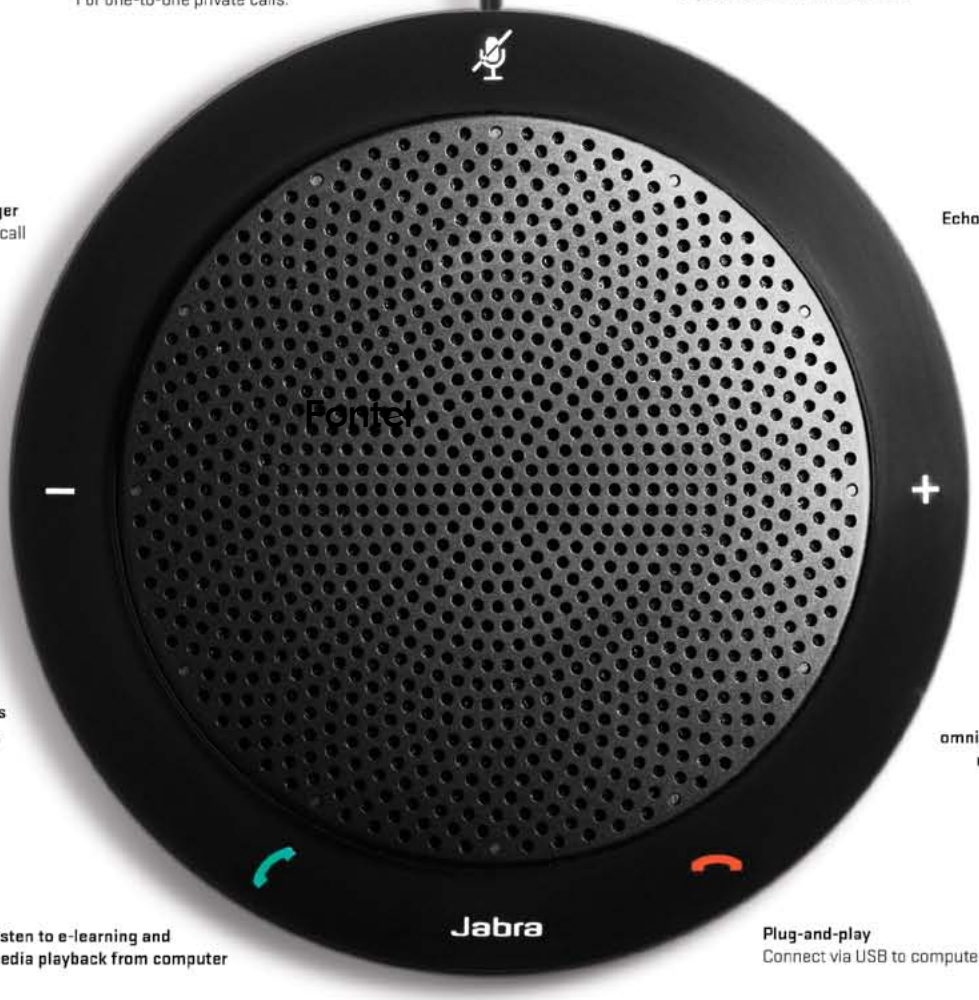

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A Love Letter to 2010, the Year Ahead and the Consumer

With continued high unemployment and an economy still in the doldrums, last year was kind of a bummer on many fronts. But you sure couldn't tell that from the talk and general sense of excitement at some of the recent trade shows I've been attending.

TMC's own ITEXPO in Miami this month is rocking, with a better-than-ever line up and strong attendance. And people at the Consumer Electronics Show, which I attended last month in Las Vegas, seemed especially upbeat about the past year and the prospects for the year ahead as well.

In his opening night keynote, Microsoft CEO Steve Ballmer noted that 2010 was an exciting year for the company and its customers, with the launches of Windows Phone 7, Office 2010, KINECT and various other products. The cloud, natural user interfaces and machine learning were all big bets Microsoft made relating to those products, he added.

Needless to say, he went on to comment that KINECT helped Microsoft rock the 2010 holiday season.

"This has been the biggest holiday…for Xbox," he said.

Paul Otellini expressed similar sentiments about 2010 in his comments during a press conference at CES. Intel's president and CEO mentioned that both Intel and the industry had their best year ever.

Gary Shapiro, president and CEO of CEA, the organization that puts on CES, said to expect a 3.5 percent increase in consumer electronics revenue in 2011, which would amount to more than $186 billion. That's consistent with, but of course much better messaging than, Shapiro could offer at the last CES I attended, which I believe was three years ago. During that show he admitted to members of the press that the economy and growth picture for tech were grim, but the consumer electronics industry would make a comeback.

And indeed it is starting to. And that means newer and better devices, and growing demand for the services and networks that power them. **IT**

Sweet.

On a separate note…

The movie Avatar broke box office records and amazed us with its 3D affects. Now Avatars appear to be poised to move into the mainstream.

At CES several demonstrations by leading companies including Alcatel Lucent, Intel and Microsoft Corp. showed how avatars can come in to play in gaming (the one area where avatars already have taken flight, but wait, there's more…), retail applications and, really, any kind of real-time interactions.

In his CES keynote, Ballmer revealed that the next-generation version of KINECT, Microsoft's popular body motion peripheral to Xbox LIVE, will offer avatarKINECT. This new feature will track the facial expressions of the player and apply them in real time to that user's avatar.

Avatars also were present in the Virtual Stylist demonstration put on in Alcatel Lucent's CES booth as part of its ng Connect Program (see page 42 for more on this). In this demo, a customer walked into a dressing room at a clothing store, and technology in the room created her avatar. The customer was then able to see her avatar in the clothing she selected (with the assistance of a stylist via HD videoconference) and to save that data in a digital wallet for later viewing and sharing.

Facebook Now Worth $50 Billion, Does Deal with Goldman Sachs

Facebook has done a deal with Goldman Sachs to set up a special purpose vehicle, or SPV, which will allow the company to get around the limitation on the number of investors it can have. Currently limited to 499, Goldman Sachs will work with the world's leading social network to get around this limitation and allow Goldman's high net worth investors to get a piece of the company before it is publicly traded.

It is rumored that 2012 is the year Facebook is considering going public and at its ever-expanding valuation it seems virtually impossible that any company would be big enough to acquire it. Some reports indicate that the latest Goldman Sachs deal could put added pressure on Facebook to have an IPO, though top executives at Facebook appear reluctant to take the company public.

One wonders if indeed we are witnessing a new bubble in tech valuations as I discussed a while back, or whether, as some think, the entry of Wall Street into the game signals we are much earlier in the valuation curve.

As reported by Ed Silverstein, a TMCnet contributor, Goldman Sachs – which is leading a new round with a $450 million investment in Facebook – may be raising the eyebrows of regulators and other concerned parties related to the above-mentioned SPV that The Huffington Post says could bring Goldman Sachs as much as $1.5 billion from investors.

Silverstein's piece goes on to note that under U.S. Securities and Exchange Commission requirements, companies with 499 investors or more have to disclose their financial results, yet it appears Goldman Sachs will be claiming it is just one investor for this vehicle, even though thousands of its clients may try to take part in the arrangement.

Indeed, as a result the commission may not look favorably on this deal. Moreover, the SEC already is looking at the secondary investment market for a slew of web companies – coincidently, many in the social media space.

As also noted in the TMCnet story, James Angel, a Georgetown University business professor, has been quoted saying that the deal could be scrutinized by regulators and they will likely try to pinpoint its purpose. The same story indicated Goldman Sach clients need to have a net worth of at least $10 million to participate and also will have to pay fees as part of the investment.

The deal now values Facebook at $50 billion, and this transaction means an earlier investment from Russian investment firm Digital Sky Technologies (which along with Goldman invested in this round) has gone up five-fold in value. One wonders if indeed we are witnessing a new bubble in tech valuations as I discussed a while back, or whether, as some think, the entry of Wall Street into the game signals we are much earlier in the valuation curve.

One thing is for sure – with the challenges at MySpace including rumored layoffs, now seems like the best time for Facebook to do a deal like this.

The company will use the money it has raised to keep hiring top talent and for acquisitions. I also believe it is logical for the company to start an app store and try to generate revenue from paid apps and service sales. This seems like a no brainer considering Apple may see $2 billion in gross revenue from app sales in 2011. **IT**

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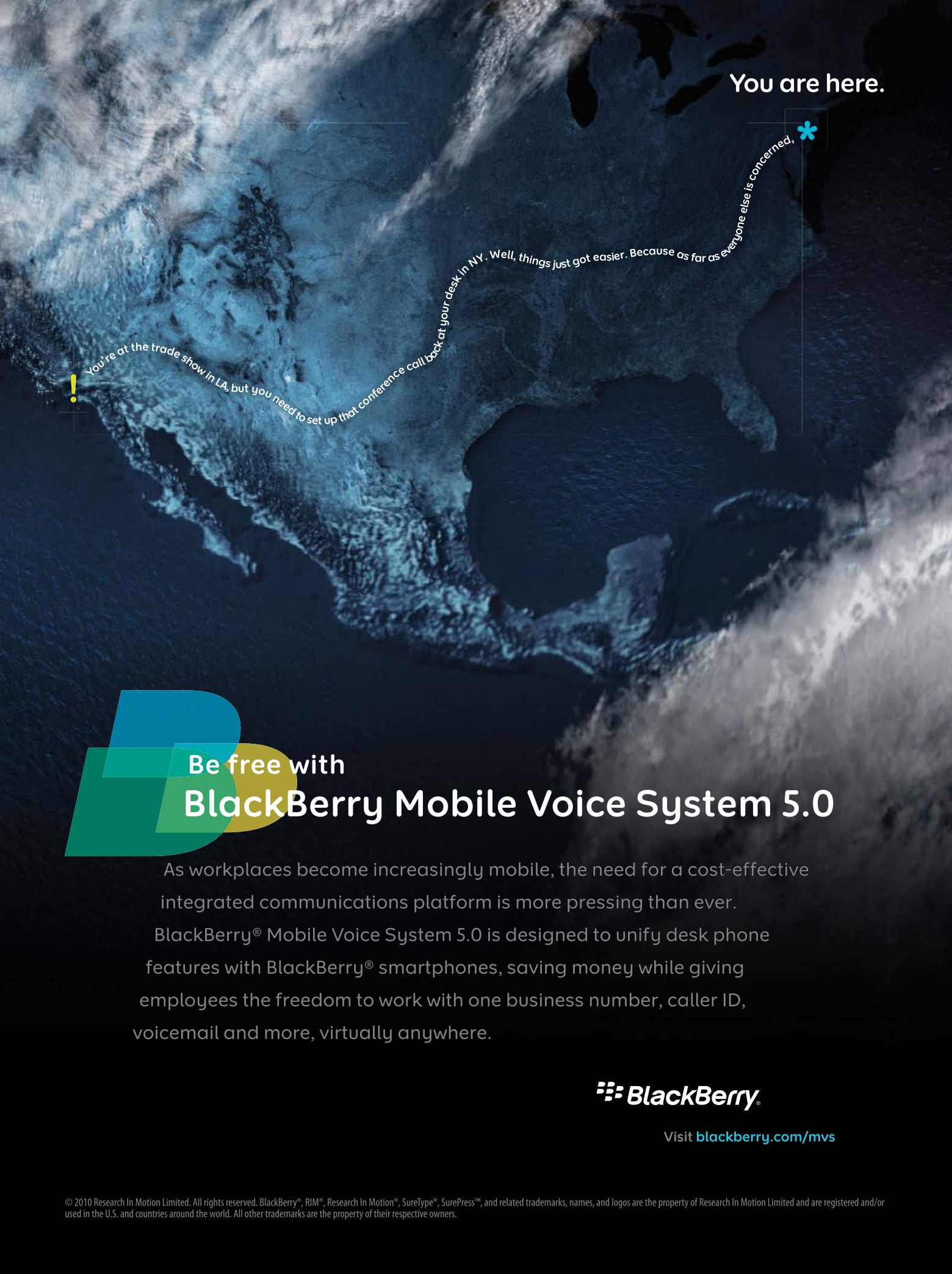

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By Tate Cantrell

Shaping the Data Center Industry in 2011

Over the past few years, one can't talk about data centers without including the topic of greening the data center through improved efficiency. By moving toward a focus on efficiency, data center operators throughout the world have found ways to improve reliability and reduce costs by focusing on green data center strategies. As we move forward into the tweens of the new millennium, there are a few areas that will shape the data center industry.

First Focus – Savings for the Business
The first task for the data center management team will be to increase savings by better integrating the data center strategy with the business mission. The efficiency gains brought forth in recent years by the industry emphasis on PUE and other energy-centric metrics did not always yield optimal savings increases for the business. CIOs will continue to improve their models of data center operations. They will also strive to better understand how the data center generates revenue for the company and how the data center draws down on company resources through operations.

Second Focus – Improve Business Flow
The first step to efficiency within the data center is the creation of a production platform for deployment of company applications. The trends in recent years of virtualization and cloud deployments have provided many forward-thinking CIOs with excellent tools that can be used to further business missions. One limitation to the utilization of these tools is in the automation of deployment and management of the systems. Without creating automated services, CIOs will in effect create yet another layer of management and another group of hands and eyes that are required to keep the data center services up and running. By focusing on the tools that will allow for automated deployment of virtualized and cloud-enabled systems, CIOs will bring the computing resources right to the fingertips of the business strategists and the business integrators, thereby keeping headcount down and reducing opportunity for manual interruptions on the assembly line.

Third Focus – Conserve Capital Expenditures
While no one likes to dwell on it, the last few years have not been kind to many businesses. Many companies that overbuilt in 2007 aren't around anymore to tell their tales. The CIOs of 2011 are survivors of the recessionary era, and they are savvy about retaining capital for critical business interests and M&A activity. However, CIOs who were active in the 2002-2005 business climate know that if you get behind the innovation curve, you will become yesterday's news even more quickly than you would by over spending. The solution is a search for a balance of capital control and flexibility in design. By choosing outsourced solutions CIOs will be able to tap into resources that deploy quickly without stranding important capital resources. And for in-house requirements, companies will look for commodity solutions that integrate seamlessly between the company systems and those of the upstream infrastructure providers.

Forth Focus – Manage Security Risks
Whether it be outsourcing infrastructure, integrating with public cloud technologies, or improving the mobile capabilities of the workforce, the CIO has many options for technical advancement of the corporate IT strategy. But it is ultimately the management's responsibility to adapt the infrastructure to take on these technologies without risking the established best practices for business-critical topics. Security tops the list. For outsourced data center solutions, the security team will need a provider that has a clear SLA and open book accounting of security principles that it implements while delivering the outsourced services. For public, private, or hybrid cloud and even mobile computing solutions, the security teams must develop network security solutions that will be able to connect existing users with the new resources and tools. Without forward thinking on security solutions, many of the great ideas of 2011 will be completely inaccessible to the revenue generators.

Fifth Focus – Regulation of Data Centers
Here is a trend that isn't going to stop any time soon. Use any other industry as a guide, and you will see that regulation will increase over time until a steady state is achieved and the fluctuations become the gradients of political will within the established governing bodies. Federal regulators are just now exploring ways in which to regulate the energy efficiency of data centers (EnergyStar and ASHRAE 90.1, for example) and the trend will not stop within the four walls of the data centers. The Green Grid recently released their concept for a CUE, a carbon usage effectiveness metric for the data center. Provided that this takes off in a way similar to the acceptance of the PUE metric, we can expect that data centers will become directly tied to the regulatory efforts to control carbon. Britain has delayed its flagship program by a year or two, and the United States cannot seem to get a law passed through Congress, but carbon regulation is coming. And while efficiencies are improving in everything from chips to chillers, data centers are very much an energy consumer and will be affected by energy and ultimately carbon regulations.

So the question is: How is the green data center relevant to the general trends of focus within the data center industry? The relevance begins at the energy usage itself and works its way back from there. A truly green data center solution is a solution that protects the CIOs IT strategy from the impact of potential carbon legislation. By preparing the IT network infrastructure for outsourcing, the CIO can take advantage of existing data center products that provide a regulatory hedge while not over-committing critical business capital. Once the location and the energy source are network-ready and secured, the CIO can go about filling the data center – physically and virtually – with the automated tools that are most efficient and best integrated with the company's business mission. **IT**

Tate Cantrell is CTO at Verne Global (www.verneglobal.com).

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Disaster Preparedness

By Rich Tehrani & Max Schroeder

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VoIP, FoIP, unified communications, SaaS and other hosted services provide the tools for a mobile workforce. Home offices, once a rarity, are now an indispensable component of many business operations. An added benefit is a built-in business continuity/disaster recovery strategy. Employee dispersion reduces the risk of business disruptions caused by fire, power outages and other problems. However, it does not eliminate the risks entirely. Smaller companies are particularly vulnerable as many employees reside in the same community or region as the primary company office.

Since most business interruptions last less than 72 hours, total relocation time is critical for maximum efficiency. Road warriors usually have portable offices at the ready. However, stationary home office employees will not be as mobile unless their company has provided a clear plan and the proper equipment. Senior management is usually focused on data preservation, maintaining communications and other centralized issues, so personal BC/DR planning can easily be overlooked. Plus, many managers are also road warriors and simply assume their critical employees are equally prepared.

To get started, identify your critical employee home office locations in relation to your company offices. Step two is to identify hotels for your team outside of a defined radius with a secondary location at a greater distance. Most hotels provide high-speed access in their rooms and a business center, but do not take these for granted. You may also want to consider making arrangements with hotel management to guarantee a number of rooms for your company. Space can disappear quickly in an emergency. If the emergency is of a longer duration than 72 hours, you easily can make adjustments, as your team already will be fully operational and in communications with management.

One of this column's authors, Max Schroeder, recently experienced his second storm-related power outage in two years. Within an hour, Max was at his designated BC/DR hotel and fully operational. Putting a company BC/DR plan in place is not complicated and generally pays for itself quickly in improving overall company efficiencies, but it does require you to get it done – no time like now to start. IT

Max Schroeder is the senior vice president of FaxCore Inc. (www.faxcore.com) and managing director of the DPCF.

Rich Tehrani is the CEO and group editor-in-chief at TMC, and conference chairman of ITEXPO.

Regulation Watch

By William B. Wilhelm and Jeffrey R. Strenkowski

FCC Imposes Network Neutrality Rules on Broadband Providers

On Dec. 21, 2010, the FCC voted to approve rules aimed at "preserving the open Internet" (i.e., network neutrality rules). As expected, the FCC voted to impose transparency, nondiscrimination and a no-blocking rule on broadband providers. The rules require wireline broadband service providers to treat lawful content in a "nondiscriminatory" manner. Likewise, service providers will be prohibited from blocking legal content, applications, services, and non-harmful devices. Broadband service providers also will be required to disclose their network management, performance characteristics, and commercial terms of their offerings. All of the new rules are subject to an exception for "reasonable network management."

The rules also do not specifically ban the practice of paid prioritization, but the FCC has stated that the practice is not likely to be considered "reasonable." The FCC will consider that practice, and others, on a case-by-case basis, with the burden on the service provider to prove that the practice is "reasonable." The rules will not strictly prohibit tiered pricing for consumer broadband access, but the FCC intends to monitor the practice.

While not treated identically to wireline services, wireless broadband services will be subject to several open Internet rules as well, including a requirement to disclose network management practices, including device and application certification procedures and the criteria for placing restrictions on services or applications. The rules also prohibit the blocking of websites as well as access to applications that compete with the broadband provider's voice or video services.

A number of members of Congress have announced their opposition to the new rules, and it is expected that this debate will continue into 2011 and beyond. IT

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

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1:30pm Delivering SIP to the Enterprise
2:30pm The Value of a Service Provider Demarcation Point
3:30pm Ensuring Interoperability -- The Key to Service Revenue growth
4:30pm Addressing Security Issues
5:30pm Generating Revenue from HD Video
6:30pm Cocktail reception

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Moderator: Joel Maloff, Principal Consultant, Maloff NetResults

Wednesday, February 2, 2011

SIP Trunking Professional Development Program

9:00am The State of SIP Trunking: A World View
- SIP Trunking in Latin America and SIP Trunking in Europe
10:00am Building for ROI
11:00am Live Demo: Setting Up a Secure SIP Trunk
11:30am The Service Provider Perspective
12:30pm Telia: Lessons Learned from Across the Pond
1:00pm **TOWN HALL MEETING: SIP, UC and Security**
2:00pm The Need for an E-SBC

Thursday, February 3, 2011

Unified Communications Day

9:00am **TOWN HALL MEETING: Unified Communications**
10:00am SIP: Unifying the Distributed Workforce
11:00am Fax-over-IP
12:00pm Unified Communications: The Future for Service Providers
1:00pm Hosted Unified Communications
2:00pm Enterprise-Centric Unified Communications
3:00pm UC Across the Borders

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Viewpoint: Voice of the Customer

By Elaine Cascio

How Do You Measure the Customer Experience?

As a customer advocate, I'm happy to see so many organizations focused on improving their customers' experience. But whenever I talk to customer experience professionals, they say they struggle with how to show improvements and how to measure success. Often, they feel overwhelmed and worry that surveys, focus groups and other methods will be costly. Well, here are 10 ways to measure whether you're delivering a compelling customer experience that won't break the bank.

Quality monitor your speech self-service calls just as you do agent handled calls. Create scores and action plans. Double back with agents regularly to inform the customer experience across other channels. Examine trouble tickets and e-mails to understand patterns that can be addressed in self-service and other channels. Use simple web tools or more complex social media tools to gather data on complaints and kudos.

Not having success with after call surveys or robo calls? Try texting a survey link to a customer's phone immediately after a transaction. Keep the survey short and sweet.

Understand why customers may use multiple channels and how improving channel design can enable them to complete their task on a single channel.

Create baseline customer experience maps that you can use to measure success. Continue to map customer experiences across channels for continuous improvement.

Measure how well you meet customer expectations at key moments of truth in the customer lifecycle.

Understand the costs associated with key metrics – the cost of a transaction that isn't once and done, on each channel and across channels, and how much each customer complaint costs you.

Finally, make sure that all of these roll up to clear measures of success that your CEO understands. Measures should be customer-centric, strategic – and make a difference in how the business operates. IT

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

Tech Score

By Jeff Hudgins

The Advantage of Carrier Grade Virtualization

The topic of carrier-grade virtualization first emerged back in 2006. Granted the focus at that time was on carrier-grade Linux, but the seeds were planted for the future of carrier-grade virtualization. Today, the migration to more packet-based services such as voice over IP and high-definition video are finally making carrier-grade virtualization relevant. The latest carrier- grade platforms now have more processing cores, memory, and I/O than ever before, but can telecommunications original equipment manufacturers realize the benefits of using carrier-grade virtualization software? The potential benefits are reduced hardware infrastructure costs, improved time to market, and better energy efficiency.

Service providers rely on carrier-grade redundant systems to provide high availability for communications equipment in their networks. To still meet the demands of the network and capture the full benefits of carrier-grade virtualization, the OEM's virtualization software must meet three critical properties. The first is performance. The software must have low overhead and operate in real time. The second property is availability. Fault isolation and high availability management must be present to support watchdog, error handling and notifications. Third is serviceability. The health monitoring of virtual machines must provide advanced warning of VM failure events. But just having highly available virtual machines is only part of the solution. Adding elastic provisioning to virtual machines allows the service provider to realize improved energy performance during low usage times.

According to Austin Hipes, director of field engineering at NEI, "through intelligent use of carrier-grade virtualization solutions and elastic provisioning techniques, OEMs can create highly scalable platforms and eliminate unnecessary over provisioning of resources for peak usage. Current advances in multi-core processors, packet processors, and high throughput Ethernet silicon make it possible to consolidate what previously required multiple specialized carrier-grade server platforms into a single private cloud."

Final Score:
In 2011, we will see another leap forward in the number of cores available to software developers. Combining elastic provisioning with highly available virtualization software will allow OEMs to develop carrier-grade virtualization platforms with the level of performance, availability, and serviceability needed for next-generation carrier networks. IT

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

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By Alan Murphy

Virtual Server Farms: Distributed Applications in the Cloud

Server virtualization first gained a foothold in the data center by offering a production-ready solution to replace physical servers one-to-one, typically referred to as P2V – physical to virtual. The benefits of P2V were immediate: less physical servers to manage; fewer physical servers to cycle; and upgrade on a fixed cycle, savings on energy, etc.

Soon thereafter, enterprise-class virtual platforms allowed administrators to push beyond one-to-one system replacement and consolidate at an exponential level: two-to-one, four-to-one, eight-to-one, as much as the virtual platform and available physical resources would allow. With advances like live migration, it was no longer necessary to keep so many individual servers running for a particular application, and new applications and services could be added to the virtual platform. Virtual machine density – how many virtual machines can run on one physical host server – became a common word in enterprise IT lexicon, and now we're seeing average density levels between 10:1 and 25:1. These are numbers that are fundamentally changing data center server architecture and allowing new services to be added as physical resources are virtualized.

One thing that hasn't changed within the data center, however, is the concept of a server farm. A server farm is a cluster of like-tasked servers that either offer redundant services for distributed load or servers that are part of a complete application delivery chain: web tier, app tier, and data tier. For large-scale production deployments, applications are typically deployed across large server farms for redundancy and fault tolerance. In fact, thinking about applications in the paradigm of a farm of servers – be they physical or virtual – is still very much how we design and build data centers today. The fundamentals of that distributed server farm model don't change as those application clusters are virtualized and even as they move into the cloud.

Virtualization agility is based on the model of a workload: a virtualized resource that performs a specific task. When a web server, for example, is moved from a physical server to a virtual machine, that virtual machine is said to be offering a web server workload; the role of that virtual machine is to run the web server workload and typically not much else. As I've discussed here before, virtualization enables a very discrete system of workload isolation. There's no need to make a virtual machine run both web and e-mail server workloads because we can deploy a unique virtual machine for each discrete web and e-mail workload. We're able to take advantage of density and resource virtualization by separating and isolating workloads, giving us more granular control over how and where we deploy those workloads across the virtual infrastructure.

If we apply this same isolation model to the idea of the server farm, we can begin segmenting individual roles and responsibilities within the farm into discrete workloads. Using the three-tier system – web server, application server, and data server – we can split up the physical server farm into individual application-focused workloads. In other words, we can break up the physical web servers and application servers into virtual web server workloads and application server workloads. On the surface we didn't changed anything; we're still keeping server farms clustered together, just in a denser virtualized environment that allows us to take advantage of virtualization benefits across the entire server farm. The ability to isolate discrete workloads within the virtual infrastructure becomes critical when moving those workloads to the cloud.

Before an IT department moves an entire application to an off-premises cloud provider, they're going to need to decide what pieces of that application are going to move. Historically, that was an easy task: everything must go. If an IT department was moving from an on-site data center to a hosted environment, it moved the entire server farm, lock, stock, and barrel. The off-premises cloud model – enabled by and through virtualization – however, gives IT the flexibility to isolate which workloads are going to move and which workloads are going to stay. This allows IT to move geographically certain application services without breaking up the virtual server farm. One part of the server farm may reside on-premises while another part is running off-premises. The application server farm is intact even though the individual workloads are distributed between multiple locations.

The ability to isolate discrete workloads within the virtual infrastructure becomes critical when moving those workloads to the cloud.

The idea of the server farm is so ingrained in IT architecture and data center design, being able to use that same model across distributed workloads and cloud deployments becomes a necessity for a truly virtualized data center. Virtual server farms allow us to create a new distributed application model in the cloud while still maintaining a server cluster paradigm we understand and are comfortable with. IT

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

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By David Yedwab

Two 2011 Wildcards for IT

Many of my industry colleagues already have written extensively about the key issues, opportunities and developments that IT will likely have to address in 2011. (By the way, what ever happened to the first decade of the 21st Century anyway?). However, I have seen little on two issues that I believe may take significant IT time, resources and budget during 2011. Both may be viewed as largely exogenous to your major issues of delivering quality services to your end users.

The two issues are:
- the imminent exhaustion of IPV4 addresses, and the need to transition to IPV6 addressing; and
- the impact of the net neutrality decision of the FCC, and the legal and political turmoil it is likely to cause to business IT plans.

First, while your enterprise's private address space behind your firewalls/NATs may likely be OK during the transition to IPV6, your network and your users do connect across a WAN and the public Internet to other address spaces (customers, partners, etc.) that may be affected during the transition.

Some key questions that need to be asked:
- Have you been assured by your service provider(s) that none of your critical applications nor any of your planned transitions to public or private clouds will be affected?
- Have you been assured or notified by your equipment provider(s) as to whether any of your routing or switching equipment (hardware and or software) needs to be upgraded?
- And, the third question, when must we do something?

At least you should be sure that you have comfortable answers to these key questions and have a plan in place to react, if you need to.

Regarding net neutrality, the concern is really whether your service providers (traditional telcos, ISPs, MSPs and cloud providers) are going to be providing consistent levels of service or are going to be distracted over potential business model changes stimulated by the net neutrality ruling (initially likely to be more smoke in legal challenges). And will wrangling over the ruling delay the launch of capabilities or services that enterprises might desire? And finally, let us not forget that these same service providers also are channels to market for the many solutions offered by the UC vendors as well as likely candidates to be providing cloud delivery of services – will these activities be changed or delayed?

Hopefully both these issues ultimately will amount to little more than smoke, but certainly they're worth asking about to be sure that they are not wild cards that will disrupt your plans and programs. IT

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

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Ask the SIP Trunk Expert

By Steven Johnson

Unified Communications: Microsoft Lync and SIP Trunking

This month at ITEXPO, our speakers at the SIP Trunk-Unified Communications Summit are addressing the key issues you need to know to leverage SIP, SIP trunks and unified communications to help your business succeed. One of the hottest topics is Microsoft Lync 2010.

Like Microsoft Office Communications Server 2007, which has a tremendous installed base of users employing OCS SIP-based communications, Microsoft Lync 2010 is not expected to be natively compatible with SIP trunking.

Why? Microsoft OCS and Lync have several requirements when deploying SIP trunking. First is the use of TCP transport. The TCP transport, as compared to UDP transport, provides a more reliable means of communication between services and can be effective in unified communications. However, many SIP trunk service providers deploy SIP trunking only using the UDP transport (referred to as a streaming protocol, as data is sent without confirmation or receipt/delivery, whereas TCP is sent in small segments and confirmation is sent before the next segment is sent).

Another common OCS and Lync requirement is the use of fully qualified domain names in many to all of the SIP addressing fields. Again, many SIP trunk service providers deploy SIP trunks using only IP addresses in the SIP addressing fields.

Enterprise session border controllers, or E-SBCs, can solve this problem. They sit at the edge of the network to provide control over the SIP traffic. Traditionally they were seen as just providing firewalling protection – the security – for SIP-based voice networks. Today's E-SBCs provide that security, which is absolutely a critical function, and have evolved to serve as a crucial element in enabling SIP deployments.

E-SBCs can provide a seamless format conversion of TCP to UDP, and change IPs to FQDNs, working hand-in-hand with the ITSP service and Microsoft Lync 2010 solution.

Stop by the free SIP Trunk-UC Summit at ITEXPO, which includes a full day focused on unified communications, and get the latest from the experts and visionaries in the field. IT

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

E911 Watch

By Nick Maier

SIP and E911...It's About Time

Two recent announcements from voice platform vendors prove the industry is getting serious about addressing the E911 issue for SIP endpoints.

The first announcement from Microsoft was a blockbuster. With the launch of the new Microsoft Lync Unified Communications platform, SIP endpoints can request and hold their location within the enterprise network as an object and, when a user dials 911, the location object is sent with the call to emergency dispatchers. This is the first commercial implementation of the National Emergency Number Association's i3 standard, which calls for endpoints to know their location so that it can be sent with the voice call in the event of a 911 emergency. Pretty cool.

The second announcement came from Avaya with the launch of its Avaya Aura Session Manager Release 6.1. With Session Manager 6.1, a SIP endpoint registers with Session Manager, and the IP and MAC address of the endpoint are sent to a third-party application that can query the network to find the exact location of the phone. The third-party software then writes instructions back to the call server that tells it how to route a 911 call. Session Manager 6.1 brings Avaya SIP endpoint capabilities in line with those Avaya H.323 endpoints now enjoy.

These two announcements testify to the importance enterprises place on E911 capabilities. Enterprise customers expect robust E911 capabilities for all endpoints including SIP phones. In fact, many of these customers pushed back on voice platform providers that launched SIP endpoints without E911, essentially saying: "We can't move forward with SIP until E911 is automated as part of the solution."

Thankfully, the platform providers seem to have gotten the message. IT

Nick Maier is senior vice president of RedSky Technologies (www.redskyE911.com).

By Hunter Newby

The OSI Model – Investment by Layers

As complicated as the networked world seems to be today there is actually a rather simple way to break it all down – the open systems interconnection model.

From Wikipedia:
"The Open Systems Interconnection model (OSI model) is a product of the Open Systems Interconnection effort at the International Organization for Standardization. It is a way of sub-dividing a communications system into smaller parts called layers. A layer is a collection of conceptually similar functions that provide services to the layer above it and receives services from the layer below it. On each layer an instance provides services to the instances at the layer above and requests service from the layer below.
For example, a layer that provides error-free communications across a network provides the path needed by applications above it, while it calls the next lower layer to send and receive packets that make up the contents of the path. Conceptually two instances at one layer are connected by a horizontal protocol connection on that layer.
Most network protocols used in the market today are based on TCP/IP stacks."

Most people in the networked world are familiar with the OSI model, but typically those that are experts in one layer are not so well versed in the others. This is a result of the depth of each and the various functions, services and providers that must be comprehended. The good news is that the OSI model is a standard, and it is meant to allow for the hand-off from one layer to the next in a seamless fashion. So, basically, an expert in one particular layer need not be an expert in another for the entire system to reach optimal performance.

Although there may be slight differences between layers at the hand-off points, there are dramatic differences between fully separated layers such as the physical layer and the application layer. Usually network and IT people that are responsible for Ethernet and IP administration can perform functions in the local and wide area at layers 2 and 3. These people are typically not application or software engineers, but they can get an office network going to support those applications. Software developers may have an understanding of Ethernet and IP, but that is not necessarily their expertise as they focus more on programming languages in layer 7.

Neither of these two groups of expertise posses subject matter expertise on building the physical links that make all that they know and do possible.

Infrastructure peering is, in essence, this layered model. It is the physical infrastructure that supports the OSI stacks in the same way that the physical human body supports the DNA within it. Of course, without the DNA, there is no purpose for the physical. The same can be said for physical objects of any kind and the laws of physics. They are intertwined, and their relationship is inherent.

Without acknowledging each and every law or layer, and having a basic understanding and appreciation of each and its respective role, a prudent network plan cannot be effectuated. The peering that is taking place, whether on a P2P level between people, or machines, or on a network to network IP peering level, actually happens physically at one or many points of infrastructure. When the lowest layer is overlooked, or forgotten, even the best laid network plans will go awry. (In the old days of dial-up, the World-Wide-Wait and America-On-Hold sums it up. Today it would be the impact of the iPhone on the AT&T wireless network.)

Without acknowledging each and every law or layer, and having a basic understanding and appreciation of each and its respective role, a prudent network plan cannot be effectuated.

One of the most important things in the world when making any type of plan is predictability. Having the information to know cause and effect, input and output, is the only way to know and then mitigate the risk of loss, or failure. These are the elements required to maximize the

return on any investment. Each layer of the OSI model is bound to this same principle in and of itself as much as they are bound to it between and among each other. All investments in any aspect of information technology, devices, equipment and networks of all kinds public and private are therefore bound to this as well.

In a totally local, fully private scenario where the end result is to run a single application and only be connected and functioning within a single environment and unto itself then perhaps some of the risk is already mitigated, but alas this is not the norm. In fact it is far from it. The reality is that everything of any meaningful value to society outside of a lab is connected. To be disconnected is to be non-existent.

Unfortunately over the past ten years the vast majority of businesses have been conditioned to not ask about anything beyond their own internal networks and to rely on the public Internet and the ISPs to provide them access for interconnection to all things not on their own IP networks. This encouraged ignorance has created a very detrimental situation in the United States called net neutrality. The situation is that net neutrality has nothing to do with the Internet itself (in the realm of public layer 3 and up to layer 7), but rather network access to the Internet (the physical link, layer 1 and 2). The issue is that due to ignorance the FCC is now attempting to regulate the public Internet instead of attempting to create a real plan to resolve the issue of independent, physical access to it.

To make matters worse, no one can really have an educated opinion about the subject since everyone has been so misinformed for so many years. Being told the untruth repeatedly by the mass media that VoIP means voice over the Internet, and actually believing it, has contributed to our disastrous present reality. Internet protocol is not the Internet. The Internet is not your broadband cable connection. Your cable provider provides you access to the Internet. If you are an end user consumer, you may not have many, or any, choices so therefore you are subject to your providers' discretion. This discretion is now what is in question with the FCC, but that is not and should not be a question of the Internet itself.

If "you" are a business, you might have other options, and if high-speed access to the Internet is something that your business requires to operate optimally then you will seek the best possible connection even going to the extent of moving your office location to a building or state that has a greater number of better, more economical options for access. The issue is that both consumers and businesses are connecting to the same Internet, but rules being created to supposedly help one group, the consumers, will have an impact on the other group, the businesses, or basically anything that is not a consumer. Unless….

Fortunately the OSI model is a standard and it provides a level of predictability for everyone that wishes to apply its rules. If the FCC truly wants to protect end users rights to "legal" content (legal as defined by whom? Maybe WikiLeaks becomes deemed an illegal terrorist website and gets blocked by the US GOV? That's for another article) then all of those in favor of better access to the Internet can organize and build it. This is the basis of every community fiber network build in the U.S. and abroad including the Australian NBN.

The tools and the plans are all out there. The return on the investment is known as long as there is a path to physical interconnection. A positive outcome through a proper plan is as predictable as the negative impact of inaction. It is just a matter of knowledge and execution. IT

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

The reality is that everything of any meaningful value to society outside of a lab is connected. To be disconnected is to be non-existent.

By Peter Radizeski

Where's the Beef?

Agents are looking into 2011 with awe and wonder. They aren't alone, as VARs and carriers also try to figure out a business model for the future. The rapid adoption of cloud-based services caught many by surprise.

Agents and VARs have to figure out quickly where they fit in the cloud ecosystem. It could just be on the edge as the pipe. Carriers currently are looking at that dumb pipe position and saying there's not a lot of value in being a dumb pipe provider. There's not a lot of value in being a dumb pipe order taker either.

The value is in understanding the ecosystem and the business processes. There are choke points and weak points in the chain that can allow for adding value.

Value comes in the form of knowledge these days. Can you make the on-boarding process easier? Can you help avoid pitfalls? Can you provide guidance in network design for redundancy? Will there be interoperability issues?

One of the reasons that I promote niche marketing is that you can develop specialized industry know-how and lexicon. Federal and state regulations affect different industry sectors in varying ways. Being able to bring that kind of knowledge to a prospect is invaluable. It is the cornerstone of being an expert.

Examples include PCI compliance for retail; HIPAA for health care; and GLBA for banking and finance. These examples also can be turned into marketing. Seminars, webinars and news items can be used in social media updates, e-mail campaigns, search engine marketing and other ways to grab attention from prospects and customers – not just to sell them something but to teach them and add value not just to the services you sell but to their business.

Voicemail, spam filters, noise and out of the office are preventing you from getting the prospects attention. 2011 will require you to add value first. IT

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

The Channel & AGENT NEWS

http://tmcnet.com/58525.1

McGraw To Sell PanTerra UC

PanTerra Networks has signed an agreement with McGraw Communications, a competitive local exchange carrier and provider of voice, data and Internet services since 1996, to offer a private branded version of WorldSmart, PanTerra's cloud based unified communications service offering. WorldSmart will be sold through all of McGraw Communications' channels. PanTerra's WorldSmart includes unlimited business voice, unified messaging, fax, instant messaging, e-mail, file transfer, mobile text messaging and presence.

www.panterranetworks.com

www.mcgrawcom.net

http://tmcnet.com/58526.1

Aastra USA to Resell 911 Enable

Next-generation enterprise communications provider Aastra USA has entered into a reseller agreement with 911 Enable, a provider of E911 solutions for the IP telephony market. The agreement enables Aastra USA to provide its customer base with a telephony solution that is integrated with 911 Enable's Emergency Gateway appliance, which offers secure, flexible and reliable support for nearly every leading IP PBX platform. The Emergency Gateway is designed to enable large enterprises, college campuses and other organizations to track the location of a distress call, and then relay the information to onsite security personnel and emergency responders. The EGW provides this service whether the call is made from an organization's campus, or from a branch office or a remote location.

www.aastra.com

www.911enable.com

http://tmcnet.com/58527.1

Broadview Addresses Cloud Sales

Three years ago, Broadview took what it had learned about service delivery and used that rollout as a hosted application, now sold in several different packages under the Broadspeed label. Today, the company is building further on its success by jumping into the cloud market. It's able to do so with confidence because the company has its own platform with code that can be customized in-house to give the channel community exactly what it needs, says Kevin Goodman, who heads up Broadview's channel marketing and strategic development division.

www.broadviewnet.com

http://tmcnet.com/58528.1

InsideView Signs On iGo2 Group

Australian-based social technology product and services company iGo2 Group has joined InsideView's Partner Program as a reseller and master agent to companies based in Asia-Pacific countries. InsideView offers solutions and services that continuously aggregate and analyze relevant, executive and corporate data from thousands of content sources to uncover new sales opportunities; iGo2 offers customers tailored social technology solutions that range from methodology consulting to full social media implementations. "Asia Pacific is one of the most active regions in social media, and we see our customers and partners making strategic investments in social CRM to help bring them to the next level," says Michael Green, CEO of iGo2.

www.igo2group.com.au

www.insideview.com

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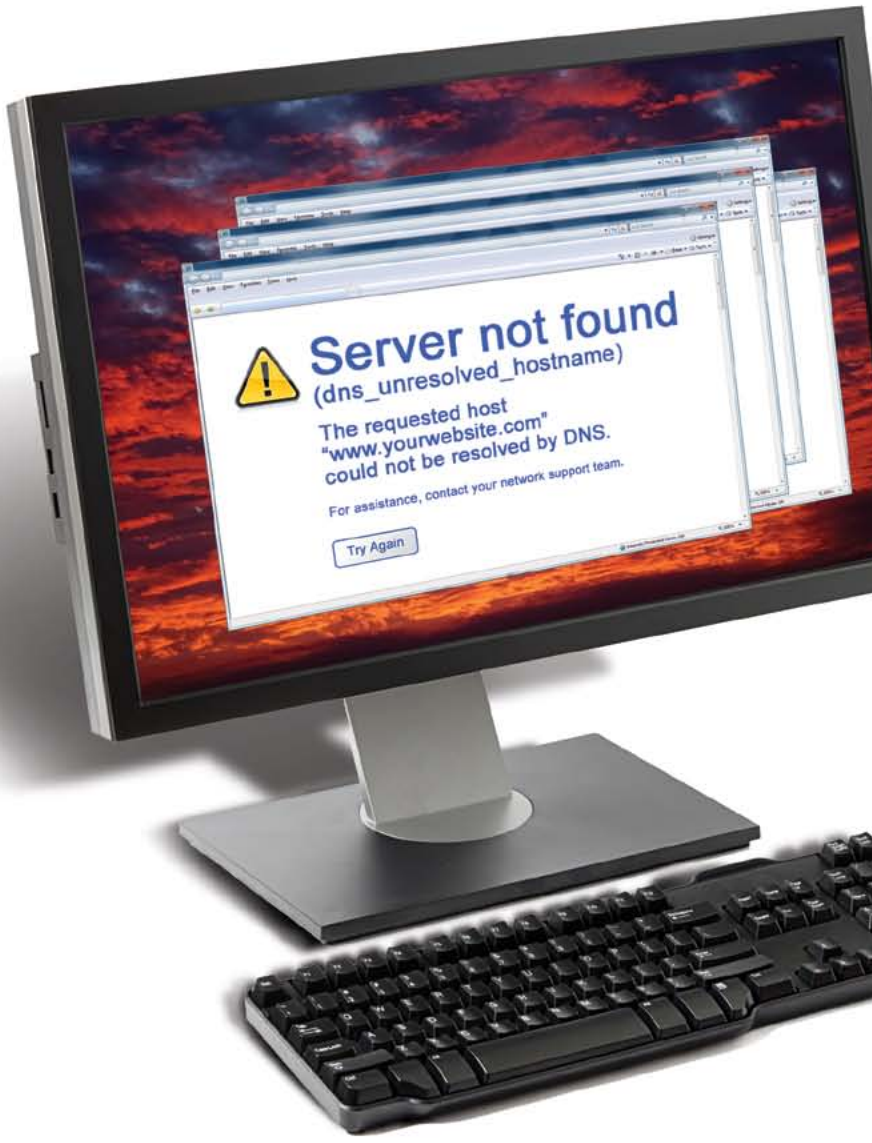

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ActiveQoS Supports New HNS Service

Hughes Network Systems, a dealer of broadband satellite networks and services, offer anew managed services suite for enterprises that integrates voice, data and video over affordable broadband. The new offer is supported by ActiveQoS, an optimization technology that Hughes says enables MPLS-like performance over high-speed, affordable DSL and cable broadband connections. It allows real-time latency sensitive apps to coexist harmoniously with other bandwidth-loving traffic.

www.hughes.com

http://tmcnet.com/58535.1

Telepresence from Polycom Is Lync Interoperable

Polycom HDX series telepresence systems and Polycom UC Intelligent Core Infrastructure are the industry's first telepresence solution designed to be fully interoperable with Microsoft Lync, according to company officials. Lync offers a single interface that unites voice; IM/presence; and audio, video, and web conferencing. That allows for a richer, more contextual offering, and a single identity, making it easier and more efficient for users to find contacts, check their availability and connect.

www.microsoft.com

www.polycom.com

http://tmcnet.com/58538.1

IBM: 3D to Come to Telepresence

The next five years will see rapid adoption of 3D technologies. For instance, 3D interfaces, like those in the movies, will let users interact with 3D holograms of their friends in real time, according to IBM. In fact, IBM scientists are working to improve video chat to become holography chat or 3D telepresence. The technique uses light beams scattered from objects and reconstructs a picture of that object, similar to what human eyes use to visualize our surroundings.

www.ibm.com

http://tmcnet.com/58533.1

Digital Ingenuity Snapped Up By Vantage

Vantage Communications, a provider of hosted unified communications services, has acquired the assets, technology and customer base of Digital Ingenuity, a long-established Philadelphia-based VoIP provider. Officials with Vantage said that in addition to furthering its nationwide leadership role with the acquisition of several internationally recognized customers, the company will further reinforce its presence in the Philadelphia market, adding to its ever growing customer base in the region.Company officials said that as a result of the deal Vantage also will expand its vertical leadership in the education, medical and insurance industries. Vantage expects to continue to grow through targeted acquisitions nationwide as well as via increased sales through the ever-growing Vantage Solution Provider indirect sales channel.

www.digitalingenuity.com

www.vantageip.com

http://tmcnet.com/58534.1

SUNY Picks Microsoft

Microsoft

Microsoft Live@edu suite of online communications and collaboration tools will now be used to serve the 64 campuses of the State University of New York (SUNY). As a result, SUNY students will have access to advanced online software, including hosted e-mail, calendars, online storage, Office Web Apps, instant messaging, document sharing and videoconferencing, among other services. Sig Behrens, general manager for U.S. Education at Microsoft, says that SUNY is joining a growing class of higher education institutions that are committed to career readiness and making sure its students are able to enter the workforce and hit the ground running. By using Live@edu to communicate with their friends and professors, submit homework, write reports, prepare presentations, and share online documents for class projects, students are gaining experience and software skills employers are looking for, he adds. Monroe Community College, one of the largest colleges in the SUNY system, was one of the first to rollout Live@edu to students three years ago.

www.suny.edu

http://tmcnet.com/58536.1

Court Awards Millions to Oracle

The bitter fight between Oracle and SAP over copyright infringement got more bitter with courts agreeing SAP owes Oracle $16.5 million in interest on the $1.3 billion award Oracle received. While less than the $211.7 million Oracle sought, Oracle also will get reimbursed by SAP for $120 million in attorney fees.

www.oracle.com

www.sap.com

http://tmcnet.com/58537.1

IE9 Lauded for Standards Support

Microsoft Corp. will release the next flavor of its web browser this year. Currently in beta, IE9 has been streamlined and overhauled from version 8. The beta has received kudos for its better support of web standards, an area in which Microsoft has been lacking in the past. In particular, IE9 is trying to get ahead of the curve by supporting HTML5. Though it has been shedding some market share to other browsers, such as Firefox and Chrome, IE still dominates, especially in the enterprise arena.

www.microsoft.com

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Rackspace Hosting Buys Cloudkick

With all the new entrants in the hosting/cloud communications space and the growth in cloud computing in the data center, pressure for players to consolidate and expand, and to deliver more scalable management solutions, seem to be building. On this front, Rackspace Hosting recently announced plans to buy Cloudkick. Rackspace is a specialist in hosting and cloud computing. Cloudkick makes web applications for cloud-server management.

www.rackspace.com

http://tmcnet.com/58544.1

China Says 'No' To Non-Incumbent VoIP

Internet phone services other than those provided by China Telecom and China Unicom have been made illegal, which is expected to make services like Skype unavailable in the country, People's Daily says. The decision seems clearly aimed at maintaining a duopoly of such services for the two state-run communications companies, while simultaneously tightening control of content and communications within the country. China is not the first country to declare Skype or other services illegal. The International Telecommunications Union reported in 2007 that VoIP was explicitly legal in dozens of countries (50 or so), but as you can imagine, that leaves scores of countries where it is not.

www.chinatelecom-h.com

www.chinaunicom.com.hk

http://tmcnet.com/58540.1

GENBAND Buys Cedar Point

Less than eight months after closing its acquisition of Nortel CVAS, GENBAND announced its purchase of Cedar Point for an undisclosed sum.Cedar Point, which has7.5 million lines in service globally, sells the SAFARI C3 Multimedia Switching System, a SIP-based VoIP switch that is compliant with CableLab's PacketCable specifications and popular with the cable TV companies. While GENBAND moved into the No. 1 cable market spot with its acquisition of CVAS, Cedar Point (which at the time of the CVAS deal claimed 15 percent market share) brings to the table such marquee cableco customers as Comcast, Liberty, Charter and Kabel Deutschland (the leading cableco in Germany). It also has as its customers various smaller cable companies in the Caribbean, says Mehmet Balos, executive vice president and chief marketing officer at GENBAND.

www.genband.com

http://tmcnet.com/58542.1

The Skype Crash – Cause and Effect

On Wednesday, Dec. 22, a cluster of support servers responsible for offline instant messaging became overloaded. As a result of this overload, some Skype clients received delayed responses from the overloaded servers. In a version of the Skype for Windows client (version 5.0.0152), the delayed responses from the overloaded servers were not properly processed, causing Windows clients running the affected version to crash. Around 50 percent of all Skype users globally were running the 5.0.0.152 version of Skype for Windows, and the crashes caused approximately 40 percent of those clients to fail.

www.skype.com

http://tmcnet.com/58543.1

VoIP Outfit Gets Its Ojo Working

VoX Communications Corp., a supplier of wholesale voice over IP telephone services and smartphone applications, has introduced the Ojo Vision Digital Video Phone and service as a core product offering to its retail and wholesale customer base. The company, a wholly owned subsidiary of Pervasip Corp., is marketing the voice and video solution as a home phone replacement to consumers, and as a business-class commercial solution to small and medium-size business customers. In addition to video calling, each plan includes features like caller ID, call waiting and three-way calling, as well as advanced features such as three-way videoconferencing, connecting to a large screen LCD or TV, and unlimited video calling.

www.voxcorp.net

http://tmcnet.com/58563.1

AOE Supports New Service-Centric Approach

ADTRAN Inc. has unveiled a management solution called the Advanced Operational Environment, or AOE. The company describes the solution, which brings element management systems, an OSS gateway and service management under one umbrella, as a management framework focused on service delivery and operational improvement that abstracts hardware from the network manager's user interface. David Williams, who's in charge of business development for AOE, says in light of changing dynamics in the marketplace and customer needs, ADTRAN is moving from a manager of hardware to a manager of systems. The key goals of AOE are to enable automated service activation, by offering integration with network operators' existing gear and billing, provisioning and other operational support systems; to support the move to a service-centric approach to management, by abstracting hardware out of the equation; to deliver a new level of system logic that distills data down to a few actionable items; and to let that all happen within a multivendor environment, by providing standards-based interfaces.

www.adtran.com

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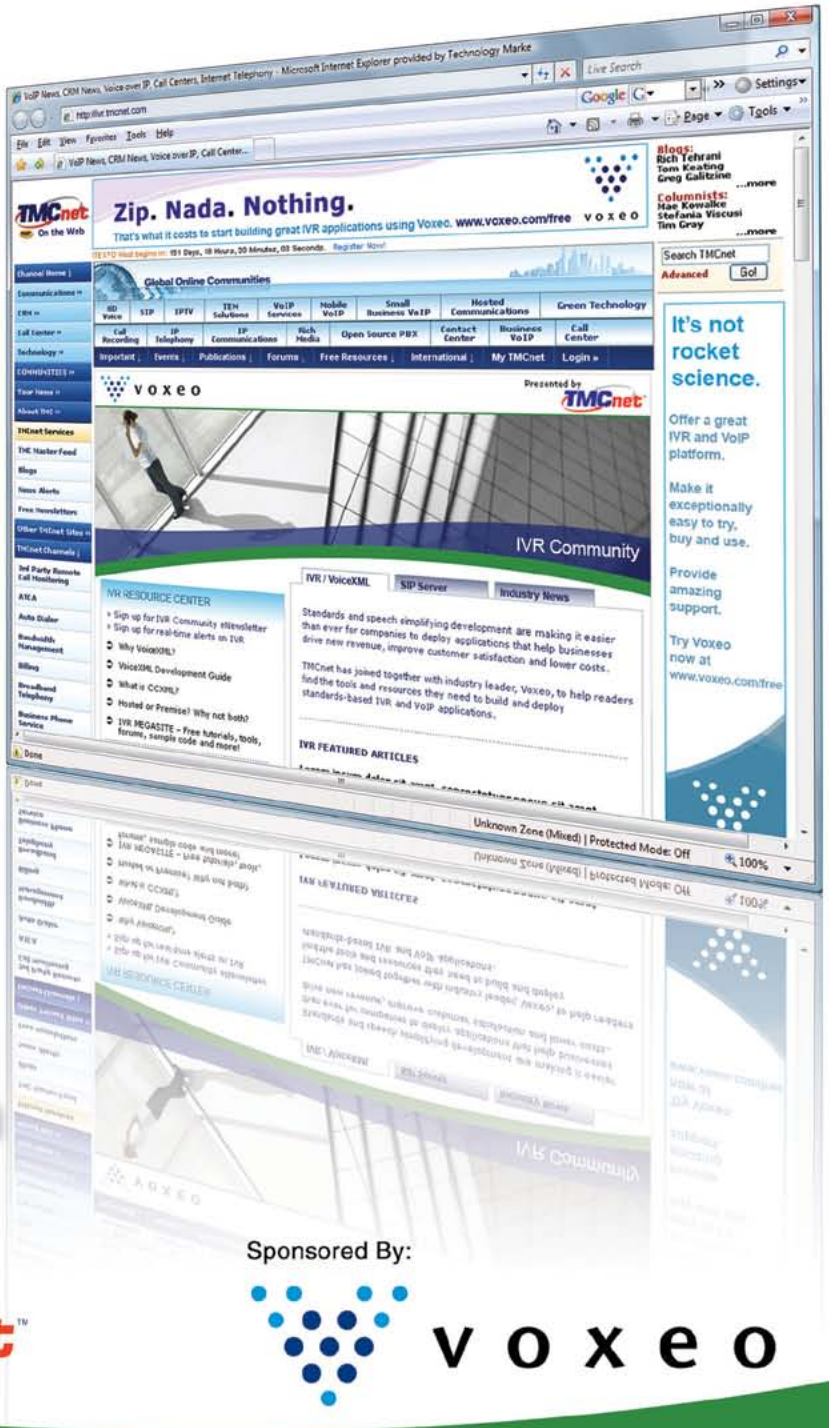

http://ivr.tmcnet.com

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http://tmcnet.com/58545.1

Covad Wireless Goes to TelePacific

TelePacific Communications, a carrier that serves customers throughout California and Nevada, has signed a definitive agreement to buy MegaPath's NextWeb Inc. subsidiary dba Covad Wireless. A broadband fixed wireless carrier operating in California and Nevada, Covad Wireless will enable TelePacific to expand its SMB services into the fixed wireless market with a complementary network footprint. Transaction benefits include increased availability of high- bandwidth products to customers, the ability to provision customers more quickly, and last mile assets, which reduces dependency on incumbent local exchange carriers. TelePacific is all set to gain approximately 3,500 profitable broadband fixed wireless business customers in California, Nevada and suburban Chicago through the all-cash purchase of capital stock.

www.telepacific.com

http://tmcnet.com/58547.1

NSN to Close Motorola Deal This Quarter

Pending regulatory approval from China, Nokia Siemens Networks expects to complete its acquisition of the majority of Motorola's public carrier wireless network infrastructure assets this quarter. Initially, when the deal was announced on July 19, 2010, NSN expected to complete closing activities by the end of 2010. However, the delay in regulatory approval from the Anti-Monopoly Bureau of the Ministry of Commerce of China, which is continuing its review process, pushed back the timeline. According to the Finland-based company, all other necessary regulatory clearances have been obtained, which include the U.S., European Union, Brazil, Japan, Russia, South Africa, Taiwan and Turkey.

www.nokiasiemensnetworks.com

http://tmcnet.com/58546.1

AT&T Expands Wi-Fi

As the popularity of Wi-Fi continues to grow as more and more consumers adopt WiFi-enabled devices, AT&T late last year revealed plans to expand its hotzones in major markets, including New York City and San Francisco, before the end of 2010. Some media outlets have reported that the deployments are in large part a reaction to complaints of dropped calls from cell phone customers in certain metropolitan markets. The expansion will start with AT&T's existing Times Square Wi-Fi hotzone and new hotzones near Rockefeller Center and St. Patrick's Cathedral. In addition, AT&T will launch a Wi-Fi hotzone in San Francisco's popular Embarcadero Center.

www.att.com

http://tmcnet.com/58548.1

Alteva Exec Talks Mobile

In a recent interview with TMC's Stefania Viscusi, William Bumbernick, chief innovation officer at Alteva, said: "As service providers evolve to offer different flavors of the mobile VoIP product, we will see changes in calling plans, features and phone capabilities. End users will greatly benefit from those changes and over time that will change the mobile communications environment. It will no longer be about phones, but more about their applications. It won't be handsets and mobile devices, but more about how voice and/or video communications, SMS or MMS, presence, integrates into your hard phones, softphones, smartphones and other mobile devices – they will all become business process-enabled communications, and it won't just be limited to mobile VoIP."

www.altevatel.com

http://tmcnet.com/58550.1

Forrester Maps Out Navigation Opportunity

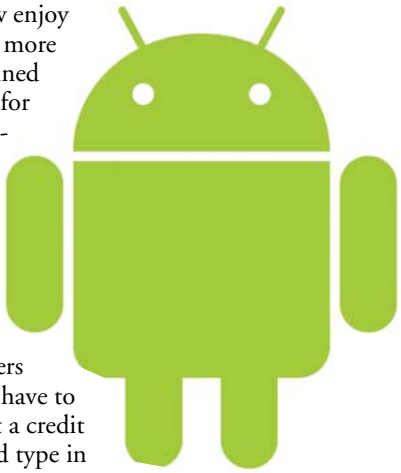
Navigation solutions powered by smartphones are the fastest-growing category of personal navigation devices, growing faster than in-car units or stand-alone devices, according to Forrester Research. But changes in the navigation device market also illustrate a recurring theme in the mobile business: the complicated revenue ecosystem, where application providers, device manufacturers and service providers compete to secure more of the revenue stream. More than one-third of consumers (37 percent) own a navigation solution, including standalone portable navigation devices from Garmin or TomTom, a phone-based application like Google Maps Navigation, or a solution built into their car, says Forrester Research. That represents a growth rate of 18 percent from the 32 percent who owned a navigation solution in 2009 and a 34 percent growth rate since 2008.

www.forrester.com

http://tmcnet.com/58549.1

Google Offer Streamlines AT&T Android Experience

Purchasing the apps you want for your smartphone or tablet computing device should be an easy few-click process, but Android users that are also AT&T customers know this hasn't always been the case. Fortunately, those customers can now enjoy a much more streamlined process for purchasing the apps they want. Android AT&T customers used to have to pull out a credit card and type in the entire sequence of numbers each and every time they wanted to purchase an app. But now Google has introduced an AT&T Direct Carrier Billing option specifically for these customers.



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Wireless Experts Adds Tempus-Rex

Tempus-Rex has signed a master agent agreement with New York-based Wireless Experts. The latter company specializes in the provision of cost-effective cellular management and cost reduction solutions for the major U.S. wireless carriers AT&T Wireless, Sprint, T-Mobile and Verizon Wireless. This alliance is expected to help Tempus-Rex make inroads in the American professional services market.

www.tempus-rex.com

http://tmcnet.com/58554.1

JAB Wireless Selects OptionEase

OptionEase Inc., a developer of on-demand software-as-a-service applications that enable fair market value accounting and compliance, has provided its offerings to JAB Wireless Broadband. Jab, a provider of Internet and voice over IP telephone services, will use OptionEase for delivering monthly equity reports, recording option and warrant expenses, and completing annual audits in a quick manner. OptionEase provides a range of end-to-end equity management tools to more than 500 private VC-funded and multinational public corporations. Based in Colorado, JAB Wireless offers wireless broadband Internet and digital voice telephone service to residential and business customers in Colorado, Wyoming, Utah, Idaho, and Texas.

www.jabbroadband.com

www.optionease.com

http://tmcnet.com/58555.1

In-Stat Offers Forecast for App-Based VoIP Spending

A recent research report by In-Stat entitled, "U.S. Business Spending by Size of Business and Vertical, 2009–2014: Business IP Communications" indicates that application-based voice over IP spending could increase nearly 60 percent by 2014. The largest growth in VoIP spending is coming from the professional services and health care and social services vertical markets. Over the next five years, it is anticipated that businesses from SOHO to enterprise will increase their applications-based VoIP spending by nearly 60 percent. While the SOHO market will see the largest decline in overall wireline voice spending declining by 6 percent from 2010 to 2014, the overall VoIP spending might increase to 52 percent during the same time, says In-Stat.

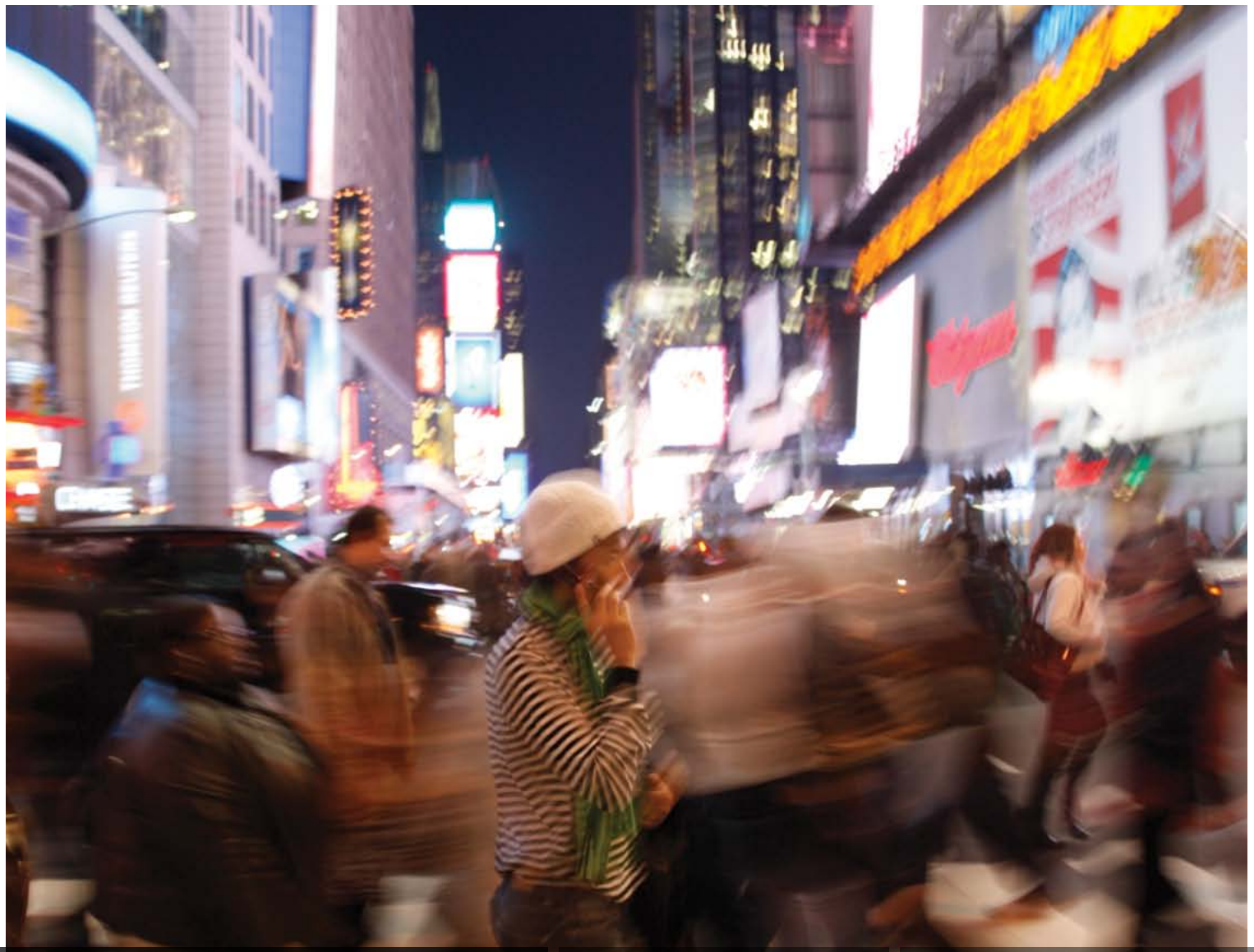
www.instat.com

http://tmcnet.com/58556.1

Insight Forecasts Post-2011 Pickup in Private Lines

Demand for new telecommunications private lines is likely to rebound after 2011, as demand for new 4G wireless applications increases. The growth in leased point-to-point circuits will resume in 2013, despite expected little growth in 2011, according to Insight Research. The current market size of the private line services is $36 billion. Telecom private lines are used by wireless carriers to link their towers to landline networks.

www.insight-corp.com



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By Paula Bernier

OpenERP Delivers Flexible Business Apps to SMBs

A five-year-old company called OpenERP is riding the wave of a variety of hot technological trends including ERP applications, open source and software as a service.

OpenERP caters to small and medium businesses like Beija-Flor Jean, a South Carolina-based fashion outfit that supplies Brazilian-made jeans to about 300 boutiques in the U.S. Beija-Flor has seen a 50 percent cost savings after adopting an OpenERP solution.

Beija-Flor is just one of OpenERP's more than 500 customers – and OpenERP's software sees more than 1,000 downloads daily. The ERP company says companies of this size are starting to look for ERP suites to replace Quickbooks and other homegrown solutions, but they don't have the resources to go with a solution from Oracle or SAP. That's where OpenERP comes in.

Going with OpenERP offers customers more flexibility to customize their applications and go from premises-based to SaaS-based solutions (and vice versa) than other systems, says Marc Laporte, COO of the company. And he says the company's solutions – which include ERP implementation, customization costs and consulting – are typically 40 to 60 percent less expensive than competitive offers. (He says OpenERP offers its solution for $39 per user per month vs. competitors who tend to charge in the $100 to $150 per user per month range. For a 25-user company with an on-site implementation, he says OpenERP charges $3,800 per year for a solution with a warranty, security alerts and a migration report.)

These benefits and price points are possible, he says, because OpenERP is based on open source software, which means no licensing costs, and because the company's solutions are based on PYTHON, which is a new generation language that is extremely flexible. For example, if a client wanted to add new fields, or change some of the workflows, or add some additional ERP work, that addition would not require hard coding, Laporte says.

OpenERP last month launched OpenERP v6, a major upgrade for its business applications, which include CRM, purchase management, manufacturing, warehouse management, project management, accounting, human resources and more. The software has been tested and improved by a global community of open source developers who contributed more than 800 suggestions, enhancements and fixes to the software.

Three key things Laporte pointed out about version 6 of the OpenERP solution are its flexibility, its ability to be deployed in both on premises and SaaS-based implementations, and its usability. To the first point, he says a customer could deploy logistics or CRM, for example, and customize the app to match the current need, and a few months later could implement with a few clicks additional applications – and have all of the above be integrated. That means users can start with what they want and get a return on their short-term investment, but still have the flexibility to expand the apps later as needed. "I believe that we're the only one that can do that," he says.

As mentioned earlier, the OpenERP solution is now available both for SaaS-based and on-site scenarios. "And what is more important, you can switch from one to another at any time," Laporte adds.

More About OpenERP v6

- Customers can start an ERP project and see the benefits in only a few months.
- Users find needed information in just a few clicks, improving software acceptance.
- More than 100 features have been added, making v6 very comprehensive and yet so simple.
- Customers can start with one application and in just a few minutes add new applications when they feel it's right for them.

Source: Accenture

To address usability, OpenERP provides both simplified and expanded menus to its rich software offer, he says. That means users don't have to get lost in the weeds of complexity just to do a simple task. It also set up the system so it offers a single solution with all the apps needed for a particular job position, like that of a purchasing manager.

"OpenERP v6 is a major breakthrough in ERP simplicity and ease of deployment," says Laporte. "For the first time, companies can build an ERP system at their own pace, enjoy the short-term benefits of starting with a single application and then build end-to-end integration as they deploy additional applications over time. No other vendor can provide this kind of integration in just a few clicks."

OpenERP is based in Belgium, has a large R&D facility in India and offices in San Jose, Calif. In March 2010, OpenERP had a presence, through its channel partners, in 20 countries. That's now expanded to more than 50 countries. The company continues to recruit channel partners. IT

Open Source News

http://tmcnet.com/58558.1

Makara Acquired By Red Hat

Red Hat has acquired Makara, a developer of deployment and management solutions for apps in the cloud. Makara's technologies will help accelerate the development of Red Hat's Platform-as-a-Service solution. Red Hat says it will make Red Hat PaaS available as software offered as a service in public or private clouds. The company says such a step will assist developers and organizations as they build, deploy and manage applications.

www.redhat.com

http://tmcnet.com/58559.1

Android Advances

According to AndroLib's latest statistics, more than 2.5 billion apps have been downloaded in the Android Market. By its definition, an app for Android includes live wallpapers, widget apps, soundboards, ringtones, and other similar applications. The Android mobile operating system was initially developed by Android, Inc., which was bought by Google in 2005 and is based upon a modified version of the Linux kernel. Unit sales for Android OS smartphones ranked first among all smartphone OS handsets sold in the U.S. in the second and third quarters of 2010, with a third quarter market share of 43.6 percent.

www.google.com

http://tmcnet.com/58560.1

KDE Embraces OIN

Open Invention Network, a collaborative enterprise that enables innovation in open source and an increasingly vibrant ecosystem around Linux, extended its community with the signing of KDE as a licensee. KDE is an international technology team that creates free and open source software for desktop and portable computing. Adriaan de Groot, vice president of KDE, comments that the company views an OIN license as one of the key methods through which open source innovators can deter patent aggression, and KDE is committed to freedom of action in Linux. Patents owned by Open Invention Network are available royalty-free to any company, institution or individual that agrees not to assert its patents against the Linux System.

www.openinventionnetwork.com

http://tmcnet.com/58561.1

UC Provider Karel Gets eZuce License

Karel Electronics has signed an OEM agreement to license eZuce's openUC software and build integrated unified communications solutions for worldwide enterprise markets. The agreement grants Karel rights to license eZuce's openUC software for inclusion in its upcoming UC solutions, fully-integrated along with its own branded PBXs, phones, servers, and media gateways. Karel will market its UC solutions worldwide under its own brand. Additionally Karel will have exclusive licensing and reseller rights to openUC within the Turkish marketplace.

www.ezuce.com

www.karel-electronics.com

http://tmcnet.com/58562.1

NXP, Google Integrate Open Source Stack

NXP Semiconductors has announced a strategic collaboration with Google Inc. to provide a complete open source software stack for Near Field Communications. According to NXP, the NFC stack will be fully integrated and validated on Gingerbread, the latest version of Google's Android operating system. Google also integrated NXP's NFC controller PN544 into the newly launched Nexus S phone, co-developed by Google and Samsung. BlackBerry maker Research in Motion has hinted that it also will support NFC in future products.

www.nxp.com

By Paula Bernier

The Connected Home

Carriers, Vendors Address Home Automation, Security

Folks in the industry have talked about the connected home for years, but various new developments could mean that the connected home for the average American is moving closer to reality.

With the economy as it is, and the "greening" of America, more consumers now are looking to lower their energy consumption and costs. Meanwhile, telephone and cable TV companies are under threat by the over-the-top providers, satellite TV and each other. Delivering home automation solutions can provide a service provider with a whole new revenue stream and give it one more thing to tie customers into its service offering.

Verizon is among the service providers readying to introduce a home monitoring and control service. The service, which the company demonstrated to press at last month's Consumer Electronics Show, is now in trial with less than 1,000 Verizon employees whose homes are on the company's DSL or FiOS networks in New Jersey, says Ann Shaub, director of consumer product management at Verizon. If all goes as expected, she says, Verizon will launch the service commercially across the company's network footprint at the end of the first quarter of 2011.

The service will enable customers to use their smartphones, computers and/or FiOS TV services to lock doors remotely; see what's going on at home via networked cameras; and adjust, control and set their appliances, lights and thermostats.

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Verizon's Home Monitoring and Control interface allows the customer to turn off an individual lamp, for example, get an energy reading on that particular lamp, and even view a graphic that indicates how that energy usage compares to other products, explains Hassane Bouhia, group manager of Verizon broadband solutions. Customers also can tap into the Verizon interface to see their total home energy consumption and get tips on how to realize energy savings.

Shaub adds that Verizon won't say that its service will lower the consumer's energy costs, but it will give them the tools to make their own decisions around energy consumption.

While it can be interesting to look at your energy consumption, few want to make a full-time job out of it, so the Verizon service enables consumers to create various "modes" for home automation, says Bouhia. For example, a vacation mode could allow for lights to be turned on and off automatically at certain times of the day or night.

The service also has some wireless tie ins. For example, if the user wants, he or she can receive text messages if, for example, there is activity on his or her home security camera. Also, there's a mobile application for the Home Monitoring and Control service, so customers can have the same experience on their mobile as they would accessing the interface via a computer or FiOS-enabled TV.

Verizon is also keenly focused on validating the customer experience and service set up during the Home Monitoring and Control service trial, adds Shaub. The company has various kits customers can select from that allow for control and monitoring of select parts of the home – such as light fixtures or the home camera for self-service security – as well as a whole home solution. She adds that Z-Wave technology allows for plug-and-play functionality of these various Home Monitoring and Control kits.

As discussed in the October issue of INTERNET TELEPHONY (page 6), Z-Wave stemmed from a technology called Zensys, now owned by Sigma Designs, that employs wireless mesh network technology that can be used in the home. The solution has been in the market for eight years and millions of products – from locks to thermostats to light switches – based on it have been shipped, says Mary Miller, director of marketing for the Z-Wave Alliance.

"It's really bringing home control to the masses," Miller says, adding that if you've ever seen an Apple commercial in which a vacationing family uses an application to turn off their home lights remotely, you've seen a Z-Wave demo.

Sam Lucero, practice director for M2M Connectivity at ABI Research, says until now home automation has been a niche business aimed at those with $100,000 to spend or at do-it-yourself technophiles. The Verizon service, which is based on the 4Home platform (which Motorola Mobility bought last month), makes home automation and control accessible to the average consumer, unlike solutions from companies like Control4 or Exceptional Innovation, which are more advanced platforms aimed at a specialty distributors, or AMX or Crestron Electronics Inc., which are aimed a luxury home installations, he says.

Of course, Verizon is not the only service provider dabbling in home automation and control, he adds. Comcast is using a platform from iControl, a company in which the cableco and other big names like security firm ADT, Cisco, Intel Capital and General Electric have invested. In November iControl announced a merger with another home automation outfit called uControl. The newly combined entity, which leverages ZigBee and Z-Wave technology and well as iPhone and Android apps, keeps the iControl name, leadership and headquarters.

And, according to reports, AT&T recently bought home automation company Xanboo. However, the company may be trying to downplay the purchase, as information on the deal is not available on either company's website and AT&T didn't respond to INTERNET TELEPHONY's request for comment on the matter.

While every service provider's home automation offer will be a little different, Lucero says it looks as though some of the cablecos will train staff on installation of such services and deliver fully monitored, UL-listed security offers as part of the mix. That may be because of their choice of the platform from iControl, which has a strong security bent. Meanwhile, on the telco side, players tend to want to take a more hands-off approach to the security aspect, instead offering consumers the ability to monitor their own homes through telco-provided cameras and interfaces.

Meanwhile, traditional security companies like ADT are expanding beyond their core business to deliver home automation services and tools that allow customers to control remotely their blinds, home appliances and the like.

Verizon has not yet announced the pricing for its home automation services, but Shaud says it will be in the "sub double-digit range." She declines to comment on the pricing for the kits.

ABI Research's Lucero says such services could bring in $20 to $30 a month of recurring revenues for service providers. And he expects more service providers to jump into home automation and monitoring services in the year ahead.

Home automation and control vendors are also moving forward with initiatives that should make Jetson-like homes more accessible to your everyday Joe. For example, Lucero says, Control4 is in talks with consumer electronics vendors to port its software into various home electronics products such a TVs and set-top boxes. IT

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By Paula Bernier

Cross-Platform Solutions & Home Networking Hubs

Vendors Grapple to Take Control of the Whole Home Experience

Americans love their TVs. They also love their computers, their smartphones, their tablets, and their movies and games. But wouldn't it be nice if the different experiences and content consumers access on these various devices were more integrated? That's exactly where we're headed, and everyone from Cisco Systems Inc. to Microsoft Corp. is moving on the opportunity.

Cisco moved forward on this front when it unveiled Videoscape last month at the Consumer Electronics Show in Las Vegas. New elements of Videoscape include, in the home, the Videoscape media gateway for the integration of voice, linear and online video, high-speed data, Wi-Fi and network traffic routing; the Videoscape IP set-top box, engineered to support all video forms delivered to a TV, including pay TV, broadcast channels, premium channels, VoD and the Web; and Videoscape software clients that extend the Videoscape experiences to a wide variety of home and mobile devices, from connected TVs to tablets, smartphones and more. It also includes the Videoscape Media Suite, which offers full life-cycle content management so that service providers can efficiently and cost-effectively manage and publish content across multiple screens, and the Cisco Conductor for Videoscape, which orchestrates

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various services and subscriber-management functions across the cloud, the network and client devices. All of the above are part of Cisco's medianet architecture, and work in conjunction with its existing portfolio of network products.

John Chambers, chairman and CEO of Cisco, which in late 2005 announced plans to buy major set-top box company Scientific Atlanta, emphasized how Videoscape will change the TV experience for consumers.

"Video will be the next voice," he said, noting that by 2014 more than 90 percent of consumer Internet traffic will be video, and video will increase sevenfold.

Videoscape will address this new video trend and transform the TV experience by allowing customers to access both the traditional content they're used to; as well as subscription-based programming, including content from over-the-top providers; and DVD movies and programs, he said. In describing this, Cisco showed a TV screen with an interface categorizing the various content types (not unlike the Apple TV interface) as well as a "friends feed" that displayed video messages from others as those messages arrived.

Chambers then demonstrated how a Cisco media gateway, which handles all kinds of traffic, including voice, and the recently unveiled Cisco umi, could allow him and a buddy to send one another video messages about college basketball and, if they wanted, to tie other video or data in with those communications.

"Mobility is going to be a huge part of it," Chambers added.

He said Videoscape will make the user interface consistent across all user devices, including all of the above-mentioned things as well as gaming devices, etc. It also keeps all devices in sync so if, for example, a consumer gets a video message from a friend, that message will appear both on the user's laptop, on his TV, and on his phone.

But the delivery of the integrated home communications experience will not be delivered by Cisco alone, Chambers emphasized. Rather, it will involve an ecosystem of partners, including service providers, he said, noting that Telstra was in the audience at the Cisco press conference and is a Cisco service provider partner. However, Chambers didn't comment on how, when or even whether Telstra is using or plans to use the Videoscape solutions.

"Service providers can do for the TV experience what mobile Internet did for the mobile phone," he said.

Of course, it is Microsoft that provides the middleware for many of the leading telco TV deployments. But when it came to Steve Ballmer's speech at the Consumer Electronics Show, the Microsoft CEO instead talked about how the Xbox is positioned as the hub for home communications, and how Microsoft's Windows 7 and Windows Phone 7 software bring mobility and other important functionality into the mix.

The Xbox launched a decade ago. That was followed by Xbox Live, which brought the cloud and social entertainment into the mix. Xbox LIVE now boasts 30 million members. Recently Microsoft introduced KINECT for Xbox 360, a product that allows gaming without the need for a remote control and which "opens the experience to the whole family," he said. Ballmer noted that 8 million KINECT sensors have been sold. And a story quoting Wedbush Securities analyst Michael Pachter says that in December the Xbox 360 saw a 91 pecent boost to 2.5 million units sold.

Ballmer at CES also revealed that this year Microsoft will go on to bring KINECT capabilities to Netflix and Hulu on Xbox LIVE. That means users will be able to access and control that content by waving their hands and arms. Microsoft also demonstrated how the Zune store, which offers movies and music, lets customers order and manipulate their context without a controller, via body movement and/or voice commands.


Ballmer

Ballmer went on to reveal a new KINECT capability called avatarKINECT that presents an on-screen version of an individual and tracks the facial movements of that person so the avatar smiles, raises its eyebrows and makes other facial moves as the person does so. (Think Mii, but with facial expressions.) This spring avatarKINECT will be free for all Xbox LIVE gold members, he said.

Considering that the Xbox has evolved from a gaming platform to a device that can be used to access other content like movies and enable social networking, it is "becoming the hub of your living room," he concluded. Of course, it's just one of several multifunctional gaming platforms out there.

Ballmer and other Microsoft presenters went on to talk about how the Windows 7 Phone, now allows customers to enjoy Xbox LIVE on the go. He added that an update to Windows 7 Phone, which launched just two months ago, will be coming in the next few months and will include copy and paste functionality, offer performance improvements, and will be supported on Sprint and Verizon networks.

"Whatever device you use – now or in the future – Windows will be there," he said. IT

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 Paula Bernier

In-Home Connectivity

Wireless, G.hn Solutions Address Residential Networking

People have become accustomed to the connected lifestyle and, therefore, expect to be able to tap into the network from any corner of their homes and with good performance. With that in mind, many equipment suppliers are working on new solutions to extend Wi-Fi into the corners of our homes that currently have no or spotty coverage, and industry groups are trying to advance technology that leverages in-home wiring to expand connectivity further.

For example, Netgear Inc. introduced the Universal WiFi Range Extender, which increases the coverage of an existing home network and plugs directly into an electrical outlet.

Netgear also unveiled a wide variety of other gear, including various routers.

G.hn is backed by various companies including Intel, Lantiq, Marvell, Sigma Designs, Texas Instruments and others.

The mobile broadband router, or MBR1000, is a new wireless router with 4G mobile broadband support. Verizon was highlighting the product at CES, and Bell Canada is already using it in commercial deployments.

The N600 Dual Band Wireless Gigabit Router – Premium Edition, meanwhile, adds to the company's previous product in this category by bringing new features such as clear channel selector; ReadyShare printer and quick start; and steady stream HD, which starts streaming videos faster with less buffering delay and maximizes bandwidth. Along with this new product, the company introduced the Netgear Genie, a home network dashboard application through which consumers can connect to, control and monitor their home networks. (For more on home automation and monitoring solutions, see story on page 32.)

Netgear's N600 Wireless Dual Band Gigabit ADSL modem router, meanwhile, brings together the functionality of multiple devices in a single box. It allows Internet access via ADSL or a gigabit Ethernet port, has a four-port gigabit switch, ReadyShare storage access with two USB ports, a DLNA media server, and more.

And the N750 Wireless Dual Band Gigabit Router, which offers connectivity of up to 450mbps, is designed for HD video streaming, simultaneous downloads and high-quality online gaming. The dual band technology means interference isn't a problem and helps ensure high speeds and good range.

The company also introduced a variety of other products in the wireless accessory arena, Powerline AV solutions; a home media storage product; and a digital media player.

Elsewhere on the home networking front, the HomeGrid Forum is promoting an ITU home networking standard called G.hn that uses existing in-home wiring to carry traffic at gigabit speeds.

G.hn is backed by various companies including Intel, Lantiq, Marvell, Sigma Designs, Texas Instruments and others. HomeGrid Forum President Matthew Theall tells INTERNET TELEPHONY that Lantiq and Sigma Designs expect to ship G.hn compliant silicon this quarter, meaning that by the second half of this year service providers will be able to deploy G.hn-based solutions.

While there are plenty of home networking technologies, including MoCA (which Verizon is currently using for its FiOS deployments) and HomePlug, out there, Theall says telcos typically go with the ITU standard, and in this case that's G.hn. AT&T, BT, China Telecom and international operator Telefonica already have pledged to deploy G.hn, he adds.

"The G.hn standard is going to affect any consumer device, product or service that connects with the home using either coaxial, phone or power cables," Theall says. "It's going to be exciting, it's going to be lifestyle changing for people across the world and it's all happening now." IT

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By Paula Bernier

Alcatel Lucent, Partners Show Apps Aimed at Driving Retail Sales

Question: What do Americans like to do during their leisure time when they're not at home watching TV, playing an online game, texting, or cruising the Internet?

Answer: It's a trick question, because there are at least three correct answers: shopping, driving, or eating and drinking.

With all this in mind, Alcatel Lucent and its ng connect program partners, have come up with a handful of revenue-generating applications for services providers that address the above-mentioned activities and tend to focus on LTE technology. Laureen R. Cook, vice president of 4G/LTE strategy-emerging technology at Alcatel Lucent, explains that while the applications have yet to be commercially deployed, they could be ready to launch very quickly if an interested party stepped forward. What's more, she adds, the group has worked with BellLabs' revenue group to offer cost modeling for each of these applications.

Among the ng connect applications demonstrated at last month's Consumer Electronics Show was The Connected Car, which Alcatel Lucent put together with partner QNX Software Systems, which offers a real-time embedded OS.

This includes in-vehicle infotainment and advanced safety features, but while the car is in drive the driver has no access to the entertainment, notes Cook. Each seat in the vehicle (in this case it was a Toyota) has its own screen, through which passengers can make a phone call, and have their own unique views into their own selections of games,

ng Connect CES 2011 Virtual Personal Stylist

widgets, movies and other content. They also have the ability to pull content from their home-based devices and to purchase content from online portals. Each passenger has a Bluetooth headset, so as to reduce driver distraction, Cook says. The Connected Car includes its own Wi-Fi hotspot. And the vehicle's interface ties into the user's home gateway so driver and passengers can do home energy monitoring and control remotely. Of course, a GPS system is also part of the mix, and the related application not only provides directions, but offers quick links and maps to nearby banks, coffee spots, gas stations, hospitals and malls.

Once uptake of LTE, which companies like Verizon just started rolling out late last year, hits 60 percent nationwide, Cook says she expects car manufacturers to support this application set.

A second application demonstrated by the ng connect program in Alcatel Lucent's CES booth was the Virtual Venue.

The venue in this case could be any public venue, like a museum, a theater or a sports arena. In the case of demo, the venue was a baseball park. LTE connectivity within this park, explains Cook, could allow fans to easily be pushed or actively tap into data and video related to the location, the team, the game and/or the players. Visitors could also use their wireless connectivity to order food from the concession and have it delivered to their seats. And if they didn't want to wait in a long line at the gift shop, fans could use their wireless connections and the venue app (which could show products in 3D) to make a purchase and have the product(s) delivered to their homes. Cook emphasizes that this and all the applications discussed here are all about generating new content for retail locations and their partners.

Virtual Stylist is perhaps the most interesting and multi-faceted app of the bunch. It brings together a lengthy list of partners, which includes Samsung and Vidyo, among others.

The idea here is that it allows a person to walk into a dressing room in which there's high-tech equipment that creates a look-alike avatar of the shopper and can display various clothing and makeup on that avatar, which can then be saved by the shopper in a "virtual wallet" for later viewing and sharing. This demo also showed the shopper interacting with a stylist via an HD teleconference.

This can enable a retail outlet to expand its revenues both by enabling shoppers to consider and make a purchase even after they've left the store. It also makes reordering simple, says Cook.

The Virtual Concierge, meanwhile, leverages digital signage from MediaTile and LTE connectivity enabled by Alcatel Lucent gear to provide what Cook calls a "human kiosk". The idea is to offer folks access to a remote expert so they can get more information on products, help with troubleshooting a product, and/or communications in their native tongue.

In a separate area in its CES booth, Alcatel Lucent showed a digital sign in table format. Two people were using their cellular phones as controllers to play a game on the digital sign.

Other applications demonstrated included Global Bazaar, a mall-based kiosk that lets shoppers view, order and pay for products from around the world, and the Media Hotspot. The former app's interface includes a 3D map of the world that drills down to what products are available from that geography, and a link to allow shoppers to initiate a telepresence conference call with a representative to talk in real time. The Media Hotspot, meanwhile, is a media jukebox that could allow retailers to bump up their sales by offering customers the ability to buy music while they're in line to buy a coffee, for example, says Cook. **IT**

By Paula Bernier

The Long and the Short of IPv6

We're Not There Yet, But Soon It Will Be an Imperative, Not a Choice

The communications industry has been talking for a decade about the threat of IPv4 address exhaust and the need to move to IPv6. Yet while many service providers today support IPv6, the vast majority of their customers have not made the transition. Why? As it turns out, IPv6 is suffering from something of a chicken-and-egg problem.

Dr. Shankar Narayanaswamy, vice president of network architecture at Reliance Globalcom, which in late February announced the launch of IPv6 as a feature enhancement to its IP Transit product portfolio, says most organizations don't yet see the urgency of moving to this new IP addressing scheme. That's because some in the industry have created workarounds like classless interdomain routing to get around IPv4 exhaust. Perhaps more importantly, though, it's because content companies for the most part haven't moved to IPv6, he says.

"I think that's the biggest hurdle," says Narayanaswamy, referring to the fact that most content companies – like online blogs, magazines, and other purveyors of information – have not yet gone IPv6.

Once these workarounds are no longer practical, and once content providers are no longer able to reach the customers they want to address, the case for IPv6 will become clear, says Narayanaswamy of Reliance Globalcom, which sells services to carriers as well as direct to enterprises.

As you probably already know, as new endpoints like smartphones and tablets proliferate, there's a growing need for IP addresses. In fact, many experts forecast that the pool of IPv4 addresses will empty out later this year. Narayanaswamy explains that means that while content companies will be able to reach existing endpoints with their offerings, when newer devices that rely on the IPv6 addressing scheme try to tap into their sites, they'll come up dry. And when that starts to happen, or the threat of that reality draws nearer, content companies are likely to get moving on IPv6, he indicates.

More About IPv6

- It offers an address space of 128 bits as compared to 32 bits in IPv4.
- It will provide virtually unlimited IP addresses for the future, expanding the number of possible addresses from approximately 4 billion with IPv4 to roughly 340 trillion.
- It also enables, improved network configuration, security, scalability, mobility, enhanced administration and manageability for global organizations.

Source: Reliance Globalcom

Despite the apparent lack of demand for IPv6, many service providers have gone ahead and taken the IPv6 plunge.

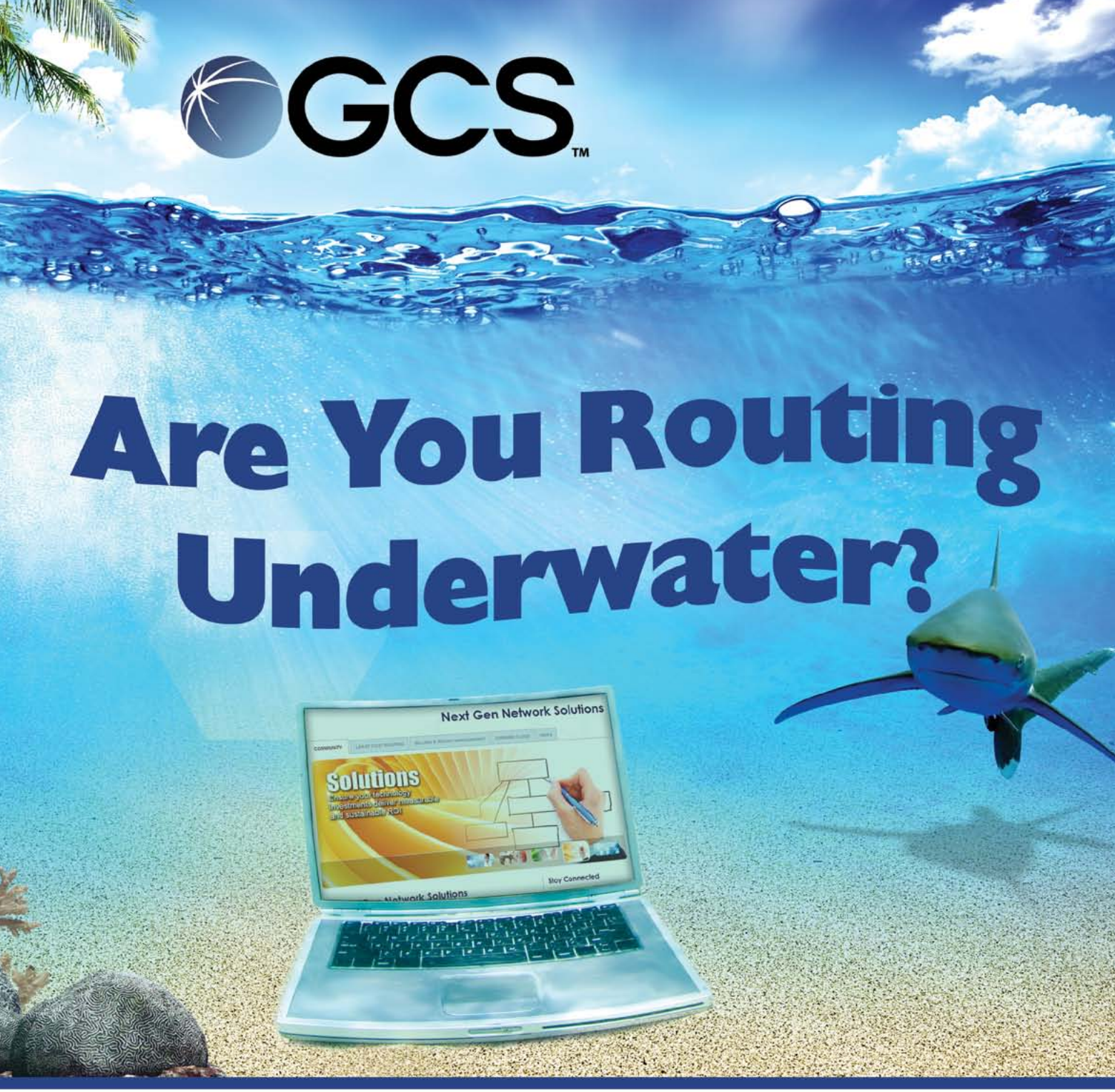
In addition to Reliance Globalcom, in November Cox Communications announced it is prepared to support IPv6. The company is conducting active trials with Cox Business customers and plans to extend the trials to its residential product line.

"By migrating to IPv6, Cox is future-proofing its network, systems and products," says Jason Weil, principal architect at Cox Communications. "As a digital voice, video, Internet and commercial service provider, we are committed to a seamless transition, so our customers experience the same service in the future that they enjoy today. Cox's dual-stack IPv6 deployment allows customers the ability to continue leveraging their current IPv4 capability while incrementally adding the IPv6 support required for the next generation of network devices and applications."

Also in November, CableLabs revealed that it had successfully completed a PacketCable 2.0 SIP call over IPv6 during a two-week IPv6 interoperability event Oct. 11-22. This was the fourth in a series of semi-annual IPv6 interoperability events.

Representatives from 17 companies worked together to test IPv6 interoperability in a range of products including DOCSIS 3.0 cable modems, DOCSIS 2.0+IPv6 cable modems, cable modem termination systems, PacketCable E-DVAs, e-set-top boxes, provisioning servers, home gateways, large-scale NAT servers, and test tools. Participants also tested DOCSIS IPv6 provisioning, Internet video streaming, eRouter and standalone home router configuration, and interoperability with PCs running Windows XP, Windows 7, Mac OS X, and Linux. In addition, CableLabs demonstrated NAT444 and Dual-Stack Lite, two important IPv4/IPv6 coexistence technologies.

Companies that participated included A10, Arris, Broadcom, Cisco, Comcast, Cox, D-Link, Incognito, Motorola, SCTE, Shenick, Spirent, STMicroelectronics, Technicolor, Texas Instruments, Ubee, and the University of New Hampshire Interop Lab. "Suppliers have demonstrated significant progress in their support for IPv6," says Chris Donley, project director of network



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protocols at CableLabs. "This is a very important technology for cable operators, and it is encouraging to see such a strong commitment from the industry's supply community."

However, according to Narayanaswamy, the barrier to support IPv6 is not all that high for service providers. He says it's typically simply a matter of the ISP selecting the IPv6 configuration option on their existing gear.

While many service providers have embraced IPv6, some major enterprises and government agencies have only "dabbled" in IPv6, Narayanaswamy says, with governmental entities and global enterprise customers the most in tune with the pending IPv4 exhaust. He adds that he's unaware of any customer that has made a wholesale move to IPv6.

Voas says that because the size of the addresses and headers on packets change with the move to IPv6, database cells may not be big enough to support new longer addresses. For example, if an organization uses a particular database to generate reports off of a security device, those reports have fields in them designed for IPv4.

"The push from the government is that they recognize converting to v6 is not going to be a small effort, and they want to get well ahead of the curve, they don't want to get caught at the end," says Voas. "It takes time."

Cisco Systems, which has been a key company in the effort to move this new addressing scheme forward, says that the U.S., Brazil, France, Germany and Japan are among the countries "aggressively transitioning to IPv6."

While many service providers have embraced IPv6, some major enterprises and government agencies have only "dabbled" in IPv6.

According to INTERNET TELEPHONY's sources, government agencies are somewhat ahead of the curve in adopting IPv6 given the federal government's directive that all U.S. government agencies must upgrade their IT infrastructures to support the new addressing scheme.

The deadline of the mandate has shifted over time, but around June of last year the government indicated it would no longer push back this requirement, says Dennis Voas, manager for security solutions at Enterasys Networks, a Siemens Enterprise Communications Company. (The company provides wired and wireless network infrastructure and security solutions. In December Enterasys Networks announced the latest release of the Enterasys Intrusion Prevention Solution, which features patented distributed intrusion prevention technology that simultaneously addresses the widest variety of network and host-based threats, now extends its network protection to enterprises deploying the IPv6 standard.)

Michele Araujo, director of product management at Enterasys, adds that at first the mandate was for IPv6 compatible solutions, meaning that traffic had to be able to run over an IPv6 with no inspection, but that it evolved to require networks be IPv6 addressable, meaning inspection must be included.

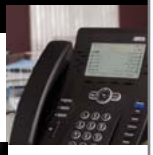
Araujo and Voas agree with Narayanaswamy of Reliance Globalcom that outside the federal government and service providers, there seems to be very little sense of urgency around IPv6. But while Narayanaswamy says that the move to IPv6 is no great shakes, at least not for the service providers, the Enterasys employees indicate that the change is a pretty big deal from a software point of view.

"Government agencies, institutions and commercial companies around the world are committed to the operational deployment and use of IPv6," says Brad Boston, senior vice president of the global government solutions group at Cisco.

The company, which says it has pioneered IPv6 technology since its inception in 1996 and announced in November that it leads in total USGv6 certification for routers, switches and firewalls, is introducing new features in its ASR 1000 Series routers, use cases, and professional services to help customers transition to IPv6. Additionally, Cisco notes it is the first technology vendor to be certified by the IPv6 Forum to offer IPv6 education and certification for information technology professionals. And it has developed IPv6 professional services to help customers successfully transition to IPv6 with a portfolio designed to meet customer needs throughout the network lifecycle, from planning and design to deployment and optimization.

"Our leadership, attested by industry and government certifications, underscores an architectural commitment to IPv6 across the board – from our devices to our applications and professional services," says Boston. "Our unique knowledge and experience will help our customers move up to the next generation of networking applications and operating systems in order to dramatically enhance communication, collaboration and mobility."

Adds Jeanne Beliveau-Dunn, vice president and general manager at Learning@Cisco: "The need for networking talent capable of designing, managing and implementing IPv6 will grow in importance as the availability of IPv4 network addresses is depleted." IT



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By Ian Colville

The Cloud – The Development Environment for the Future of Communications

In the beginning, the Internet was conceptualized as a way to interconnect multiple computers, and the scientists who used them, for the advancement of science and technology. Today's Internet has surpassed that fundamental purpose by evolving into the primary communication medium that connects nearly everybody to everything. It is ubiquitous, efficient, and forever evolving.

The perfect illustration of this maturation is the growth of voice over IP technology. When first introduced, VoIP was positioned as the perfect solution to reduce toll charges. But when customers baulked at the high costs associated with integrating the first series of IP PBXs, it took a while for the technology to find its footing. Once it was discovered that incredibly robust applications like linking to remote locations and collaboration tools were optimized in an IP environment, interest began to increase. And when companies realized there was a profound ROI by collapsing voice and data networks into a single infrastructure, the technology really took off.

And now, history is repeating itself. As the Internet continues to evolve and mature, the cloud concept is the most recent iteration garnering attention. Characteristic of the name, the cloud is difficult to define or pin down. For some, the cloud is just a new name for the same connectivity medium that underpins the Internet itself. However, in reality, the cloud is a temporal destination: a place where computing resources are available to execute tasks and generate results. Not a destination in a brick and mortar sense, the cloud is more a destination of a malleable nature that adjusts to the demand and applies the appropriate resources to match the need. Connectivity no longer has to be from point A to point B, now it can be from point A to point It Doesn't Matter.

In telecommunications, cloud-based services take a large step beyond traditional hosted services by providing near limitless scalability, physical and geographic diversity, and operational resilience that are not commonly available in a brick-and-mortar hosted offering. Hosted telephony services targeted to most enterprises rely on a dedicated connection to a telephony server or call manager that is located at the service provider premises. Most service providers then employ strategies such as physical redundancy and failover capability to ensure reliability in the event of a catastrophic system failure. But, by the very nature of the services being hosted from a single physical location, connectivity can still be at risk. Hosting services in the cloud mitigates these hazards by employing resources located in dispersed locations that act in concert across the Internet.


Ian Colville

Additionally, the distributed nature of the compute resources in the cloud can provide an elastic resource without the capital and operational expenses associated with in-house systems. Cloud-based resources provide nearly limitless scaling for development activities, which oftentimes place severe peak demands on compute resources. For the more mundane daily operations of an enterprise, the cost benefits are realized through virtual right-sizing of resources to meet the immediate need. Whether computer power is needed to support the widely varied demands of development, or the more predictable fluctuations in telecom usage of a typical enterprise, cloud-based service providers can easily support pay-as-you-go supply models that adapt to their immediate needs.

Amazon's Elastic Compute Cloud (EC2) is one such platform, which goes a long way toward eliminating the risks and costs associated with managing dedicated computing resources and infrastructure. The ability to expand and reduce resource utilization on the fly enables a multitude of advantages for service providers and developers. The latter group, in particular, gain the freedom to focus their energies on innovating and creating new applications tailored to address the changing landscape of commerce in the Internet-powered world.

The compute resource platform – or virtual machines – provided in the cloud form the foundation of the next generation of application development. But, as with every other technology paradigm, there are multiple layers required to deliver on the promise of developing in the cloud. These layers address essential business requirements, such as connecting to legacy networks; supporting a broad array of protocols and codecs; and maintaining vital security and operational functions.

Fundamentally, telecom applications manage various forms of digitized communications signals – voice, fax, video, and others – collectively referred to as media, for a multitude of purposes. Manipulation of the digitized media traditionally has been done by dedicated hardware or server-based media processing engines. These media processors each have unique programming requirements and most often require the developer to have intimate knowledge of the programming interface and the C or C++ language.

Enabling development in the cloud necessitates a shift from complex programming languages like C to higher-level scripting languages and web services APIs, making media processing more accessible to developers who are looking to create communications applications that can reach beyond the traditional telephony base. Opening the door to a broader scope of developers will have a dramatic influence on the type and variety of application-layer service offerings in the marketplace.

At this point, the cloud provides flexible compute resources and application programming interfaces that enable developers to go down the path that leads to new services and functionalities. Yet there are some fundamental requirements that must be managed for providers to deliver on the promise of a cloud-based enterprise service. The global nature of business necessitates the ability to integrate and manipulate media across disparate network types and accommodate many different communications protocols.

The final layer of the development toolkit should cover the features and functions that are commonly used in everyday business. Making and receiving voice calls, multi-party conferencing, contact center capabilities, call recording and playback, automated voice prompts, call transfer and hold, voice recognition and DTMF receiving are among the basic services upon which customers rely.

Heavier reliance on cloud-based communications services brings with it an increased risk of intrusion or eavesdropping on sensitive conversations or transactions. Securing sensitive information in place or in flight is a challenge for every business. It is critical that every ongoing development of cloud-based applications should include capabilities to incorporate secure protocols and encryption techniques as they become available.

Whether for regulatory reasons, or just prudent business practice, concern for the security of confidential and sensitive information is prominent for nearly every business. A concern shared by many is that the data in the cloud is somehow less secure than data held in a system on the corporate premises. Cloud-based service providers mitigate this concern with the implementation of secure access and encryption protocols and schemes that provide data security on a par with or better than that employed by many enterprises.

Cloud-based systems are comprised of multiple elements that act in concert. A necessity in such an environment is replication of data and rigorous version and operational control of all compute resources. A key benefit of the homogeneity of these systems is that it limits exposure to attacks and hacking by virtue of maintaining all machines at the same level of security and encryption technology.

There is a broad spectrum of access and usage models for cloud-based applications. The broadest use is the public cloud that provides limitless virtual resources made available on demand. In this public model, the user has access to many shared resources in a multi-tenant operational sense with absolute sufficiency of resources as needed.

Private cloud services are somewhat akin to a VPN connection employed by enterprises to enable remote connection inside the firewall. Use of a private cloud can reduce operational costs with cloud-based compute resources, but also addresses concerns about data security and control.

In a hybrid scenario, a defined set of resources are segmented from the public cloud infrastructure and dedicated to exclusive use. This scheme provides the enterprise with the look and feel achieved by building its own cloud without the up-front costs.

With all of the layers in place, and the cloud scheme that best fits the business's needs, the cloud becomes an extremely powerful environment for creating the next wave of communications applications and services. The promise of the cloud as the next big step in the ongoing evolution of communications technology is becoming a reality. We can only guess what doors will be opened by the innovation that will be enabled. But if history is a guide, the success of cloud-based services will once again come down to nimble, visionary and creative providers who can leverage this platform to deliver innovations that can tangibly satisfy the needs and challenges of both businesses and consumers.

Learn more about Aculab's take on cloud communications by attending a keynote delivered by Aculab's founder and CEO Alan Pound at ITEXPO on Thursday, Feb. 3 at 10 a.m. IT

Ian Colville is product manager at Aculab (www.aculab.com).

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By Paula Bernier

A New Take on Improving Website Performance

While facilities-based wireless network operators are busy optimizing their networks and services for the mobile data barrage, companies continue to optimize their websites so users on both mobile and fixed connections and endpoints have a better experience during their virtual visits. One company helping them with that is Strangeloop.

Strangeloop designs, builds, installs, and supports hardware and software solutions that accelerate the performance of websites and web-based applications.

After founding content management company Iron Point in 2002 and selling it four years later to Active Network, Joshua Bixby in 2006 joined forces with his identical twin, Jonathan, and two other business partners to establish Strangeloop. Joshua is president of Strangeloop; Jonathan is CEO. The private company had 125 customers as of late last year, has $11.5 million in financing, and expected to reach profitability by 2010.

During his time at Iron Point, Bixby says customers always wanted the sites the company built for them to be faster and more feature rich. So, he set out to "create a magic box that would make everything faster."

Most people think about website optimization in terms of taking what the server gives you, and figuring out how to make it faster. Strangeloop, meanwhile, approaches the problem by working with the "parcel" – unpacking it, optimizing it, and sending it, says Bixby.

Specifically, Strangeloop's solutions improve website performance by minimizing the number of round trips, decreasing payload by removing unneeded content, and optimizing how the browser and images are rendered. It also automatically rewrites to a CDM, flushes the buffer early and does preloading.

Today Strangeloop offers solution to customers both as a service and in the form of appliances that customers can install and manage from their own data centers. Traveloc-ity is among the customers that subscribe to Strangeloop's service-based solution. Petco and VISA are among the roster of customers that have purchased and installed the Strangeloop appliance.

Although the costs of these solutions depend on a customer's particular requirement, a mid-sized business using two appliances could expect to spend about $60,000, while a mid-tier cloud customer might pay between $3,500 and $5,000 a month for the Strangeloop service.

Strangeloop's "magic box"

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Strangeloop President Joshua Bixby

Whatever the model to which a customer subscribes, in the end, it's all about making web pages render faster to result in better business for Strangeloop's customers, says Bixby. Improving website performance, he adds, gets more people to a site, keeps them there longer, and results in a larger and more frequent number e-commerce transactions for the site.

So how fast is fast enough when it comes to website rendering? Well, that's depends on who you talk to. Google has the internal mandate to make every site 100 milliseconds, Bixby says, but right now the "Barbie standard" is two seconds.

Bixby calls it the "Barbie standard" because, like the iconic doll from toymaker Mattel, it creates a standard that's impossible to reach. Companies like Akamai define such standards to make everyone feel insecure, he says. Instead of shooting for unreasonable goals like this, Bixby suggests companies should look at their competitors' websites to figure out where they need to be in terms of performance.

Trimming time off a website can result in a better SEO ranking. Bixby says that Strangeloop found that after it accelerated a website, Googlebot was able to crawl about twice as many pages as it was able to at the outset. Google allocates either a set amount of time, or a set amount of data, for crawling each site. The more pages that Google can crawl within these limitations, the better a site's ranking will be.

Expediting a website's rendering also can improve page views for and revenues from the site.

If every major online retailer in the U.S. were to implement this acceleration this year, Bixby said during an interview with INTERNET TELEPHONY in late 2010, it would generate an additional $25 billion in revenue.

AOL found that visitors in the top ten percentile of site speed viewed 50 percent more pages than visitors in the bottom ten percentile. On average, visitors to optimized sites view 9 percent more pages than visitors to un-optimized sites.

Microsoft's Bing conducted a test wherein it slowed down its own site by two seconds. Users made almost 2 percent fewer queries, clicked 3.75 percent less often, and reported being significantly less satisfied with their overall experience. Conversely, speeding up the site by 2 seconds resulted in a 5 percent revenue increase. Bixby adds that Shopzilla, meanwhile, decreased its average page load time from 6 seconds to 1.2 seconds and experienced a 12 percent increase in revenue and a 25 percent increase in page views.

The need to improve website performance is becoming even more important given customer expectations continue to rise and pages are getting more complex, says Bixby. In 2006, the average online shopper expected a web page to load in four

The Strangeloop Difference

Original
An unaccelerated site has 63 objects making 63 roundtrips between server and browser. The total page load time is 9.5 seconds.

Delivery
A delivery solution comprised of a content delivery network and an application delivery controller can shorten these roundtrips by bringing content closer to the user's browser. There are still 63 roundtrips, but the total page load time is 5.7 seconds.

Transformation
Strangeloop working in conjunction with the CDN and ADC shortens the roundtrips and reduces the number of roundtrips required – from 63 to just 9. As a result, the same page loads in just 2.1 seconds.

seconds; today, that same shopper expects a page to load in two seconds or less.

As indicated above, if a website doesn't load quickly enough, customers might jump ship. Bixby tells INTERNET TELEPHONY that up to 40 percent of shoppers will abandon a site after waiting three seconds for a page to load. What's more, nine out of 10 people will not return to a site after a disappointing experience, and three of those individuals will go on to tell others about their experience.

Although mobile devices and networks are much more limited in the bandwidth they deliver today than wireline broadband networks, more than half of mobile subscribers expect websites to perform as well on their handhelds as they do on their home computers. About the same number (almost 60 percent), say they'd be unlikely to return to a site that provided a poor mobile web experience. IT

Managing the Barrage

Service Providers, Suppliers Address Mobile Data on Multiple Fronts

By Paula Bernier

Fourth-generation wireless technologies like LTE and WiMAX promise to bring faster broadband connections and all-IP-based technology to cellular networks. In some places, they're already doing it. But if you thought that means wireless service providers will have more than ample network capacity for the long term, or even for the immediate future, you thought wrong. With mobile data demand what it is, even some of these brand new 4G networks will soon be overwhelmed by rich media traffic.

Cellular network operators like AT&T and Verizon already are taking steps to address all that through the introduction of more usage-based service packages, as opposed to selling services on an all-you-can-eat basis.

"I expect to see more experimentation with flexible and more creative data service bundles and offerings," says Tekelec CMO Susie Kim Riley. "For example, operators may introduce tiers for video, music or gaming services instead of pricing plans by the byte. These appeal to a wider range of customer segments, increasing retention and service plan personalization."

Some wireless service providers also are doing bandwidth throttling to put the lid on capacity consumption from so-called bandwidth hogs. Clearwire is one example of a company that has admitted to employing this procedure.

Meanwhile, some of the equipment providers that outfit – or hope to enable – mobile data networks are developing, delivering and, in some cases, deploying solutions that help wireless service providers more efficiently manage their networks and the applications that run over them.

For example, Eden Rock Communications sells a real-time coordinated multimode resource optimization solution called Eden-NETT. It's a controller that talks to thousands of base stations to get information about what's happening on each channel.

Chaz Immendorf, president and CEO, says that provides wireless service providers a map of how best to allocate radiofrequency at any given time. As a result, a wireless service provider can realize capacity improvements on the order of 40 percent for LTE networks, Immendorf says.

While the Eden Rock solution puts the focus on the network infrastructure, some outfits have come out with solutions that target how applications and content are handled.

In this category, Opanga offers a video delivery optimization solution that prepositions content on endpoint devices. That way, service providers can offer customers the content of their choice for something like $1 a month, and preposition that content on devices so networks don't get overloaded, explains Opanga CEO Dave Gibbons.

"We just think that has to happen," he says.

The Opanga solution was in trials with service providers in the Americas as of late last year.

By Paula Bernier

Run the Gambit

Company Expands Simulated Lab to Cloud, Mobiles

You wouldn't invest in a Cadillac to teach an inexperienced driver the rules of the road. Instead, at least in my day, Driver's Ed teachers used simulators to get their students acclimated to being behind the wheel.

Likewise, it doesn't always make sense to invest in a pricy test network to get folks trained on the latest Cisco gear. So some companies employ simulated lab environments from companies like Gambit Communications.

It's an imperfect analogy, I know. You really do have to get behind the wheel to get the full experience of driving. And comparing sophisticated simulated network labs to the unsophisticated driving simulators some of us used in high school 30 years ago is like comparing apples and oranges – or apples and orangutans. But you get the idea.

Anyhow, Gambit's MIMIC Simulator, which is actually a bunch of simulator modules, is used by more than 600 customers for development, disaster simulations, testing and training. Users of the tools include such well-known organizations as AT&T, Cisco, HP, IBM, Intel, JP Morgan, Shell, the U.S. Army, the U.S. Air Force, and VISA.

What's new and exciting on this front is that Gambit Communications recently made generally available a cloud solution based on this technology, explains CEO Pankaj Shah. As a result, Gambit can put hundreds of labs in the cloud and enable users to connect to them using their favorite browser. Users can rent a lab in the cloud for $10 per user per lab; $35 for 30 days; or $90 for 90 days. Kaplan IT Learning, which helps students with test preparation, uses Gambit's MIMIC Virtual Lab as part of its Cisco certification courses. It allows students to practice their course work from anywhere.

Gambit also recently expanded the type of endpoints that can access its cloud-based labs by unveiling an iPhone application that lets users connect to the labs on the cloud via their mobile devices. The app is called iCCNAlab. It provides network engineers with access to training tools for Cisco Certified Network Associate certification.

"This is the first of a kind on iPhone and iPad," says Shah. "iPad is the best medium for that."

> Gambit's MIMIC Simulator is used by more than 600 customers for development, disaster simulations, testing and training.

April Browne, director of product management at Kaplan IT Learning, says the interface on the iCCNAlab app makes navigation easy.

"It leverages the iPhone style well, and at the same time, showcases a wide range of devices, commands and tutorials," says Browne. "We think this app is something the students can truly embrace as a certification tool for use at anytime." IT

By Alex Foster

The Return of Layer 2

How Data Center Networking Requirements Will Change the WAN

For the past five years MPLS-based IP VPNs have been the dominant WAN transport solution for organizations of all sizes. Originally adopted and deployed by large organizations to support interconnection between thousands of sites, IP VPNs quickly trickled down market to the point of ubiquity. The widespread adoption of IP VPN has taken place because it offered a complete solution to a common corporate need – secure, fully-meshed IP connectivity with quality of service between locations.

While WAN architectures have converged on a Layer 3 approach, a quiet revolution has been under way in data center networks and is increasingly creating requirements that IP VPNs cannot practically meet. Modern data center networks are designed around the requirements of virtualization and SAN replication. One of the biggest requirements for fully leveraging virtualization is that virtual machines be able to move between physical hosts while maintaining their IP addressing. Virtual machine movement within a data center is already common and has driven a reinvention of data center switches and LAN architecture. Virtual machine mobility between data centers for disaster recovery is the next frontier, and the networking requirements around this technology and SAN replication will drive a new set of connectivity requirements not easily met by IP VPNs.

Thus far vendors and network architects have responded with several strategies for accommodating these needs within the existing WAN architecture. The well-tested solution is simply to operate outside of the IP VPN and deploy SONET or WDM connectivity between the data centers to act as a LAN extension. This solution is costly, does not scale with several data centers, and it may be difficult to even get connectivity between data centers if they are served by different carriers.

A more recent solution to extending Ethernet between data centers is to overlay Ethernet traffic on top of IP VPN networks using tunneling to encapsulate Ethernet frames into IP packets and then strip them back out at the far end. This solution eliminates the operational expense of running parallel networks but requires a substantial hardware investment and a significant amount of expertise to configure and maintain.

Both solutions are far from ideal. The preferred solution for most mid-size businesses increasingly will be carrier-delivered Layer 2 VPNs. This category includes services such as virtual private LAN service, E-LAN and transparent LAN services. These services are delivered over the service provider's MPLS backbone but leverage functionality in the provider's edge to deliver a Layer 2 service based on virtual bridging rather than a Layer 3 service based on virtual route forwarding. This gives the customer a network that behaves like a wide area Ethernet switch. For many companies this single Ethernet WAN can serve as a solution to interconnect both data centers and offices.


Cavalier's Alex Foster

VPLS allows customers to solve many of the common data center interconnection problems in a much simpler and more intuitive way than in an IP VPN environment, and is far more affordable than SONET/WDM solutions. Without having to peer with service provider routers at Layer 3, subnets and Layer 2 domains can easily be extended between data centers. With complete control of the IP layer, routing can be based on the preferred protocol rather than a limited set of protocols supported by the service provider. Perhaps most importantly, organizations can tune their routing protocols to deliver convergence times far quicker than possible in an IP VPN environment. Finally, many technologies that have a long history of deployment in data center environments such as hot standby router protocol can be leveraged in the WAN for failover between data centers with complete IP mobility.

Although there is concern in some corners about latency over the MPLS core, these concerns are generally unwarranted. The latency imposed by MPLS hops in the carrier core is on the order of 12 to 50 microseconds, nearing irrelevance even in a world of single-digit millisecond requirements.

While VPLS and E-LAN solutions are not yet common, they are growing rapidly. Virtually every major service provider has announced some form of VPLS offering, and customers are quickly realizing that removing the service provider from the IP layer of their network can greatly simplify their lives and speed the deployment of next-generation data center solutions. The instances where separate corporate and data center networks are justified will continue to decline, and the likely winner in these cases will be Layer 2 VPN solutions such as VPLS. IT

Alex Foster is product manager, data and managed services at Cavalier Telephone (www.cavtel.com).

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By Paula Bernier

TMC, INTERNET TELEPHONY Congratulate IT Product of the Year Award Winners

INTERNET TELEPHONY and its parent company, TMC, are proud to announce the winners of the IT Product of the Year Awards. The below list includes the winning companies and products selected by a panel of judges led by Erik Linask, TMC's group editorial director.

4PSA
VoipNow Professional ver. 2.5

8x8 Inc.
8x8 Virtual Office Pro

ActionPacked!Networks
LiveAction Software

ADTRAN
NetVanta 1544 (2nd Gen)

ADTRAN
ADTRAN Ultra Broadband Ethernet

Allworx
Allworx 48x

Angel Inc.
Caller First Analytics

Apparent Networks Inc.
AppView Voice

Aptela
Aptela Business VoIP

AudioCodes
AudioCodes Enterprise Session Border Controllers

AudioCodes
MediaPack 252

Avaya
Avaya Aura Contact Center

Avaya
The Avaya Flare Experience on the Avaya Desktop Video Device

Avotus Corp.
Avotus ICM Unity

BelAir Networks
BelAir100SP Strand Picocell

BICS
EasyConnect VoIP

Brekeke Software Inc.
Brekeke SIP Server

Broadview Networks
Broadview Networks' Nationwide OfficeSuite

Brocade Communications Systems Inc.
Brocade MLXe Core Router

Business Mobility Systems
Business Mobility Client

Cbeyond
Cbeyond's Virtual Receptionist

Cedar Point Communications
SafariFusion Visual Communications Suite

Citrix Online
GoToTraining with Integrated Toll Free Audio

Cypress Communications
C4 IP

Dialogic Corp.
Dialogic BorderNet 2020 Integrated Multimedia Gateway

Digital Rapids
StreamZHD Live ABR adaptive streaming video encoder

Digium
Switchvox SMB 4.5

Enablence
Enablence BroadAccess MSAP

Enterasys Networks
Enterasys Wireless

Epygi Technologies Ltd.
QuadroM8L

FacetCorp
FacetPhone

Fanvil Technology Co. Ltd.
IS600 Multimedia HD Video IP Phone

FaxCore Inc.
FaxCore 2010

Five9
Five9 Virtual Call Center Release 8

Fonality
Fonality HUD

Force10 Networks
S-Series S60 Top of Rack 1 GbE Switch

Force10 Networks
Force10 S-Series 4810

GENBAND
GENBAND IP Unified Services (GENiUS) Platform

Gigamon LLC
GigaSMART

Grandstream Networks
GXV3615W

Grandstream Networks
GXV3175 IP Multimedia Phone

iDirect
iDirect's SatManage Network Management Solution

Ifbyphone
SourceTrak

Ikanos Communications
Ikanos NodeScale Vectoring Technology - Breakthrough Broadband Technology Dramatically Increases Broadband Speed & Reliability

IneoQuest Technologies Inc.
Expedus DVA

Ingate Systems
Ingate SIParator 96

Interactive Intelligence
Customer Interaction Center (CIC)

IPitomy Communications
IPitomy Presence Link

IPsmarx Technology Inc.
IPsmarx Multi-Tenant IP-PBX Solution

IQ Services
Application Feature Testing

JDSU
Signaling Analyzer Real Time (SART)

JDSU
Enterprise Services Application Module (ESAM) for the T-BERD/ MTS-4000 Platform

JoiBiz
JoiBiz PBX with Call Center

LifeSize
LifeSize Bridge 2200

M5 Networks
Call Conductor

Mammoth Networks
Mammoth Total QoS

Media5 Corp.
Media5-fone

MegaPath Inc.
MegaPath Integrated and Hosted Voice

Meru Networks
AP320i

MTS
TEM Suite

Narus Inc.
NarusInsight

NBS
NBS Hosted V.o.I.C.E

NEC Corporation of America
UNIVERGE SV8000 Series

NEC Corporation of America
UNIVERGE Sphericall

NEI
N-2710 Power-Optimized Carrier-Class Server

NET (Network Equipment Technologies)
UX2000

NEXTIVA
Nextiva Office

NICE Systems
NICE VoIP Solutions

Octasic
TXP1000

Ooma
Ooma Telo

Openet
Service Passes

Overture Networks
ISG 400

Overture Networks
ISG 4800

Pac-West Telecomm Inc.
Telastic

PaloSanto Solutions
Elastix

Pareto Networks
Pareto Branch on Demand

Patton Electronics
SmartNode 5400 Four-Wire G.SHDLS. bis Enterprise Session Border Router

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Phone.com Virtual Office

PINNACLE
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Plantronics
Savi W430

Polycom Inc.
Polycom Open Telepresence Experience High Definition 300 (OTX 300)

Protus
MyFax

Protus
my1voice

QuesCom
One Number for Savings & Controls on all international and Roaming calls

RadiSys Integrated Mobile Media Server (IMMS)
RadiSys RadiSys LTE SEG

RADVISION
RADVISION SCOPIA XT1000 Series

Radware DefensePro
Radware Alteon 5412

RedShift Networks, Inc.
RedShift Hawk UCTM-2K Appliance

Ring Carrier LLC Ring
Carrier Office

RingCentral Inc.
RingCentral Office

SevOne Inc.
SevOne Performance Applicance Solution

Shenzhen ALLYWLL Info&Tech Co. Ltd.
MTG600 NGN Trunk Gateway

ShoreTel
ShoreTel Mobility

Siemens Enterprise Communications, Inc.
Openscape UC Server 2010

snom technology AG
snom ONE

Sonetel
Sonetel Phone System

SPIRIT DSP
TeamSpirit Voice&Video Conferencing Engine

Star2Star Communications
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TelePacific Communications
SmartVoice

Telesphere
Telesphere Speak2Dial

TeltronicsInc.
Cerato VCSe 100

Telx
Telx Ethernet Exchange

Thinking Phone Networks
ThinkingVoice

Toktumi
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Toshiba Telecommunication Systems Division
Toshiba Strata Call Manager

Trilithic
MetroNet 5000

Vantrix
Vantrix Bandwidth Optimizer

Verint Witness Actionable Solutions
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Virtual PBX
Virtual PBX Complete

Vocalocity
Company Call Recording Service

Voxbone
Voxbone inbound SMS support for DID numbers

Voxeo
VoiceObjects On-Demand

WorldGate/Ojo Services
Ojo ProVision

Yealink
VP-2009P

Zultys
MX250 IP PBX & Zultys Unified Communications

By Erik Linask

To 4G or Not 4G

Last month, I wrote that I didn't feel the Verizon iPhone – which we now know will be available on Fe. 10 – would be a big deal. Yes, there will be many units sold, and with defectors from AT&T as well as existing Verizon subscribers who have held out for Apple's modern masterpiece, but I still believe the choice in the market – particularly the variety of Android-based handsets – will have a limiting effect overall.

However, since last month's column, I did some basic market research, talking to many of my friends, colleagues, and associates, and found I could, indeed, be mistaken, thanks to the brilliant marketing out of Cupertino. Indeed, I was rather amazed to hear how many people have their sights set on the CDMA version of the iPhone 4.

Still, I can't help but wonder if the three weeks between now and when the iPhone becomes available at Verizon stores isn't enough time for at least some of them to reconsider. For one thing, when flat-screen TVs became available, how many of them went out and bought a new tube TV? When high-speed broadband became widely available, how many signed up for dial-up service? And when shopping for a new car, how many of them would opt for a previous model year if they could get the new model, with many enhanced features, for the same price?

At CES in Las Vegas, Verizon announced four LTE devices that would be available in the first half of 2011 – the HTC Thunderbolt, Samsung SCH-i150, LG Revolution, and DROID BIONIC – in addition to tablets, mobile hotspots, and laptops from several vendors.

With Verizon's focus now solidly on its LTE network, which as of Dec. 5, 2010, had been deployed in 32 metro areas and 92 airports nationwide, I ask all the iPhone holdouts, why do you want a 3G phone, unproven on Verizon's 3G network, when you can get a 4G device a few short weeks after the iPhone release? When 3G phones became available, did you run and get an old 2G handset?

It's that simple.

We know the future of the mobile market is anything but voice. In fact, the millennial generation is already using IM and SMS to communicate more frequently than voice. Rather, it's the apps and multimedia services that are driving usage and device innovation to new heights. Knowing that, again I ask, why opt for a slower, more congested network, when a next-gen network is likely available in your area?

For those who live in an area not likely to see 4G for a couple of years – Verizon says it plans to have its LTE network cover its entire 3G service area in three years – I understand this is an irrelevant argument. But even for them, a look at the many Android phones out there is still well worth the effort.

The iPhone, for all its great capabilities and features, isn't without its flaws, the biggest of which – for the time being, at least – is that it's a 3G device in a 4G era.

I can hardly wait for my contract to expire so I can dump my dreaded BlackBerry – these are words most of us didn't expect to hear a few short years ago, and while it will still retain a sizable market share in the corporate world, RIM stands to be the big loser in the current handset war.

I understand the power of marketing, social media, and the influence of friends and family, a factor that Apple has exploited to its fullest, and I have many colleagues and friends with iPhones. Yet, I'm not particularly inclined to rush out and buy an iPhone. Instead I am looking forward to testing out the 4G handsets that will be on the market by that time, and taking advantage of the latest network technologies and enjoying the capabilities of whatever 4G device I choose to their fullest.

For those out there excited about the Verizon iPhone, consider your options before making your decision. The iPhone, for all its great capabilities and features, isn't without its flaws, the biggest of which – for the time being, at least – is that it's a 3G device in a 4G era.

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