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It's the End of the World as We Know It

The Federal Communications Commission last month voted on rules to

modernize the Universal Service Fund and intercarrier compensation. These important and overdue actions could mark the end of the communications world as we know it.

The reform is clearly aimed at moving the nation more fully into the broadband era, in which voice is just another application, and away from the legacy, circuit-switched network and the existing regulation that continues to prop it up. In fact, I'm told that AT&T and Verizon are pushing for the end of POTS completely.

This excerpt from comments that AT&T submitted to the FCC in December 2009 seems to support that. "Any such forward-looking policy must enable a shift in investment from the legacy PSTN to newly deployed broadband infrastructure," AT&T wrote. "While broadband usage – and the importance of broadband to Americans' lives – is growing every day, the business model for legacy phone services is in a death spiral. Revenues from POTS are plummeting as customers cut their landlines in favor of the convenience and advanced features of wireless and VoIP services. At the same time, due to the high fixed costs of providing POTS, every customer who abandons this service raises the average cost-per-line to serve the remaining customers. With an outdated product, falling revenues, and rising costs, the POTS business is unsustainable for the long run. Yet a web of federal and state regulations has the cumulative effect of prolonging, unnecessarily, the life of POTS and the PSTN."

Unplugging POTS would be a good thing for a big carrier like AT&T, which continues to support costly legacy systems while its cableco competitors have newer, potentially more feature-rich and cheaper to maintain VoIP networks. Of course, USF reform and abandoning legacy networks is a scary notion for many telcos in rural areas that get significant funding via the USF.

But whichever side of the debate you're on, it's clear that the existing USF regulatory structure has a lot of problems, including – as the FCC notes – inequity of funding between rural areas and service providers; rules that reward companies for losing customers; and others that have produced a rural-rural divide.

The intercarrier compensation scheme also is a "flawed system", the FCC notes, explaining that it has loopholes that some companies are taking advantage of to benefit from phantom traffic (or disguising the source of calls to reduce or avoid payments to other carriers) and traffic pumping (in which local telcos inflate incoming call volumes to increase compensation).

The Notice of Proposed Rulemaking that the commission issued in early February aims to address all that. Proposed changes to intercarrier compensation are meant to close the above-noted loopholes and address how VoIP traffic fits into intercarrier compensation, something that many agree is long overdue considering the number of people who now use VoIP services.

And, as the FCC has been discussing as part of the National Broadband Plan, it aims to transition the USF to the Connect America Fund, which is all about broadband as opposed to POTS.

"At the end of this transition, we would no longer subsidize telephone networks; instead we would support broadband," according to an FCC press release on the matter.

Richard Shockey of Shockey Consulting, and chairman of board of director of The SIP Forum, says there are of course many questions about how all this will play out. For example, where will the money for the new fund come from given that much of the USF base has evaporated? He also wonders how voice and, specifically, 911 will be funded. The states could handle that, he says, but then many states are struggling financially, to say the least. **IT**



News of the World

There's a lot of news happening both within the communication sector and within the world at large.

At ITEXPO last month in Miami, I heard several rumors of note.

First off is the idea that the FCC may soon give credence to the notion that POTS needs to die. (See previous page for the latest on this.) The carrying costs of this legacy network are massive, and the 5ESS switches are 30 years old, and you have to get the spare parts from eBay. 911 is a reason to not kill POTS, but some predict that if the FCC gives a 10-year deadline for the death of POTS, the telecom network equipment market will see a surge in business that may even rival Y2K times.

Also, Arunas Chesonis, the CEO of PATEC, was in India last month and may be working on a deal with an Indian telco or a possible acquisition. Maybe a sale? We'll see.

Moreover, the voice peering market is saving more than \$250 million a year for cable companies and others. This is one of those no brainer technologies that disrupts legacy markets, and we still have a long way to go in terms of peering adoption.

Meanwhile, some are wondering what happens to the smart grid market when the subsidies from the feds run out. And they mostly have. Does the market sustain itself and continue its growth, or slow? Again, we'll see.

On the world stage, meanwhile, we're all watching what's happening in Egypt.

Recently I discussed the purchase of SayNow by Google – a voice platform company complete with an API. Now, Google has taken the SayNow technology and collaborated with Twitter to allow users to call specific phone numbers to have their voice messages converted to tweets. At the moment there is no speech-to-text translation, and I found one message in Arabic. But thankfully the person calling also speaks English as evidenced by his mention of “adding pressure.”

The tough thing about controlling the Internet is you have to scramble constantly to keep up with people looking to communicate – even when most of the methods of communications have been disconnected. Many of us have heard that the Internet has been cut off in Egypt and that mobile phones have been as well. The government could always cut off landlines too if it so chose and, in theory, that would put an end to this service being useful. Satellite users would be the exception, of course. The government also can track the callers to the special international numbers Google has set up – and in repressive regimes, that can be a major problem for callers – especially if the protests die down.

This isn't the most elegant solution to meet the communications needs of the country, but it works. And it shows that even though this is a U.S.-based solution, the ingenuity of people seeking freedom can indeed be difficult to stop. Remember to what extent students in London used technology – Google Maps, tweets, APIs – to track police and other government actions during their protests over tuition hikes after a campaign promise was made that this would not happen? I mentioned it in a post titled The Internet Lubricates Protests. Here is an excerpt:

“Technology has already been lubricating protests and has made it far easier to gather others who share a particular point of view using the web and e-mail. And this can be a very good thing – I am a huge proponent of human rights and believe peoples' voices should be heard.” **IT**

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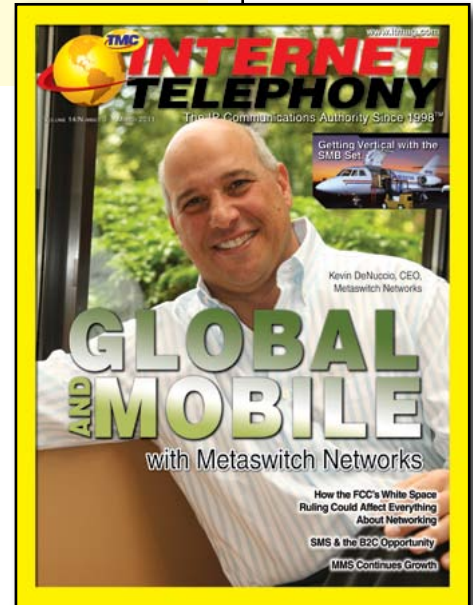
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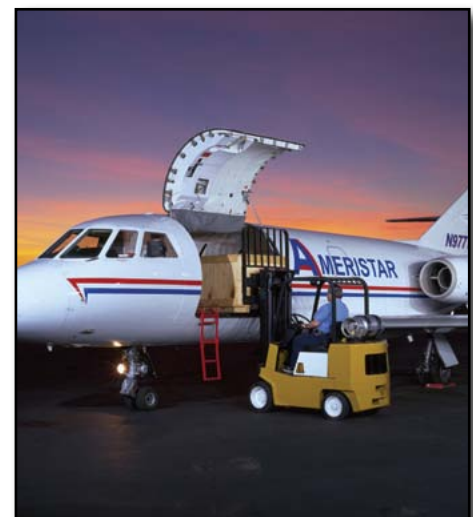
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Ready for Takeoff

Ameristar Jet Taps NEC for UC Contact Center

Ameristar Jet Charters Inc. is flying high after bringing aboard a new contact center solution from NEC Corporation of America. One of the country's largest operators of on-demand cargo jet aircraft, Ameristar Jet was ready to move to the next level with its contact center and communications solutions.

The InUCB blade-based server solution from NEC has enabled Ameristar Jet improve its customer service, according to the companies. More specifically, it has led to fewer abandoned calls, faster follow up with quotes for customers, and shorter average hold times.

"The call center is critical to our operations because we need to quickly access priority information, including the weather, a plane's fuel status and the caller's information file," says Stacy Muth, vice president of operations at Ameristar Jet. "We've also embraced presence capabilities through InUCB, which allows our agents to see their colleagues' availability, so callers are not transferred to busy agents."

In addition to the unified communications features this solution offers Ameristar Jet's call center operations, adopting InUCB – which is now available on NEC's UNIVERGE SV8300 and SV8100 communications servers – also allowed the business to move to a single server for its contact center and voicemail. As a result, the new system is yielding a 60 percent reduction in server power requirements, not to mention the smaller physical footprint and management involved in this new set up. (Ameristar Jet was previously on NEC's NEAX 2000 and used three separate servers for its contact center, voice and voicemail applications.)

"We've been a customer of NEC and AIT Technologies for nine years and have been happy with our solution, but our company is growing and we needed a solution that can grow with us," says Muth.

Adds Larry Levenberg, vice president of sales and marketing for national channels at NEC (and the former writer of an INTERNET TELEPHONE column called The Channel Perspective): "NEC authorized dealer AIT Technologies suggested and implemented InUCB because presence was a key feature for Ameristar Jet. Ameristar Jet now has caller ID pop-up screens, the ability to quickly access subject matter experts and collaborate in real time to resolve issues on the fly. Also key to this implementation was the fact that InUCB loaded internally on the SV8300 is resulting in significant reductions in space requirements, power and cooling costs." **IT**



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Keeping It Fresh

Pace Picks Up Savings with MegaPath Services

Preservation is important, whether you're talking about maintaining the freshness of fruits and vegetables, or controlling costs to ensure your business's longevity. In the case of Pace International, a hosted voice solution from MegaPath helps it address all of the above.

Pace develops and sells products that protect and preserve fruits and vegetables from harvest time through shipping and delivery. But, like the produce it helps to maintain, the Seattle-based company has more than one plant (two, actually, one in California and one in Washington) and needs the right conditions to help it survive and thrive.

When Pace sought out a more cost-effective and efficient way to enable communications among its 100 employees – which work out of the two plants, 11 ware-

houses and eight international offices – it did some digging around to see what options were available. Ultimately, the company picked a solution from MegaPath.

The MegaPath (formerly Speakeasy, which MegaPath recently purchased) hosted voice solution lowered Pace's growing long-distance telephone costs, a critical requirement for this customer. Pace also estimates that it saves 10 to 20 percent of IT time each month by not having to maintain the old phone system. (MegaPath provides Pace with a web portal to allow for quick and simple administration of password management and moves, adds and changes.

Tasks that used to take 30 minutes now takes five, according to the companies. In all, Pace estimates that it is saving \$65,000 annually in long-distance costs, conference calling, and phone system connectivity.

What's more, Pace employees can make conference calls between the company's sites under an unlimited calling plan. The service also allows for four-digit dialing between the sites, find me/follow me functionality, auto attendant for automated call routing, and is integrated with Outlook.

"Our [new] system offers tremendous versatility and features over our old phone system and provides centralized visibility for our customers," says Jon Wells, director of IT of Pace International. "We'll save thousands a year in long-distance, and since the service is hosted, we'll eliminate all the headaches associated with maintaining phone system hardware in-house. When you combine all these benefits, switching to VoIP rapidly becomes a no-brainer."

IT





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By Daniel Joseph Barry



Avoiding the Scissor Effect Intelligently

Avoiding the dreaded scissor effect has become the No.1 priority for mobile carriers. The scissor effect refers to the phenomenon of rising infrastructure costs and flat revenues – an unsustainable situation for any business. The scissor effect already has been witnessed in fixed line networks, and now mobile carriers face the same challenge in relation to mobile data services. Is it possible for mobile carriers to grow revenue per user in line with bandwidth usage?

The key to avoiding the scissor effect is intelligence. You can't manage what you can't see, so more intelligence on network and service usage is a fundamental first step. But, intelligence can also be understood as providing smarter services that better meet the needs and expectations of customers and, for which, mobile carriers can earn revenue in line with bandwidth growth. The intelligence gathered from the network lays the foundation for building more intelligent services, which in turn leads to more satisfied customers, who spend more.

Mobile carriers are fully aware of the scissor effect threat and have taken steps to respond with various solutions based on deep packet inspection to manage traffic. This includes services where consumption caps are introduced (i.e. you pay a flat rate up to a certain download limit and higher rates thereafter) and even degradation of performance for undesirable services, such as peer-to-peer downloads.

example, some customers are more active during the day, others in the evening. Some customers are more active on Facebook, others more interested in news broadcasts or music download.

With this intelligence, a better basis for network planning is established, based on a much better understanding of how and when customers will use their services. The infrastructure established to gather network and service intelligence data can also be used to monitor usage in real-time trends and shifts in behavior that can be detected early allowing changes to network planning and service plans to be made, not to mention pricing models.

In short, more intelligence on network and service usage leads to more intelligent, agile and responsive service definition, pricing and network planning. What is required is the establishment of a network intelligence infrastructure that can provide the data, in real time, that is required to make this a reality.

This investment need not be expensive. It is possible to build deep packet inspection and policy server systems using off-the-shelf standard server hardware and commercial intelligent network adapters. This provides an extremely cost-effective hardware platform with high performance.

More intelligence on network and service usage leads to more intelligent, agile and responsive service definition, pricing and network planning.

These approaches are effective, but are they customer-friendly? Will this approach lead to more satisfied customers who are willing to pay more or customers ready to switch providers as soon as the option arises? How easy will it be for a hungry competitor to compete with this model? I think the answers are clear.

An alternative approach is to build a strategy based on understanding and satisfying customer needs and providing services that reflect how they would like to use their mobile data services. The proposition is that by concentrating on providing exactly what customers want, they are less likely to switch provider and are more likely to pay more for the convenience and value their mobile data services provide.

The key to achieving this is intelligence. The first step is gathering intelligence on network and service usage, so we understand how customers are using their mobile data services and that they are receiving the quality of experience they require. With this intelligence, it is possible to tailor services to different types of customer usage scenarios. For

Since multiple systems will need to be deployed at critical locations in the network, it is important to base development on a cost-effective, high-performance, reliable and, most importantly, scalable platform.

Scalability is absolutely essential as mobile data traffic threatens to swamp mobile networks. The advantage of standard servers is that the underlying server chipsets are increasing performance by up to 60 percent each year. What's more, these chipsets are based on multiple cores with higher densities available on an annual basis. The availability of more and faster processing cores each year provides an opportunity to scale performance as and when new standard servers are available.

Avoiding the scissor effect requires intelligence. To build intelligent services, you need network intelligence based on systems that are built intelligently. Only by re-thinking how services are provided, how networks are built, and how systems are developed can we hope to respond quickly enough to the challenges that will face mobile carriers over the coming years. **IT**

Daniel Joseph Barry is vice president of marketing at Napatech (www.napatech.com).



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By Alan Murphy



Cloud Bursting and Cloud Provider Considerations

I would consider the topic of cloud bursting to be one of the more advanced cloud computing concepts, but also one that shows the most cloud functionality and return. As a relatively new idea – although almost all cloud ideas are still new concepts – cloud bursting certainly is getting a lot of conceptual architecture time. It's something that most people can grasp as an immediate benefit of cloud computing.

In a nutshell, cloud bursting is the idea of using cloud-based resources as an extension of existing resources. The principles of cloud computing – limitless scale, dynamic provisioning, on-demand resources, etc. – still are present with cloud bursting, but they're only invoked after resources within the physical data center are exhausted. For example, an IT department may host a website in its own data center, but can only handle approximately 10,000 connections per minute. During a spike that drives connections over that threshold, IT can send the additional connections to an on-demand cloud environment dynamically and seamlessly. When demand dies down, the cloud environment is de-provisioned and the on-premises web hosting manages the normal load.

Ideally, cloud bursting provides the best of both worlds: It allows the enterprise to maintain ownership and control over its application on-premises while having a fail-safe off-premises solution when needed. But there's a trade off: That flexibility comes with a more complex computing environment to manage. First, there's building the cloud bursting environment and keeping it current. Since the bursting environment is only used based on need, it's conceivable that it may not be used for months at a time – great for the budget but a challenge to keep current. Every change to the on-premises application needs to be replicated to the mostly dormant bursting environment. While many IT departments are struggling with virtualization challenges such as managing virtual machines and virtual sprawl, adding an extra off-premises virtual environment can compound management challenges.

Managing the bursting environment as an extension of the on-premises data center is one of the most important – and difficult – design factors. Much of the pre-planning comes down to choosing a provider that understands the bursting environment is basically a disaster avoidance solution rather than a full managed cloud. This minor difference is important: A cloud bursting environment is basically always on deck, but may never see any action. It's the special team of the data center world. The cloud provider needs to offer an environment where that team can be called up at any time in an automated, programmatic way, from the management platform as if the resources were on-premises. It does no good to keep resources at the ready if you can't spin them up on your terms. Choosing a provider that can tie into your event management system is a make or break decision.

That leads us to the third consideration for cloud bursting: integration. By definition, cloud bursting is tied to another, existing data center environment. Applications only need to burst into the

cloud when there's a demand that is exhausting existing resources. The bursting event depends on a threshold trigger that starts the event, a workflow that can flip the switch to turn up the burst environment, and a network that can manage connections as they move from on-premises to off-premises. All of that logic needs to come and be based on the existing infrastructure. Bursting is triggered based on a dynamic change in demand, but that demand will come from the existing infrastructure. It's critical that both on- and off-premises environments be integrated so they can function as one network delivering applications to users.

Choosing a provider that can tie into your event management system is a make or break decision.

These are just three major considerations for cloud bursting; there are many other smaller but equally critical components to a successful bursting architecture. Virtual platform choice, VM management, dynamic routing, application monitoring, SLAs, centralized message bus, dynamic DNS – the list goes on and on. There are some cloud providers that are well ahead of the curve and are offering pre-packaged cloud bursting solutions. These can be excellent choices provided they match your current management environment and can integrate with your data center out of the box, or the provider offers a la carte solutions that can be compiled to match your specific environment. Other providers are offering internal bursting options for traditional managed and hosted customers, building an architecture that allows those customer environments to burst as needed but keeping everything localized to the provider's network – also excellent options if you're already using an MSP or hosting provider that offers those solutions.

Cloud bursting may well be what propels cloud computing into IT's standard toolbox, but critical yet simple decisions during the design process with your cloud provider will make all the difference in the world between a seamless disaster avoidance solution vs. one that does everything but avoids a disaster. **IT**

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



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- Common reasons why some Online Communities fail
- Why it is essential to partner with a respected editorial team when building your Community

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By Mike Sheridan



Consumer 2.0 and Enterprise 2.0 – The Next-Generation “It” Couple

Sure, they aren't as photogenic as Brad and Angelina, but there is a hot new couple in town. In fact, in my previous column, I introduced them: Consumer 2.0 and Enterprise 2.0 and the promise that they collectively hold in making next-generation customer experiences a practical reality. By providing a rich and seamless customer experience for every touch point and channel, companies can take a major step forward in meeting the needs of today's consumer.

How the organization decides to wield the power of Enterprise 2.0 in serving its customers will vary from company to company. The good news is there are myriad of ways to satisfy consumer wants and desires with the technology and processes of the organization.

Below are two different, but equally impactful next-generation customer contact tactics.

A large American retail chain realized that traditional contact center technologies would never satisfy its customers – who are primarily teenage girls. It's taken its marketing and contact center strategies out into the social world and has had much success. With a media-rich website, thousands of followers on Twitter and YouTube and more than two million fans on Facebook, any teens can interact

with the company via their preferred method of contact, whether it's text, chat, or e-mail to get what they are looking for.

One of the world's largest paint companies with a massive network of 25,000 dealers recognized the need for improved service, responsiveness and communication with end customers. It embarked on a mission to better engage customers and build loyalty by offering new consultation and support services to end customers and aligning other components of its business including marketing and pre-sales campaigns, customer loyalty programs and after sales, and complaint handling systems – many managed in collaboration with dealers.

These examples are just the tip of the iceberg when it comes to companies displaying and acting upon innovative thinking. The next-generation of customer contact opens up a multitude of opportunities for new, creative ways to execute a company's approach to customer contact. What is certain, though, is that organizations need to understand the importance of strategy. And while traditional technologies may still work in some facets of the company, when it comes to customer contact, companies that carry on only with traditional modes of communication will be quickly and dramatically outpaced. **IT**

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

Enterprise View

By Max Schroeder



A Reseller Educational Series Partnerships – Keys to Success

In 1997 I gave a presentation at a conference in Amsterdam addressing the need for organizations to transition from legacy information and voice solutions to VoIP and e-media technologies. “Data Smog” by the award-winning author David Shenk had recently been published. Some of the book's concepts were incorporated into my presentation, including the theory that workers were being overwhelmed because information was being produced at a much faster rate than workers could process it. To survive the “information glut,” changes were needed quickly. My presentation concluded that we needed to go beyond simply moving prodigious amounts of information from Point A to Point B and fully automate the process using converged messaging and workflow technologies.

Recently, I was reminded of my 1997 presentation when I received calls from two separate organizations that were not satisfied with their current information and communication processing solutions. Each of the various resellers involved handled individual solution components and were not able to provide the complete answer. Company 1 needed to integrate phone traffic between several offices using systems from different suppliers. Company 2 needed to fully automate its call and workflow processes. Interestingly, the systems in place were from top quality companies like Cisco, Avaya/Nortel and SAP. So, what was missing?

Not being an expert on some of the products involved, I placed calls to companies that do have this expertise. First, I called Matt Fairbanks of Unity Telecom, a full service communications company providing IP-based business communications solutions. Matt was able to identify the issues and provide the answers. Basically, the necessary tools already were in place, and the systems simply needed to be re-configured.

My second call was to Ted Thompson of Digital Documents LLC, a company that specializes in intelligent data capture and document management processes from a variety of sources across the organization. Ted's recommendations provided the answers for the workflow process.

Sounds simple, and it is if you have a partner network in place to bring in the appropriate expertise. Today's customers need fully integrated communications, data and workflow solutions. Very few resellers have the resources to do it all. Partnering with other resellers and vendors to leverage their expertise will position your company as the go-to reseller and protect your customer base. **IT**

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

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By Steven Johnson



Overcoming the Interoperability Challenge

At ITEXPO in Miami, many presentations focused on the crucial role interoperability plays in SIP implementations. Now that SIP trunking is here to stay and unified communications is truly taking off, end users, VARs and service providers are all

facing the interoperability challenge: For years deployments have been at the whim of what equipment was available at the time, price point, capability. Now that technology and market demand are in sync, the challenge has been integrating the hardware and software in which we've invested so heavily, to have them all come together to enable unified communications.

One problem with interoperability is the many flavors of SIP. Some manufacturers build their equipment, or bill their service, as SIP. But SIP is an inexact protocol, and vendors use different but compliant methods to perform the same function within the protocol. These variations may be slight, but in the end can prove to be a significant stumbling block in deployments.

They also impact security. Opportunities for hackers, spoofers, etc., are easy to come by when there are inconsistencies between the SIP-enabled PBX and the ITSP. Leading IP PBXs and ITSPs are conducting interoperability testing aggressively; make sure your equipment and service providers have demonstrated successful interoperability with one another.

Pave the way for interop by using products that strictly adhere to the SIP protocol. There are a number of advantages vendors can leverage with SIP that benefit security, advantages that come into play only when the protocol is strictly maintained. This also positions you well in planning your future network.

Specific to SIP trunking is the SIPconnect solution. SIPconnect is a set of technical recommendations or best practices for SIP trunking. It was developed by the SIP Forum to provide a common method for enterprises to connect to a SIP trunking service provider using standard SIP messages consistently across all vendors. SIPconnect is a major step forward toward standardizing interoperability among all of the components of a SIP trunking implementation.

Even with these strides, there are many issues that won't be resolved in the near term, and the best steps to take in implementing SIP, SIP trunking and unified communications are to install an enterprise session border controller at the edge of the network. The E-SBC normalizes the SIP signaling between the SIP-enabled PBX and the ITSP, allowing the enterprise to connect successfully to SIPconnect-compliant SIP trunking service providers quickly, easily and securely. **IT**

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

E911 Watch

By Nick Maier



Tragedy Often Prompts E911 Action

The tragic shooting at Ft. Hood in November 2009 prompted the Department of Defense to take a hard look at its approach to force protection on military bases across the country and around the world.

Secretary Robert Gates has since directed the department to implement a series of recommendations including one calling for the implementation of E911 protection on all DoD installations as soon as possible.

The department determined "military personnel should receive the same emergency response services as their civilian counterparts." While I applaud the secretary and the DoD for adopting this policy, I can't help but find it sad that this conclusion wasn't drawn years ago. Unfortunately, this E911 public safety disparity between where we live and where we learn and work is also prevalent in many workplaces, schools, colleges, hospitals and hotels – anywhere that is served by a multi-line telephone system.

How can our tech-hungry society that can't wait for the latest smartphone announcement continue to drag its heels when it comes to adopting readily available technology that ensures emergency responders know how to find someone in need

during a 911 emergency? Why also does it take tragedies such as a shooting on a military base or a college campus before we take notice and consider what should be a national mandate? While legislation exists in 16 states and counting, the folks in Washington have yet to make E911 the law of the land.

There are many responsible organizations that share the DoD's new emergency response position and have implemented E911. In the process they also have enjoyed benefits beyond increased safety, including reduced network administrative costs. However, far too many organizations continue to roll the risk dice despite the fact that barriers to implementation are extremely low.

Today, an enterprise can protect its employees, customers and visitors with a variety of on-premises and cloud-based hosted E911 solutions. It's even possible with hosted E911 to be up and running in as little as a day. A wide range of automated and flexible solutions also is readily available for all the major voice platforms to meet more complex enterprise requirements and to protect an increasingly mobile workforce wherever they may be. Some things simply don't make sense. **IT**

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

younified

My NetVanta® UC Story.

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

Today, I'm proud to say that **NetVanta UC** is part of my solution. When that late night emergency call comes in, a parent can leave a detailed message of their child's situation. The **NetVanta UC** system immediately rolls their voice mail message to myself, or the doctor on duty. We get the message on our cell phones, via voice mail, text message, or email.

That allows us to call right away and gives us the ability to assess their situation and provide fast, accurate feedback.

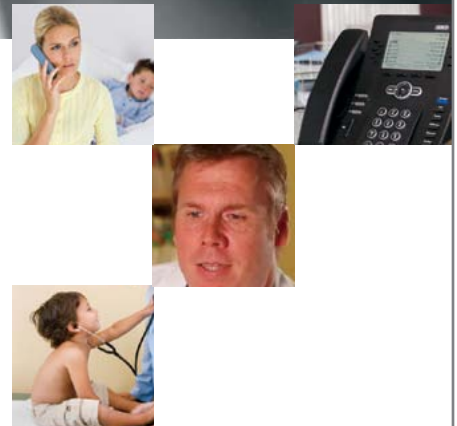
The **NetVanta UC** system also allows me to operate without the expensive "after hours" answering service. I can now say I can save lives and save money at the same time. **NetVanta UC** helps me and my patients sleep better at night.



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By Hunter Newby



A Model for Access – Axxess Ontario

All around the United States there are many examples large and small of states, counties, cities and communities that are building dark fiber infrastructure to support network and ultimately application demand. They are often open access systems that encourage network service providers and carriers of all kinds to come and light the fiber. This model creates an even playing field through competitive pricing, terms and product offerings through control of the underlying physical fiber and interconnection process.

Collectively these open systems form a fragmented picture of similar, yet disparate pieces that all seek uniformity. In as much as they gain benefits from creating their own local system they need and would benefit more from cross connecting their respective systems. The entire process is a journey, and each piece needs to be seen and understood for what and where it is. It is essentially the re-creation of the public Internet, but at the physical layer.

From the recent announcement:

To date, Axxess Ontario has signed master agreements with eight telecom and broadband companies, including Verizon Wireless and national broadband provider tw telecom. Axxess Ontario is in continual discussions with other service providers, and is working aggressively on its next goal of luring a fiber-to-the-home (FTTH) service provider to Ontario County.

With the fiber ring complete, businesses and municipalities now have access to faster and less expensive broadband, as well as bandwidth equal to global broadband leaders. Businesses can gain access to the ring simply by contacting any of the eight service providers that work with Axxess Ontario.

There are several interesting aspects of this build including:

- The project managers realized they did not have to build and therefore finance the FTTH immediately. This staged approach is a good example for others to follow that might have difficulties financing their build.

Many of the builders and operators of these projects in the United States are not even aware of each other. This is both good and bad.

Many of the builders and operators of these projects in the United States are not even aware of each other. This is both good and bad. It is bad because they could all benefit from the economies of scale that are derived from co-builds, best practices, bulk buying, etc. It is good though in the sense that it shows that many people out there know what needs to be done and are just going out and doing it. Go!

Soon there will be a clear picture of how these disparate systems can plot a course for interconnection with each other to form that cohesive system that is required, like the interstate highway system that makes A to Z transport a reality between just about every meaningful point in the United States. Between now and then there is a lot of work to do, and opportunities abound.

One such local project is Axxess Ontario. Located in upstate New York sits Ontario County with a total population of just over 100,000 people (as of 2000) and a total area of 662 square miles. The Axxess Ontario project has been ongoing for several years now – and the project just recently completed its \$5.5 million, 200 mile fiber ring around the county.

- The open access philosophy isn't limited to just offering the dark fiber and access to all service providers that wish it, but also to promote the services of those that have taken the dark fiber to anyone seeking the lit services that the dark fiber provider does not provide.
- As for revenue, Axxess Ontario already has executed agreements with service providers. This proves that demand exists for new dark fiber from multiple network operators in areas where it did not exist previously. Where there is cash flow, project financing can be structured.

When it came to structuring the plan for Axxess Ontario, it engaged ECC Technologies, a technology consulting group that seems to have the blueprint and playbook for getting projects like this one financed and built. There are 3,143 counties in the United States with an average population of 100,000. Logic dictates that the others could follow this same plan and achieve similar success. As and when they do, the needs of the people and machines in the counties, states and country will ultimately be met. All they must do is follow the plan and build out, through and to complete interconnection. **IT**

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

Visit the Voice Quality Community

On TMCnet

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

Ooma's appliance offers exceptional voice quality and the reliability of a traditional phone service, but at a fraction of the cost. You don't need a headset. You simply connect the device to your high-speed Internet and your existing phone, and that's it. You're ready to start calling and experience Ooma's great voice quality.

Community Features:

- Listen to recorded samples and compare voice quality with Ooma vs. a leading VoIP provider.
- Track breaking news about voice quality in VoIP appliances and services.
- Read white papers relating to IP telephony.
- Get access to case studies detailing successful deployments of Ooma's products.



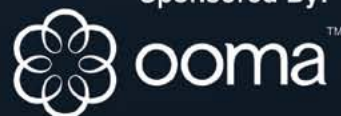
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<http://voice-quality.tmcnet.com/>

By Michael Stanford



Wi-Fi Evolves

I love Wi-Fi. It is full of surprises. It galloped to AT&T's rescue when the new iPhone swamped the data network. It impishly sabotaged Steve Jobs' iPhone 4 announcement extravaganza by being too busy with live bloggers. It is one of the most successful radio technologies ever.

In October 2009 the Wi-Fi Alliance announced a new flavor of Wi-Fi, called Wi-Fi Direct. The problem Wi-Fi Direct aims to solve is that certain use cases consume twice as much bandwidth as they need to. If you want to play a video from your laptop to your Wi-Fi-enabled TV, each frame of the video takes two trips through the ether in your room. It goes from the computer to the access point, then from the access point to the TV. With Wi-Fi Direct it bypasses the access point, going straight to the TV.

Here's a surprise: Wi-Fi Direct may be better than Bluetooth on its home turf. A company called Ozmo Devices has succeeded in making Wi-Fi chips that are in the same price ballpark as

Bluetooth chips, but consume half the power in any given application. At CES in January, Ozmo announced a wireless loudspeaker extender from Logitech and a wireless mouse from HP. There will soon be a lot more device types. The proposition is compelling. All laptops and smartphones already have Wi-Fi. If a Wi-Fi connection is more power-efficient and higher bandwidth than a Bluetooth connection, what motivation is there for using a Bluetooth radio? The primary application for Bluetooth is wireless headsets. Ozmo has not yet announced a Wi-Fi headset, but it is just a matter of time. The Ozmo chip is small enough, cheap enough and claims enough processing power to run a headset with twice the battery life of a Bluetooth headset.

Watching the smartphone industry hammering away at the low end of the PC industry, it is interesting to see an attack in the opposite direction: Wi-Fi is a technology with a PC heritage that has a shot at shaking up the mobile phone world. **IT**

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

Integrator's Corner

By Ron Jackson



Making WAN Optimization Part of the IT Landscape

Traditional technology networks can easily become crowded, leading to slow application response times, employee frustration, lower productivity, and often unexpected costs for a company. National and global organizations with end users distributed across tens, hundreds or even thousands of locations across the globe are always looking for fast and affordable access to applications.

For many companies, wide area network optimization technology holds the answer because more data can traverse the network quickly and unencumbered. Employees can more efficiently fulfill business tasks, leading to less waiting, less frustration, increased productivity and avoidance of costly WAN bandwidth upgrades.

WAN optimization previously was used as a fix or considered an expensive privilege for most companies. But the technology has matured; more products are available at better prices, and the general benefits to a company have increased. With a single upfront cost and a payback period of six to 18 months, WAN optimization is now more a general utility — a regular part of a company's IT landscape and data center infrastructure.

Through data reduction and prioritization techniques, WAN optimization provides a hard dollar payback and helps avoid the costs associated with bandwidth upgrades, which can run hundreds of thousands of dollars. There also is a soft dollar payback in terms of increased workforce productivity.

Because WAN optimization enables a company to move servers from remote locations to a central data center, this consolidation lowers management and monitoring costs, simplifies data security and meets regulatory requirements. In addition, with the growth of data volumes and the distance between data centers to help protect data from catastrophic disasters, increased pressure is being placed on the WAN.

It's clear that WAN optimization is becoming a welcome part of the IT landscape. But to ensure its success, companies must put in the time upfront to listen to internal stakeholders, and to examine different technology vendors and the varied needs of the company. If they do, WAN optimization is an indispensable technology that will continue to provide returns to the business as it matures. **IT**

Ron Jackson is network product manager at Forsythe (www.forsythe.com).

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By Peter Radizeski



Are We Looking at VAR 2.0?

There has been a plethora of merger activity in the second half of 2010, including in the indirect channel space. MSPs are merging. VARs are merging with telecom agencies. Much of that activity has to do with the cloud movement. As the cloud takes up more oxygen in the room, sectors of our industry have to figure out how to stay relevant.

Managed service providers think that they have to have cloud in their name; hosting companies, too. There's no more hosting; it's now just private, hybrid and public clouds. Everyone is riding the bus.

Value-added resellers used to selling hardware and services have to adjust to the world of cloud and SAAS. Now the hardware sales are diminishing, which affects quota, co-marketing dollars and revenue.

In the World of Cloud, WAN plays a major role. Without connectivity, customers can't reach their data.

Smarter VARs already have jumped into the VoIP pool, selling white label voice services to their client base. Many have also

been selling data backup, as a referral partner or affiliate just to be the one-stop shop for all things data/app and keep the gravy train rolling. Multiple streams of income, as Robert Allen wrote.

Apps and connectivity today mean cellular as well. Starting a telecom department, partnering with an agent, or merging with a telecom agency just makes sense as the line between LAN and WAN starts to blur.

There are many moving parts in the World of Cloud. More often it will be a hybrid model that will require planning, provisioning and integration – the value play for the channel. Just as agents get paid by carriers for services they sell, VARs will be collecting revenue for customers that buy the following services: cloud, SaaS, data storage and backup, network monitoring and security, mobility, MPLS, Internet access, VoIP and business continuity. This is the World of Cloud for the VAR 2.0 (or Agent 2.0). **IT**

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

The Channel & AGENT NEWS

<http://tmcnet.com/58589.1>

ShoreTel, ScanSource Expand Relationship

ScanSource Communications, a vendor of communications products and a sales unit of ScanSource, has expanded its distribution relationship with ShoreTel and will now offer the company's complete product portfolio of IP phone systems with fully integrated unified communications. This expanded partnership of ShoreTel's communications tools and ScanSource Communications' services and support is expected to allow resellers to meet their end user customers' increasing demand for IP and UC offerings, ScanSource officials say. Buck Baker, president of ScanSource Communications, says: "We look forward to continuing to help our partners be successful by offering a focused sales and business development team, excellent training and education opportunities, marketing support, and many other services."

<http://tmcnet.com/58590.1>

Gellos Joins MegaPath

MegaPath Inc., one of the leading providers of managed data, voice, and security services in North America, has appointed Chris Gellos as senior vice president of sales. In this

role, he will oversee the strategic direction and management of the company's direct and channel sales operations. A telecommunications veteran with over 20 years experience, Gellos previously served as vice president of sales at Speakeasy. On Sept. 1, 2010, MegaPath completed its merger with Speakeasy and Covad, creating one of the largest end-to-end facilities-based IP communications networks in the country.

<http://tmcnet.com/58591.1>

TBI Names Channel Manager of the Year

Telecom Brokerage Inc., a master agent of telecommunications, has announced that Earthlink Business's — formerly New Edge Networks' — national channel manager, Travis O'Keefe, is its 2010 Channel Manager of the Year. TBI annually recognizes one vendor channel manager for the award; in 2010, O'Keefe was exceptional for his excellence in supporting TBI's back office and subagents. According to TBI, O'Keefe was instrumental in helping TBI generate revenue within its agent base by ensuring that all of TBI's requests have the best possible solution for what the agent, as well as its customers, needs.

<http://tmcnet.com/58592.1>

Master Agent WTG Chosen by Frontier

World Telecom Group has been selected as one of the first master agents for Frontier Communications' new Strategic Alliance Channel. The program is an upgrade for the telecom carrier, and comes with new resources and compensation structures. For WTG agents, being designated as a Strategic Alliance partner means the ability to sell across the entire Frontier footprint. With a local strategy now in place, WTG said, there will be an emphasis on win-backs and acquisitions.

<http://tmcnet.com/58593.1>

Bitler Joins Top 15 Channel Managers List

Cbeyond Inc., a provider of IT and communications services to small businesses across the country, announced that sales channel manager Brian Bitler has been named one of the Top 15 Channel Managers of 2010 by Phone+ magazine. Bitler was selected from among more than 130 telecommunications professionals nominated for the award by master agents, subagents and independent agents. The picks were determined by an online poll of more than 1,000 readers.

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Xorcom Presents Updated PBX Hardware



Xorcom last month at ITEXPO East in Miami revealed some of the new products it has developed recently. The company used the expo as a platform to show off new versions of its IP PBX solutions and several other products, including a hardware echo cancellation module, a redundant power supply device, and a PRI interface solution supporting up to 16 E1/T1 ports in a single chassis. Xorcom provides hardware utilizing the Asterisk open source development platform.

www.xorcom.com

<http://tmcnet.com/58602.1>

CallFire Warm to Education Vertical

The company's voice and SMS broadcast utilities have seen deployment in a number of scenarios, but CallFire feels that the education market specifically lends itself to the software. For example, at the University of California at Irvine, the service was recently utilized to contact 42,000 alumni at a rate of 400 calls per minute offering them a message to reserve tickets for a basketball game. Since the original CallFire platform was designed by alumni of the university, it is also a good place to advertise it. Each message ended with, "This call is powered by alumnus-owned CallFire.com, pay-as-you-go group messaging."

www.callfire.com

<http://tmcnet.com/58603.1>

'Bring Your Own Device' Gains Traction

Mitel believes businesses are moving more toward a strategy of "bring your own device". According to survey results taken by Mitel, voice virtualization will take on more importance in business networks. The survey says 53 percent of respondents felt that, in the future, mobile phones will become the dominant

communication device in the workplace. Ninety percent of respondents said that virtualization will take on

greater importance in their network in 2011, with 34 percent of these

saying that

voice virtualization will take on the greatest level of importance.

www.mitel.com

<http://tmcnet.com/58604.1>

Mobile Software Helps SMBs Create Apps

Small business owners and marketers can create apps in as little as five minutes with imSMBApps Mobile software, according to the company, which adds that as a result mobile applications can be created without the need for budget allocation for design and developer costs. Ben Fisher, vice president of business development at imSMB.com, adds: "iPhone applications reach existing and new customers on the go, but many business owners lack the time, knowledge, or budget to create mobile apps without outsourcing." Menus can be uploaded, and sales and specials can be promoted, with imSMBApps Mobile iPhone Apps. The apps can also take reservations, provide locations, issue alerts, and list inventory updates.

www.imsmb.com/iphone-home

<http://tmcnet.com/58605.1>

Sprint, Smoothstone Partner

Kentucky-based Smoothstone IP Communications recently signed a partnership agreement with Sprint to provide businesses with a suite of cloud-based communications services and apps that are delivered over the telecom giant's global MPLS network. The integrated solution will offer companies advanced corporate governance tools, including enterprise call recording and real-time call reporting, as well as all the other features that normally accompany a cloud-based IP PBX. When paired with Smoothstone's Mobile Integration services, the new solution will enable enterprises to provide PBX functionality to Sprint mobile phones using the cloud.

www.smoothstone.com

<http://tmcnet.com/58600.1>

Desktop Phones Still Alive and Kicking

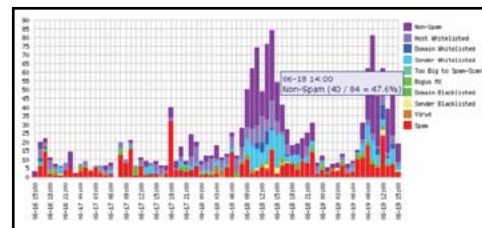
The severe global recession that began late in 2008 and lasted until early 2010 likely damaged business in just about every segment you can think of. Enterprise spending on phone systems likely was no exception. But that's a cyclical issue, and what isn't so clear are longer-term prospects for desktop phones, which some seem to believe are headed for displacement, if not extinction, by mobiles or tablets. However, Gary Kim opines that it seems premature to talk of the imminent demise of the enterprise desktop phone, saying that so far there seems no clear and dominant pattern of business users ditching landlines and desktop phones completely.

<http://tmcnet.com/58606.1>

Anti-Spam Service Upgraded

Roaring Penguin Software Inc., makers of the Hosted CanIt anti-spam service, has released a major upgrade of its solution. Hosted CanIt introduces several major new features that greatly improve its suitability for small and medium enterprises, including Log Indexing and Searching: Hosted CanIt now indexes all e-mail logs into a full-text search engine. This allows system administrators and domain administrators to search logs quickly for relevant messages. The logs are grouped into correlated sets on a per-message basis; this allows Hosted CanIt to pull together log lines that are far apart in time but relate to the same message.

www.roaringpenguin.com



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End date/time	23:59:59
Queue ID	
Stream	
Incident ID	
Message ID	
Sender	
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Subject	
CanIt Host	
Source Host IP	
Destination Host IP	
Classification	
Realm	
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<http://tmcnet.com/58608.1>

ILEC Sees Revenue, EPS Growth

Verizon Communications Inc. has positioned itself to “kick into a higher gear as we go forward,” Lowell McAdam, Verizon president and COO, told investors and analysts at a conference in January. The same day the company reported 2010 total operating revenues of \$106.6 billion. Excluding results from assets that have since been divested, 2010 revenues were \$104.4 billion, or a 1.9 percent increase from 2009 revenues of \$102.5 billion on a comparable basis (non-GAAP).

www.verizon.com

<http://tmcnet.com/58609.1>

Charter, TiVo Combine Efforts

TiVo's next-generation HD user interface and set-top box will now be part of Charter's primary multi-room and whole-house solution. TiVo will also expand upon its current platform by launching new devices, features and apps – all



of which will become available to Charter customers as soon as they are released. “We’re integrating formerly disparate worlds of traditional television and online content, and making it simple for customers to quickly find the content they’re looking for, as well as greatly expand their entertainment choices,” says Mike Lovett, Charter’s president and CEO. “We’re leading the way with TiVo to create a user-friendly entertainment experience that leverages an open standards platform to enable IP content and bring a whole new world of applications to the television.”

www.tivo.com

<http://tmcnet.com/58610.1>

ALU Solution Enables TV Everywhere

Despite the obvious market need for TV everywhere, service providers tend to be at a loss how to deliver this capability in a cost-effective way. It might not seem as if the technology is “there” yet. But, the technology is available. Alcatel-Lucent spotted the market need, and developed a system called

Multi-Screen Video Solution. Alcatel Lucent also recently commissioned a study to look at global multi-screen advertising trends.

www.alcatel-lucent.com

<http://tmcnet.com/58611.1>

4G Adoption May Be Gradual

There are patterns in technology history that we might need to keep in mind as new fourth-generation networks are activated. A 2003 research report pointed out that although many operators were pinning their hopes on 3G, which can enable new services like video calls and football highlights, adoption was slower than many had expected. And though there are reasons to believe streaming entertainment video will be a key application for 4G networks, that also was expected of 3G networks, back in 2003.

<http://tmcnet.com/58612.1>

Article Analyzes In-Building Wireless

In-home local base stations have been seen as a way for mobile operators to improve signal reception in problem areas.

The whole idea is that in areas where mobile signals are weak, for whatever reason, the microcell can use the cable modem or telco digital subscriber line

or fiber-to-home connection. However, by definition, the use of a microcell is an admission that the carrier’s network is inadequate, even where the reasons for the signal coverage issues might be reasons beyond the mobile operator’s control. This TMCnet article talks more about this and other issues with in-home wireless and what carriers are doing what in the space.

www.tmcnet.com

<http://tmcnet.com/58613.1>

VoIP Provider Offers Phone Deal

aptela™

Aptela, a provider of Internet-based communications technology as well as VoIP services, plans to offer Cisco SPA 303 3-Line IP Phones for \$89.99 each when you buy three or more with a new account.

www.aptela.com

<http://tmcnet.com/58614.1>

HomeGrid Forum Gets New Recruit



Marvell Semiconductor Inc. has joined the HomeGrid Forum and been appointed to the organization’s board of directors. Marvell joins BT, Intel, Lantiq, Sigma Designs, Telefonica, Texas Instruments and others on the board. Gani Jusuf, vice president of the product development, communications and consumer business group of Marvell, says: “G.hn technology complements Marvell’s existing total connectivity solutions already being deployed in the home and access markets, including Wi-Fi, Ethernet and cellular. We believe, moving forward, the G.hn standard will be the key for powerline, as well as coax and phone line, communications.” For more on G.hn, see the above posting and the February issue of INTERNET TELEPHONY magazine.

www.marvell.com

<http://tmcnet.com/58615.1>

CaaS Going Mainstream in U.K.

U.K. businesses are at the point of widespread adoption of communications-as-a-service, according to a report from Computing.co.uk, which cites vendor surveys as the source of its optimism. The top reason companies are adopting cloud services is faster deployment time and allowing IT staff to focus on more important business needs. Research published in November 2010 by global provider of unified IP business communications solutions Interactive Intelligence found that as many as 64 percent of businesses in the U.K. have engaged or are seeking to engage some element of their communications to the cloud. The research was based on a poll of 100 C-level executives in companies that have more than 1,000 employees in the transport, retail, financial services and distribution sectors.

www.inin.com

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<http://tmcnet.com/58616.1>

West Central Picks Interop



Interop Technologies will provide West Central Wireless, based in San Angelo, Texas, with its hosted turnkey Multimedia Message Service Center solution. The Interop Technologies MMSC will allow West Central Wireless customers to combine photos with text, audio, images, videos, and animations to send to others besides getting access to an MMS Composer for manipulating pictures with effects and audio clips. These can be distributed to other mobile devices via MMS. West Central Wireless will get high visibility into usage information, reporting statistics, and accounting information stored in robust, clustered databases along with Interop Technologies hosted Wireless Application Protocol Gateway.

www.interoptechnologies.com

<http://tmcnet.com/58618.1>

Analysts Offer Spending Forecasts

Telecom equipment might be among the bright spots for enterprise hardware spending in 2011, new forecasts by Gartner indicate. Global telecom equipment spending is expected to grow 9.1 percent in 2011, according to the Gartner forecast. The demand in mobile devices accounts for much of the increase, Gartner says. Beyond that, strong growth of software and mobile devices will hit hardware sales, despite a nominal increase in global IT spending in 2011, according to Forrester Research and Gartner.

www.gartner.com

<http://tmcnet.com/58619.1>

In-Stat Talks Smartphones

According to In-Stat findings, unit shipments for smartphones will reach nearly 850 million by 2015. Principal Analyst Allen Nogee says there are a number of critical factors that are contributing to smartphone success, including a powerful browser, a wide variety of apps, an easy-to-navigate user interface, and a good keyboard or touch screen. In-Stat's report indicates that Android will maintain much of its momentum, continuing as the leading operating system in the United States. The

second highest shipments of all smartphone operating systems, according to In-Stat, are not from Apple, but Nokia's Symbian.

www.instat.com

<http://tmcnet.com/58621.1>

Hospital Selects Extension



Doctors Hospital of Sarasota is now using Extension's Cisco and smartphone-integrated health care team communications solution. It was chosen for its ability to provide real-time, context-aware clinical communications, and to reduce overhead paging, providing a quieter healing environment throughout the hospital. The hospital, which intends to implement the solution across various departments throughout the main campus, was drawn to key functions of Extension's HealthAlert for Nurses solution, including Nurse Call Integration to Cisco IP phones and smartphones, Critical Lab Result Notifications to Cisco IP phones and smartphones, STAT Order Notifications to Cisco IP phones and smartphones, Report Availability Alerts to Ordering Physicians via smartphones, Device Messaging to/from Cisco IP phones, smartphones, and other mobile devices.

<http://opentheredbox.com>

<http://tmcnet.com/58620.1>

New Antennas Target Various Broadband Apps

MTI Wireless Edge announced the release of a new broadband 4.9-6.5 GHz 29dBi two-foot parabolic dish antenna as part of a whole new product line of low-cost single and dual polarity directional antennas covering the 5.15-5.9 GHz WiMAX, ISM and UNII unlicensed frequency bands, the 4.9-5.1 GHz Homeland Security and Public Safety bands as well as the 6-6.5 GHz bands used in East European countries such as Russia and Po-

land. According to MTI Wireless Edge, these antennas are used for both point-to-point and point-to-multipoint applications.

www.mtiwe.com

<http://tmcnet.com/58622.1>

MobileMxD Marries UC, Wireless

BroadSoft's MobileMxD – an integrated suite of consumer and unified communications services, is optimized for 4G networks and the growing variety of smartphones and tablet devices. MobileMxD will enable mobile operators to tap into subscriber revenue opportunities across all major smartphone and tablet operating systems and 4G-enabled devices. "For mobile network operators seeking a path for delivering 4G smartphone and tablet-enabled consumer

and UC service – and the increased subscriber revenue that can come with these services – we believe MobileMxD will represent a compelling opportunity to do so quickly and cost-effectively," says Michael Tessler, president and CEO of BroadSoft.

www.broadsoft.com

<http://tmcnet.com/58617.1>

Iridium Forges M2M Partnerships

Mobile satellite service company Iridium Communications has signed collaboration agreements with five new value-added partners to market its data solutions for the mobile machine-to-machine sector. The new partners are ACR Electronics, DeLorme, Digi International, KORE Telematics and Xact Technology. The new value-added partners are going to leverage Iridium's global, low-latency, two-way satellite data links and its next-generation Iridium 9602 SBD transceiver to create innovative, low-cost M2M solutions for broad-based government, commercial and consumer markets.

www.iridium.com



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<http://tmcnet.com/58594.1>

EastLink Taps MIND CTI

Canada-based EastLink has selected MIND CTI to provide its end-to-end prepaid and postpaid convergent billing solution. Officials with MIND said that the company provides EastLink with the solution for full support of its future wireless services and offers scalability to meet EastLink's expected rapid subscriber growth. "We are excited to have been selected by such a dynamic operator and by the professional team that managed the process. We believe that this is the beginning of a long-term partnership and welcome EastLink to both MIND families, customers and investors," says Monica Iancu, chairwoman and CEO of MIND CTI.

<http://tmcnet.com/58595.1>

New Wireless Trends Report Issued

AOTMP's latest report "Wireless Trends: Mobility Management Within the Enterprise" examines wireless adoption practices and preferences of enterprises. This report, part one in a two-part series scheduled to publish in 2011, delves deep into wireless

adoption practices and preferences of enterprises, before," said Timothy C. Colwell, senior vice president of global performance management at AOTMP. "These trends, however, only tell part of the mobility story."

<http://tmcnet.com/58596.1>

Symphony Lands in Magic Quadrant

Gartner Inc. has positioned Symphony Services as one of the top companies in the Telecom Expense Management Magic Quadrant, Worldwide 2010. The designation is based on a company's completeness of vision and ability to execute. The clients of Symphony Services include telecom expense management and mobile device management companies across the globe.

<http://tmcnet.com/58597.1>

SaaS Outfit Reports Results

Coupa Software, developer of cloud spend management products designed to help companies "control their indirect spending," according to company officials, has announced record results for 2010. Monthly recurring revenue grew 156 per-

cent year-over-year, placing Coupa among the fastest-growing software-as-a-service companies. Spending through the Coupa Cloud Spend Management platform grew at a 180 percent annual rate, and the company exceeded a 95 percent subscription renewal rate for the year.

<http://tmcnet.com/58598.1>

BroadSource Merges with Integrated Mobile

Atlanta-based provider of telecom expense management technology and services BroadSource is merging with Columbus, Ohio-based Integrated Mobile Inc., a provider of managed mobility services. The new company will be headquartered in Atlanta and will continue to maintain offices and operations in Ohio. The merger, termed as a "merger of equals," will create a more dominant competitor that is well positioned to provide a full suite of wireless and wireline solutions for mid to large enterprises, according to company officials.



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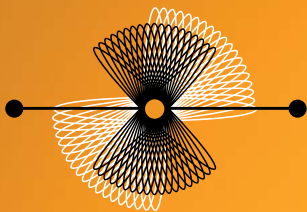
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Magneti Marelli, Wind River Partner

WIND RIVER

Wind River, a provider of embedded and mobile software, and Magneti Marelli, a global automotive high-tech systems and component supplier, have collaborated to create the first GENIVI-compliant in-vehicle infotainment solution for the automotive industry. Magneti Marelli as part of the effort leveraged its extensive automotive know-how, leading the development of the solution in integrating complex systems and technologies for the vehicle environment. Wind River integrated, tested and validated the solution, and offered customization and consulting services. The GENIVI open source platform standard aims to provide automobile manufacturers and suppliers with a common framework to simplify elements of the in-vehicle infotainment development process that have been duplicated across the industry.

www.magnetimarelli.com

www.windriver.com

<http://tmcnet.com/58583.1>

CloudPassage Delivers Cloud Servers

Security SaaS company CloudPassage has emerged from stealth mode to unveil what it says are the industry's first and only products designed from the ground up to provide security for elastic cloud servers. As a result, it says, companies can manage their own cloud security by leveraging a single solution that is purpose-built for the cloud and delivers multiple layers of defense for cloud servers. "Servers in the cloud need to be self-protecting and autonomous to survive the higher exposure level to threats and vulnerabilities," says Srivats Sampath, founder and former CEO of McAfee.com, and an investor in CloudPassage. "Elastic cloud security from CloudPassage is the go-to security solution for any organization that needs to scale and secure cloud servers."

www.cloudpassage.com

<http://tmcnet.com/58584.1>

New Offers Added by Ephox

Ephox Corp., a provider of software for optimizing web production processes, has introduced professional services for Ephox Enterprise TinyMCE. With these new services, organizations can now receive enterprise-level service, support and product extensions designed for companies integrating TinyMCE. TinyMCE is an open source, WYSIWYG editor based in JavaScript and used by millions to author content for web pages, blogs, e-mails, wikis and more. Popular for its full set of rich text editing features, TinyMCE has been downloaded more than three million times, is used by over 22 million Wordpress publishers, and is trusted by a large community of users.

www.ephox.com

<http://tmcnet.com/58585.1>

Nuxeo Studio 2.0 Available

nuxeo

Open Source ECM

Nuxeo, the Open Source Enterprise Content Management platform company, has announced the availability of Nuxeo Studio 2.0, a new major version of its customization and design environment delivered as a service. Built to meet the needs of content management application developers, architects and business analysts, the company says that Nuxeo Studio 2.0 raises the bar for usability and rich customization capabilities. It exposes new design tools to help application developers build and deploy new features, content types, automations, and sophisticated views of managed information. No upgrade or installation is required for customers currently using Nuxeo Studio.

www.nuxeo.com

<http://tmcnet.com/58586.1>

Bell Labs Fellows Win Japan Prize

Alcatel-Lucent has announced that Dennis Ritchie, Ph.D., Bell Labs fellow and distinguished member of technical staff emeritus at Bell Labs, and Kenneth Thompson, Ph.D., Bell Labs fellow and now distinguished engineer at Google Inc., were honored with the 2011 Japan Prize in information and communications. Since 1985, the Japan Prize has been awarded by the Japan Prize Foundation annually to scientists and researchers who have made substantial contributions to the fields of science and technology and to the world. Ritchie and Thompson received this honor for developing the UNIX operating system and the C programming language for use on UNIX, significantly advancing computer software, hardware and networks over the past four decades, and facilitating the realization of the Internet. UNIX, created in 1969 while both were researchers at Bell Labs, is the operating system of most large Internet servers, businesses and

universities; a major part of academic and industrial research in operating systems; and a driving force behind the development of the Internet and open source culture.

www.bell-labs.com

<http://tmcnet.com/58587.1>

DNA 3.0 Released

Open Solutions Inc. has announced the release of its newest version of the company's enterprise-wide core relational platform, DNA 3.0. The first new release since DNA was introduced in 2008, DNA 3.0 has more than 120 enhancements. "The conversion to Open Solution's DNA 3.0 platform was more positive than our highest expectations," says Butch Leonardson, senior vice president and CIO of BECU, Washington state's largest credit union. "The entire process went very smoothly; over the course of one weekend our credit union went live with the new platform"

www.opensolutions.com

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Fade to White

How the FCC's White Space Ruling Could Affect Everything About Networking

You've probably heard about how the FCC has moved to advance wireless by freeing up unused spectrum in the broadcast TV band. What you may not be aware of, however, is just how wide-ranging this white space effort is and what it could portend not just for wireless Internet service providers, but for virtually every organization that has a campus network, every consumer electronics and network infrastructure outfit, and every wireless and wireline service provider.

The FCC's white space move represents the largest single expansion of spectrum since the changes to Part 15, which expanded the use of 2.4GHz unlicensed spectrum and led to the popularization of Wi-Fi.

But it's much bigger than that.

Billions of consumer electronics devices now occupy the 83.5MHz of spectrum in the 2.4GHz space. That's the entire wireless ecosystem, including Bluetooth, Wi-Fi and just about anything else you can think of. The white space, meanwhile, represents 276MHz of spectrum – almost three times the spectrum available in the 2.4GHz band, notes Jesse Caulfield, president of Key Bridge Global LLC, and this is the largest block of spectrum available for unlicensed use under 1GHz, so it's infinitely more usable than the 2.4GHz bands.

"Now you'll be able to get broadband wherever you can get FM radio," says Caulfield.

Richard Shockey, who runs Shockey Consulting and is chairman of The SIP Forum, adds that white space spectrum has awesome promulgation characteristics, including the ability to penetrate walls for better coverage.

"This is as good as it gets really," says Shockey.

"This very much reminds me of VoIP 12 years ago, because of its potential implications," he continues. "No one took voice over IP very seriously 12 years ago, and look at where it is now."

White space spectrum, which is found between 50MHz and 698MHz, should go a long way toward helping expand broadband to all Americans, which President Obama and FCC Chairman Julius Genachowski have indicated is a key goal of the federal government. Indeed, it will be impossible to justify fiber optic broadband to all homes, and copper is in limited supply and has limited reach. Using wireless technology can help rural service providers bring broadband to subscribers that might not otherwise be reachable.

However, the applications for white space spectrum go far beyond just rural broadband builds. This repurposed spectrum also can be used to build corporate networks (Shockey says that Microsoft has already used white space spectrum to build a pilot network at its headquarters campus in Redmond, Wash.); to help deliver in-home applications including smart grid; and by wireless and wireline service providers that want to create new or fill in existing broadband networks.

Caulfield adds that because the white space spectrum is supremely usable it also brings down the cost of some existing applications. He notes that FiberTower and Sprint have been among the biggest proponents of using this spectrum for things such as wireless backhaul. Caulfield says that while a microwave solution for mobile backhaul would cost hundreds of thousands of dollars, a similarly sized solution would be just hundreds of dollars with this spectrum.

Given the wide range of devices, networks and applications for which white space spectrum could be leveraged, this effort is likely to represent billions of dollars in new revenues for the communications industry, Shockey opines.

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But the implications related to the government's white space actions are bigger still.

Also key to this discussion about white space and, potentially, all wireless spectrum, is a database. As part of the white space effort, the FCC mandated the creation of a database that wireless devices and networks can query to access, and prevent interference with, radios operating at these frequencies.

"The white space database gives you a channel list, and it gives you rights to transmit," says Caulfield.

The database is supposed to launch commercially this year. But there are still many unanswered questions about this database, like what technologies it will employ, how it will be queried, how it will be financially supported, and who will manage it.

However, the FCC has conditionally approved nine database applicants. That includes Comsearch, Frequency Finder, Google, KB Enterprises and LS Telcom, Key Bridge Global, Neustar, Spectrum Bridge, Telcordia and WSdb. All of the above companies submitted proposals in response to an FCC order seeking interest around this.

These companies had a chance to supplement and respond to concerns about their database proposals by Feb. 28. (These companies submitted their proposals back in January of 2010, but the FCC didn't release rules around the database until September. So Feb. 28 was the date by which the nine companies could alter their proposals to align with the rules or, if they want, withdraw from the process altogether.) The FCC has scheduled a March 10 workshop to address administrator operation, consistency and compliance and to schedule public trials for the database. And April 24 has been defined as the earliest possible date for commercial availability of the database, which is required for entities to make use of the white space for new wireless applications.

"I think that this database idea is the coolest thing since sliced bread," says Barlow Keener, attorney of Keener Law Group, who moderated a SuperWiFi Summit panel (in which all the sources in this story participated) at ITEXPO East last month in Miami.

The database will enable anyone with any device to see all the radios on the network, he says.

While it's unlikely that the average consumer will actively be looking at such information, Shockey explains that what the database will enable is for multi-mode wireless devices and network elements to review and select appropriate radios and frequencies for connectivity.

Indeed, Caulfield says that the rules anticipate two classes of unlicensed white space devices, ones that can create a network and ones that can consume the network. He adds that the database is really more about infrastructure for creating a network, not necessarily for its consumption.


Caulfield also notes that network devices (like access points and other enterprise wireless fixed infrastructure) that can leverage white space and the new database are expected to come on the market starting in the third quarter. Consumer devices that can work with all this should arrive starting at the end of next year, he says.

Peter Stanforth, CTO of Spectrum Bridge, says that one model to subsidize the database could be to tack on a small fee to all devices that will be registered to it. If database operators can deliver value-added services around the database, he adds, the database could be delivered even more affordably.

Here, Stanforth gets to a key point. The white space database is widely expected to evolve into something greater than a white space interference avoidance mechanism. The thought is that, over time, this database will come to house information not just on radios operating in the white space frequency, but on all radios used for wireless communications.

The database could also eventually enable value-added services and capabilities.

One source commented that could allow a service provider to offer a subscriber the ability to press a turbo button on his or her smartphone to get a faster connection, for example. However, Caulfield says that wouldn't be possible. What the database will do, however, is establish a spectrum coordinator that could take steps to avoid spectrum saturation in certain areas, he says. That means there could be more control of connectivity in a building or a park, or for certain events, like at the unveiling of a new Apple product by Steve Jobs, he explains. **IT**



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SMS & the B2C Opportunity

Or, Why Texting Is Great for Business Applications Too

There's a lot of focus these days on broadband mobile connections and bandwidth-loving applications like video. But, as they say, good things come in small packages. Such is the case with short messaging service.

As it turns out, SMS is the fastest growing mobile segment in the U.S. today.

"The performance of SMS over the last five years has been staggering and remains so mainly because it is cheap, easy to use, convenient, discreet and universally acceptable to some 4 billion consumers worldwide," according to a new report by Portio Research. "During 2009 SMS continued to grow in all markets and the report confidently predicts that it will continue to do so for several more years. In 2009, worldwide SMS traffic topped 5 trillion messages, and that figure is set to exceed 10 trillion in 2013."

Of course, SMS is just another term for texting. And while a lot of that texting is between individuals, SMS is also a great business-to-consumer tool given it's a technology that's well understood, widespread, and offers open rates close to 100 percent, says Pieter de Villiers, Clickatell CEO. He adds that every single mobile device in the world has the ability to text, and that the average SMS gets read within four minutes.

"Many are focused on smartphone apps, but no mobile strategy is complete without SMS as an anchor tenant," says de Villiers. "You can't have a mobile strategy without SMS."

The worldwide mobile messaging industry currently is generating revenues in excess of \$150 billion, and is forecast to exceed \$233 billion by 2014, according to the Portio Research report.

For its part, Clickatell offers companies the ability to send SMS messages anywhere in the world via a broadband-equipped computer. The company also provides interfaces to ERP and other applications to enable SMS services to interface with such systems.

Clickatell in 2000 launched the first website for computer-to-cell-phone SMS transmissions, says de Villiers, who adds that South

Africa-based Mobile Telephone Networks was the first mobile service provider that offered its subscribers the ability to do PC-to-mobile endpoint SMS. He says the per-SMS rate within the U.S. is between a penny and four cents, depending on volume.

There are many applications for SMS in the business-to-consumer realm. For example, a doctor's office could use SMS to remind patients about their appointments. Clickatell's de Villiers says sending patients such reminders the day of their scheduled visits can lead to savings of up to \$300,000 a year. Another medical application is to send an SMS to a person every time someone tries to access their health records; the SMS would provide a quick and easy way to alert the patient of the inquiry and, if the individual opts to, to approve that access, he says.

Banks, meanwhile, can leverage SMS technology to keep customers abreast of activity on their accounts. One bank in an emerging market was able to decrease credit card fraud by 43 percent via a Clickatell SMS solution, says de Villiers.

SMS also holds a lot of possibility for the transportation sector, he says. For example, airlines can use SMS to alert passengers of flight changes, and companies in the parcel transport business can use SMS to confirm delivery times of packages.

Companies and other organizations can tap SMS capabilities as part of their emergency notification plans. It's also a nifty tool for town-hall style meetings. In fact, during a trip to Cairo and Ghana, President Obama invited people to text him questions.

Of course, SMS also ties in nicely with the idea of location-based services. A business could, for example, leverage both LBS and SMS to deliver a coupon or link to a promotion based on the mobile subscriber's physical or online whereabouts.

However, Noah Rafalko, CEO of TSG Global Inc., says that the kind of SMS that is popular today is only the tip of the iceberg of what is possible.

TSG Global is a VoIP and SMS texting service provider that offers the web developer community, enterprises and service providers with the tools they need to enable long-code SMS applications. While Rafalko describes short-code SMS as simply a method of distribution, he says long-code supports fax, voice and SMS.

"That's the difference we have that most companies don't have – this real rich experience with voice," says Rafalko. "Voice is king, and it really takes a lot of energy to do voice."

The ability to support a variety of communications in a unified way means long-code can provide one point of contact for a business, says Bob White, vice president of marketing and public relations at TSG Global. For example, it could enable a call center represent to receive communications from customers via text and voice. Or a pharmacy could leverage long code to offer a special number through which users could call or text prescription refill requests and the pharmacy could send customers messages back when their prescriptions are ready. Rafalko adds that this technology also can be used to invite customers to comment about the quality of their experiences with a business; for example, a diner could offer a long-code phone number to enable diners to offer feedback easily and quickly before they leave the restaurant. **IT**

Monthly SMS Messages Continue to Grow

- June 2010 = 173.2 billion
- June 2005 = 7.2 billion
- June 2000 = 12.2 million

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MMS Continues Growth Despite Some Perceptions

About three years ago AT&T introduced a service called VideoShare. The idea of allowing cell phone users to send instantly one-way video to other mobile subscribers during a call was radical at the time. As a result, AT&T had to explain that this VideoShare service would be useful if a mobile subscriber wanted to share an experience like a parade or a visit to the museum, or to show someone else something in a shop window.

Of course, sharing both video and still pictures over mobile and fixed connections is commonplace today. Still, there seems to be a lot of confusion over the success of and potential for MMS, or multimedia messaging service.

Pieter de Villiers, CEO of Clickatell, which offers companies the ability to send SMS messages anywhere in the world via a broadband-equipped computer, says that MMS has had both failures and successes around the world. MMS will always be a way for vendors to monetize something that looks and feels like SMS, he says, but with MMS you need a data plan and 2.5G/GPRS technology support in your endpoint “so that was kind of like death by a thousand cuts.”

However, Portio Research indicates in a recent study that MMS is alive and well, and positioned for future growth.

“Today MMS, often cited as a failure, is a massive revenue-generating segment of the market,” according to Portio. “Full year revenues for 2009 amount to almost \$27 billion, an impressive figure, and lest people forget, not far off what SMS was generating a mere 5 years ago.”

The report goes on to say that MMS is growing fast in all major regions worldwide as affordable camera-equipped handsets flood the market and become mainstream.

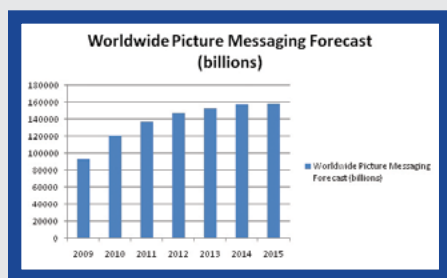
SouthernLINC Wireless, a regional wireless carrier serving the southeastern U.S., is one of

Damian Sazama of Interop Technologies

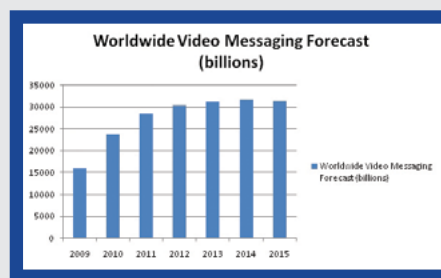


center to enable subscribers to do unlimited picture messaging between networks.

“We are pleased to help SouthernLINC Wireless expand its offerings by providing our MMSC, as well as inter-carrier connectivity, to support the company’s iDEN technology,” says Fred Farrell, vice president sales for North America at Interop Technologies. “Our solutions will help SouthernLINC Wireless further increase its competitive edge



Source:
Ovum



Even today, he adds, only about 350 million smartphones have data plans vs. 5 billion mobile devices supporting SMS. That’s why he thinks MMS will be leapfrogged by mobile media and related technology.

the companies getting in on the MMS act.

Damian Sazama, vice president of marketing and public relations at Interop Technologies, says that the service provider is using Interop’s hosted multimedia message service

and capture available MMS revenue.”

Interop’s service supports all 3GPP/3GPP2 audio-video formats and MMS-capable handsets based on the CDMA, iDEN and GSM air interfaces. **IT**

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Mobile Networking's Impact on Communications and Culture

Alcatel-Lucent last month at Mobile World Congress hosted an event that went beyond your standard discussion of networks and the mobile data boom to delve into what implications wireless, the Internet and social networking do – or could – have on the way we work, live, interact and view the world.

Assembled at the event in Barcelona was a panel that brought together a wide array of opinions and interests. Included on it were Trip Adler, CEO of Scribd; Steven Berlin Johnson, an author who writes about popular culture; Keith Woolcock, co-founder of Cyke Partners; Jay Sullivan, vice president of mobile at Mozilla; Mary McDowell, executive vice president of Nokia; and Ben Verwaayen, CEO of Alcatel-Lucent.

A key part of the discussion centered on the cultural impacts of social networking.

the iPhone and the App Store. Of course, this is just one of the many disruptions that we're seeing in our industry.

As Verwaayen noted, another disruptive force in communications is the confusion over business models as a result of over-the-top providers leveraging for free the networks of telephone companies and other service providers. (And that's closely linked to the rise of the iPhone and App Store.) The Alcatel-Lucent chief defined a second disruptive force in the industry as the ability to "monetize your brain."

of suggestions both from friends and acquaintances, and from strangers. Woolcock chimed in that social networking can be a great way to help people filter what information is important to them, and in the process avoid information overload (which can occur, for example, from arriving a new city about which you may not have much personal knowledge).

"We live in a world of abundance; there is too much information," said Woolcock.

And while social networking, connectivity, mobile devices, web services and apps would only seem to add to the information overload, the panel indicated these things also can make things more manageable and bring very useful data to people who might otherwise not be able to get it.

"The idea that you can simply do innovation within your four walls is dead."
– Alcatel-Lucent's Verwaayen

Johnson said that Facebook's Mark Zuckerberg recently commented that every major industry will reorganize itself around social networking.

Verwaayen later went on to say that Alcatel-Lucent uses social networking within its organization to enable better communications. He added that: "The idea that you can simply do innovation within your four walls is dead."

In another comment related to innovation, Woolcock noted that quite often, big change in an industry comes from outside that industry.

Indeed, it was Apple – best known for its Macintosh computers – that rocked the world of wireless with the introduction of

True. The Internet has often been referred to as the great equalizer, enabling anybody with a computer and a connection to get his or her opinion heard by the masses, or some subset thereof.

The panelists touched on the fact that the Internet, mobile networks and social networking tools have been key in helping to mobilize large groups of people during the recent events in Egypt and Tunisia. (As noted by TMC's own Rich Tehrani in Publisher's Outlook on page 2.) More commonly, however, we use these technologies for more mundane exercises, such as to get advice on a good restaurant or to share vacation photos.

Johnson said that when he tweeted we was in Barcelona and was looking for good places to eat, he got a wide array

For example, McDowell talked about an SMS service Nokia supports that delivers prenatal tips to mothers-to-be in developing countries. Another service gives rural farmers crop information so they can more effectively gauge the value of their harvests, she added.

On a separate note, Adler and Johnson talked about how things like Scribd and the ability to highlight key passages within e-readers can make reading a more interactive experience. Adler added that reading has always had the potential to be a social exercise through things like reading groups. Woolcock went on to say that the Iliad and the Odyssey started out as spoken word, so the idea of putting literature within the social arena has a great history. **IT**

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A faint, stylized silhouette of a crowd of people is visible in the bottom right corner of the image, appearing to be looking towards the left.

Unifying True Communications at Warp Speed for a Secure, Agile Mobile Workforce

It's 9 p.m. in Prague. You just ended a live smart-phone chat with your development team there. You're in California. Where does that chat data live, and why is that important?

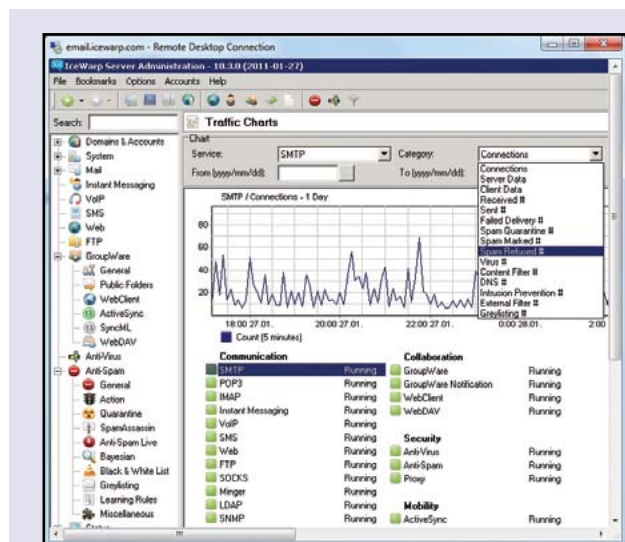
Sure, people have been archiving e-mail for more than two decades now. In today's New Normal Information Age, which ranges from enterprise use of instant messaging, text (SMS) messaging (not just for kids anymore), VoIP, live chat, smart-phone chat, videoconferencing and more, one has to wonder if anybody is securing and archiving all this critical data that's traversing the rapidly expanding new generation of networks.

Years ago, people claimed that CRM would save the world. Did it? Now the buzz on unified computing and the hoopla over cloud computing brings up serious issues beyond the hype. Today's mobile workers are demanding a seamless experience using the devices and applications of their choice. To ensure the highest productivity of an agile workforce armed with all the new and evolving forms of communications, smartphones, tablets or laptops, your network must be good enough to handle the incoming tide of data and securely manage all traffic.

Take instant messaging for example. IM matters in the moment. Capturing and archiving that data is of enormous concern to IT managers as well as CFOs and CEOs because, if not secured, data can be breached. Unsecured, unarchived data might also fail to meet audit and compliance requirements. Business reputations can be ruined. Companies fined. People can even go to jail.

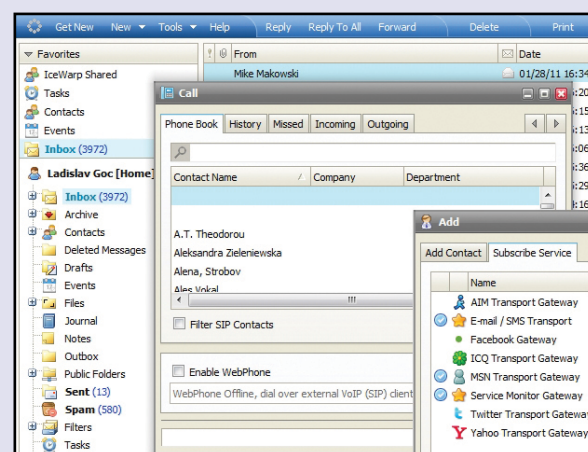
Voice is an even greater challenge. How to secure and archive VoIP truly matters. Fortunately, general technology has grown to the point where we can now achieve unified communications and extend it to mobile devices. Before the arrival of 3G, the quality of mobile, high-speed networks was not good enough for making VoIP a reality. Five years ago, talking on VoIP over the mobile phones would have been nonsense multiplied by five.

How times have changed. We have entered the realm where communications can be deployed either inside the organization or outside the company in a hosted environment living in the cloud. Inside your own organization, on your local network, you can always rely on having enough bandwidth. Archiving locally is easier and most critical information such as intellectual property, sales contacts, and prospect lists generally



IceWarp Unified Communication Server baseline statistics and resource usage

won't leave the network without authorization so long as the right protection tools and policies are in place. However, you need someone to set up and maintain all that or have your own dedicated IT staff.



IceWarp WebClient - unifying e-mail, instant messaging and voice

If you launch yourself into the hosted services residing in the cloud, your data is going to be transmitted through

IceWarp President
Ladislav Goc



public networks. All that data must be encrypted because you never know who is watching, listening and possibly accessing your data without authorization. If deployed in the cloud, it is essential that you know how your data is being encrypted and backed up and what will happen should the cloud suddenly evaporate. Yikes.

back – quickly. You must be able to seamlessly migrate your data from one cloud platform to the next if the current vendor starts going wobbly on you.

So choosing your cloud partner is a matter of deep trust.

We know a group of great tech geeks in North America with top-notch security expertise and an incredible solution certified for use by the government and the military. We really like their solution, but we're not using them so far. Their technology is great, but they are not ready to submit a contract we can trust enough to give us confidence to migrate our data into their cloud. What happens should something go awry (e.g., they run out of money and close the doors)?

With your unified communications, you certainly can do it in-house or go to the cloud and this can be remotely controlled. In both cases, the responsibilities are the same. Storage, backup, and retrieval capabilities must be addressed and proven.

Say your data center blows up. Your executives and IT staff are panicking. Their hair is on fire. How long will it take to ensure backup? Don't get me wrong, there is great opportunity with unified communications. It makes perfect sense in a world that is on the move and hyper-connected. Choosing the proper deployment is a big decision – in-house vs. the cloud. It's more than just cool technology, though. There is great responsibility and true concern about storage of new types of data. The archiving of all data is not a nice-to-have, it is a must-have. Point-to-point encryption of all communications is the answer to surviving and thriving in this brave new agile world in which we live, work and play.

New pathways of unified collaboration and communication are changing the world. Mobility certainly brings opportunities

If deployed in the cloud, it is essential that you know how your data is being encrypted and backed up and what will happen should the cloud suddenly evaporate.

There are great engineers out there designing new clouds. They love building the "coolest" technology. They're not necessarily always good businesspeople, however. Should their companies go out of business, you're in deep trouble. You need to know where your encryption keys are and how to get your data

and risk as well. Just be certain no matter where in the world it's 9 p.m. - Prague, Peking or Palo Alto – that you always know where your data lives. **IT**

Ladislav Goc is president of IceWarp Ltd. (www.icewarp.com).

Three Things to Know About Your 4G Mobile Video – Before Your Customers Start Using it

The numbers are staggering. ABI Research says revenue from mobile video services is expected to top \$2 billion worldwide in 2013. According to Cisco's Visual Networking Index, mobile video will be the next big growth area for mobile carriers and manufacturers and will likely represent almost 66 percent of the world's mobile data traffic by 2014. In-Stat predicts that revenue from mobile video calling will exceed \$1 billion by 2015.

No one denies that the widespread use of mobile video is going to change the mobile landscape forever – if it lives up to consumers' expectations. According to a study by TubeMogul.com, more than 81 percent of online video viewers click away if they encounter video clip rebuffering.

In other words, users will simply stop watching mobile video if the quality is poor. This in turn could cost mobile carriers big bucks because it could lead to device returns or increased churn.

In particular, there are three potential quality killers that mobile industry players need to consider to ensure that the 4G mobile video services they deliver meet customers' expectations.

Potential Quality Killer #1: Choosing the Wrong Codec

When it comes to video quality, size really does matter. Quality requirements for mobile video displayed on a two-inch screen are quite different from the quality requirements of a 10-inch or 14-inch tablet or laptop computer screen.



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Obviously, mobile video viewed on a tablet or laptop computer requires a higher quality codec, which requires more network bandwidth and other resources. But if you deliver video using too high quality of a codec to the two-inch screen, video quality also could suffer if the device is not equipped to keep up with the processing demands of the high-speed codec.

The trick is to support the video delivery on each device with the optimal codec and video bit rate, so that you are delivering just high enough quality to ensure that the picture is good – with no loss of frames or choppiness – without wasting network resources and bandwidth. And that means you need to uncover codec-related quality problems by evaluating different devices in the field before your customers discover these quality issues themselves.

Potential Quality Killer #2: Not Effectively Supporting Multi-RAB operations

Consider this scenario: Your customer is happily watching a streaming high-definition movie on his mobile device, and suddenly he receives a phone call. Immediately the video picture starts breaking up.

That's a very real scenario if your mobile network or the device that the subscriber is using cannot effectively support the simultaneous delivery of both voice and data operations – also known as multi-radio access bearer or multi-RAB operations. One challenge with 4G networks is that their initial deployments will not be able to effectively process voice calls. So when a voice call comes in, the network needs to migrate the device's operations down to an earlier generation of

technology to process the call. When this happens, data speeds can fall from 5 mbps to 500kbps almost instantly, which can immediately cause video quality problems such as choppiness.

To avoid this, the mobile network and the mobile device must have the capability and the processing power to support both

voice and video operations in parallel. So once again, if mobile operators are attracting customers to their 4G networks by touting their ability to watch movies and support video chat on their devices, they better make sure that the devices they're offering those consumers can actually deliver on those promises – before the devices hit the commercial marketplace.

Of course, needing a device with greater processing power can lead to another issue, one that is going to become even more critical as mobile video grows in popularity: battery life.

Potential Quality Killer #3: The Battery Life Conundrum

All LTE devices will contain first-generation chipsets – and these will typically have wider silicon tracks, non-optimized algorithms, reduced chipset integration and inefficient battery consumption. Plus the biggest battery drain on mobile devices is the screen display – which by definition has to be operating while users are watching video. Put together, this means that the biggest obstacle working against the success of mobile video could actually be battery life.

As an example, Metrico Wireless recently tested the battery life of two mobile devices while these devices were supporting streaming video and turn-by-turn navigation. The specs of the first device claimed the device supported a talk time of 6.4 hours and a stand-by time of 270 hours; the other device claimed a talk time of 10 hours and a stand-by time of 290 hours.

Not surprisingly, the Metrico tests showed that when the devices were used to support video and navigation, the battery life of both phones was hours lower than the talk time battery life listed by the phones. In fact, both devices ran out of battery power in less than four hours.

However, the more interesting discovery was this: When supporting the video and navigation applications, the battery life on the device that claimed the lower number of talk time hours – 6.4 hours, to be exact – lasted more than 40 percent longer than the device that claimed 10 talk time hours.

This clearly illustrates that measuring talktime is no longer enough when it comes to quantifying battery life. Instead, mobile manufacturers and carriers need to accurately measure the battery life of devices from the end user's perspective – by mimicking real-world conditions and assessing the battery life of devices while they are running popular applications other than voice.

The bottom line is that mobile carriers need to understand and optimize the actual 4G mobile video experience users have on all types of mobile devices – before those devices hit the commercial marketplace. By fully testing the quality of mobile video services delivered by each device in the field – before those devices are delivered to consumers – both mobile operators and mobile device manufacturers can ensure that a customer's actual experience not only meets but exceeds that customer's expectations. **IT**

Simon Bone is director of product management for Metrico Wireless (www.metricowireless.com).

Users will simply stop watching mobile video if the quality is poor. This could cost mobile carriers big bucks.

Reading Between the Lines

Mobile Barcodes Move Forward

The mobile barcode is a fun and exciting new technology that enables people to use their cell phones to capture a code on a label, sign or other item and get more information about that product or service. It's early days for the mobile barcode, but Diane Strahan, vice president of mobile marketing at Neustar, says that the mobile barcode appears poised to take a similar path to that of SMS, offering simple applications initially, but delivering more personalized information over time.

Right now mobile barcodes typically send the cellular phone user right to a website link to get more information on a product. (Yesterday I saw a mobile barcode on a realty sign in my neighborhood, for example. The code takes you to an online listing with details of the home's features.) Strahan refers to this as the direct method, in which an HTTP link is embedded in the code. The next step, she says, will involve mobile barcode applications that can authenticate users and contextualize the delivered content based on time of day, location, etc., so it's more relevant. She says this involves the use of managed, or indirect codes, which involve a URI look up of the code, and that code comes back to a clearinghouse.

Neustar's heritage of delivering numbering and addressing solutions and its recent acquisitions, which have focused on making connections to help enterprises get the right content to the right people, devices and platforms, dovetail nicely with that movement, she adds.

"It's really about enabling smart connections, and that's what mobile barcodes are about as well," says Strahan.

She says that Neustar supports all the open, standards-based barcode technologies and makes the mobile barcode experience for end users, retailers and others involved in the delivery chain interoperable and frictionless.

"In 2011 we're going to definitely see more standards and definitely see more integration and scale," she says, adding that most big retailers and big brands already have been involved in mobile barcode pilots.

While many companies are fired up (in a good way) about mobile barcodes today, it actually was a negative development that fueled much of the interest in mobile barcodes, says Strahan. She explains that scanning applications that enabled shoppers to compare prices between different retailers was a big wake up call for many businesses.

"The industry woke up a little bit because you had these incredibly entrepreneurial people out there launching shopping applications," she says.

Mike Wehrs, CEO and president of Scanbuy, which says it offers the broadest

Diane Strahan



suite of barcode readers running on various mobile OSs and has a code management platform, recently released a new study on mobile barcodes. It revealed that there was a 1,600 percent increase in the number of scans last year as compared to the previous year. Also, indicating a shift from the early adopter to the mainstream, the report indicated that more women and more people outside the 15- to 25-year-old age bracket are now using mobile barcodes.

Wehrs says there are two kinds of barcodes: the 1D, or universal package code, which is on every package out there; and the 2D, which can drive action on a phone, like sending the user to a website or initiating an SMS to opt a person into a program or contest.

So who specifically is using mobile barcodes and for what? Wehrs says Target did a campaign with Scanbuy between Black Friday and New Year's Eve. The retailer sent out a toy catalog with a code next to various toys. Scanning a code would launch a funny video related to the toy on the user's phone. Not only did this drive interaction with the customer, says Wehr, it also gave Target an idea about what toys were likely to sell best, based on number of viewers of the video. He adds that this kind of application could also enable the retailer to gauge interest in the product by look at the location of users who watched the videos and glean demographic information on viewers based on the mobile devices they used to access the video. **IT**

Key Takeaways from Scanbuy's ScanLife Mobile Barcode Trend Report

- Traffic was up 16x in 2010 overall.
- Traffic doubled since the last Trend Report in September.
- UPC scanning outpaced 2D codes as a result of the holiday shopping season.
- The largest scan days were the day after Thanksgiving and Christmas Day (as people received gifts, many being new smartphones)
- The top most used features for people scanning UPC codes are coupons, prices and nutritional information.
- There was a 13 percent increase in female to male traffic, and a 25 percent increase in the 25 to 54 age group.

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Going Global and Mobile with Metaswitch Networks

Global and mobile – that’s the very appropriate mantra driving Metaswitch Networks’ innovation today. The coming of 4G networks has been well documented, as has the timeline for the introduction of 4G handsets by Verizon and AT&T. (Sprint, of course, has had its WiMAX network and 4G devices in play already).

There is a more telling story that documents the evolution of communications technology, according to Kevin DeNuccio, CEO of Metaswitch Networks. In fact, he believes the current mobile Internet surge will prove much more significant than the original Internet boom of the 1990s, because it will be much more pervasive, reaching virtually every person on the planet.

“When the Internet came on the scene, it changed the world significantly,” says DeNuccio. “Today, the confluence of three things – the mobile Internet, smartphones, and cloud computing – makes for another technology change, the likes of which we’ve never seen before.”

Evidence of that massive change can already be seen in the mobile operating systems in play today and the applications that have been built on them. We have witnessed an acceleration of technology that has allowed one mobile operating system (Apple’s iOS) to come out of nowhere and overtake entrenched platforms to lead the market in three short years. Then we’ve seen another competitor (Android) do the same in less than 18 months.

This nearly inconceivable pace of change and the rate of adoption of new technologies, in fact, prompted DeNuccio to move his CTO and some of his best engineers from London to Silicon Valley shortly after taking over as CEO in February 2010, where they would be at the heart of the innovation and change and could leverage the opportunity.

One result of that move was the launch of the Thrutu application on the Android marketplace, an over the top application that adds richness to a basic voice call using single icon clicks to launch actions that, until now, took six or seven steps. For instance, while on a call, a user can push a single button, which will take a picture and send it to the party on the other end of the call.

“It’s about enriching what has been a traditional way to communicate, centered around voice and combining that with data,” explains DeNuccio. “It will keep people on the phone longer, making the experience much richer and much more inviting.”

Within four days of launching, more than 6,500 users were already enjoying the application.



Metaswitch CEO Kevin DeNuccio

That, however, is but a microcosm of what is happening to the communications industry, which is undergoing a transition like never before, particularly in the mobile space, creating a challenge for carriers that must now build new business models without disrupting their existing revenue streams.

Metaswitch Networks built its reputation as an expert in IP software and session management technologies, selling to some 250 telecom equipment manufacturers in the world and, over the past decade, directly to carriers, enabling them to transition from traditional telephony to IP-based communications.

Today, VoIP is on the verge of becoming a fundamental wireline technology because of the enhanced communications capabilities it enables. But the greater opportunity lies in the 4G wireless market, giving way to three key elements of Metaswitch Networks’ approach to the future of communications as it brings its wireline legacy to the mobile world: mobile VoIP,

4G communications and messaging, and scalability and security of session management in SIP environments. These three strategic initiatives are a natural extension of the company's traditional expertise to the mobile world.

Naturally, the infrastructure must be in place for carriers to deliver on Metaswitch Networks' "global and mobile" ideal. But, those plans are well under way, and America's two largest carriers, back in January, announced schedules for the rollouts of their first sets of LTE devices.

The bigger challenge will be in evolving business models to meet new user demands, efficiently delivering new services and applications, and understanding how much users will be willing to pay for these new services. One thing is certain: Most users are loath to pay more for their communications services.

"The fact that we have to go through this massive architectural shift to deliver the mobile Internet and VoIP on 4G, while going through virtually a trillion-dollar business model change, makes it very challenging," says DeNuccio.

The difficulty lies in cost effectively spurring innovation and driving new services, applications, and associated revenue opportunities, while continuing to leverage existing infrastructure.

A year ago, Metaswitch Networks acquired AppTrigger, specifically to address this dilemma and help carriers build out next-generation networks and services without jeopardizing their traditional customer bases and revenue streams. The service broker technology it acquired essentially adds a software layer to the network, enabling carriers to deliver legacy services and applications on their new networks, limiting risk for users migrating to newer technologies. Equally significant, because subscribers want to migrate at their own pace, is the opportunity to grow revenues from legacy networks though effectively creating backwards compatibility, allowing carriers to run next-gen applications and services on legacy networks.

"The ability to build out a new network and not have to make users change is an enormous capital preservation capability and facilitates the transition to new networks without having to rewrite applications or endangering your current revenue streams," says DeNuccio. "If you look at the capital constraints and the business model transition the carriers are going through, the service broker has created a fundamental shift in application delivery strategy."

The ability to run applications on multiple networks concurrently notwithstanding, the undeniable fact is that carriers will eventually have to facilitate the migration of their current 2G and 3G subscribers to new 4G networks. The economics of network maintenance versus revenue will demand it.

Current 2G users will present the greater challenge, for they have not realized the wonder of the mobile Internet and will

need incentives, again requiring an evaluation of business models. That said, the past few years have seen a 25 percent reduction in the volume of voice calls, along with a 75 percent year-over-year increase in text messaging by older populations. That adoption of non-voice communication will make it easier to entice 2G users to make the jump to 4G.

The 3G to 4G transition should be much easier, because those subscribers are already leveraging data capabilities, the demand for which will quickly outstrip 3G capabilities. Simply, users will seek higher bandwidth networks to leverage the latest services. It's not unlike the movement to high-speed wireline connectivity from DSL or even dial-up connections, where users recognized the need to increase speed and throughput for their typical applications.

Indeed, the migration will happen and, while it's up to the carriers to drive that migration, companies like Metaswitch Networks, which provide the technologies to simplify the migration path and protect revenues in the process, will play a significant role. Perhaps the greatest challenge, as carriers look for the path of least resistance, will be the unknown force that could be exerted by aggressive companies like Apple, Google, and Facebook.

As Metaswitch continues to help carriers through this unheralded technology transition, the concentration of power held by these three players could well pose a risk to the industry as a whole, if the path isn't well defined.

According to DeNuccio, however, Metaswitch Networks, with its deep heritage in software engineering, combined with a fundamental understanding of the nature of the change the communications market is witnessing, is well positioned to guide the carrier community through the process while providing the protection from outside forces.

"Our ability to marry a telecom-grade software engineering capability with the agility required to scale at the level telecom requires creates a level of innovation very few players can create," concludes DeNuccio.

But, don't mistake that confidence as a sign of contentment. DeNuccio anticipates a significantly accelerated growth rate over last year, driven largely by the continued growth of 4G networks and services, bringing many of the technologies Metaswitch Networks has developed into the mainstream.

And, as the communications industry continues to evolve and become increasingly global and mobile, exerting new pressures on carriers and equipment vendors alike, Metaswitch Networks will continue to adapt in turn.

"In a rapidly changing environment like this, while our primary strategy will be organic, there will be many opportunities to pick up technologies we can integrate and move the market forward at a more rapid pace than by doing everything internally." **IT**



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Getting a Handle on Multimedia in Corporate Networks

Bandwidth-loving applications like video are starting to make a more regular appearance within corporate networks. But some businesses would like better tools to help them and their employees create, access and control video and the other content running over their networks. If this sounds like a familiar scenario, outfits like Ignite Technologies and Smith Micro may have a solution for you.

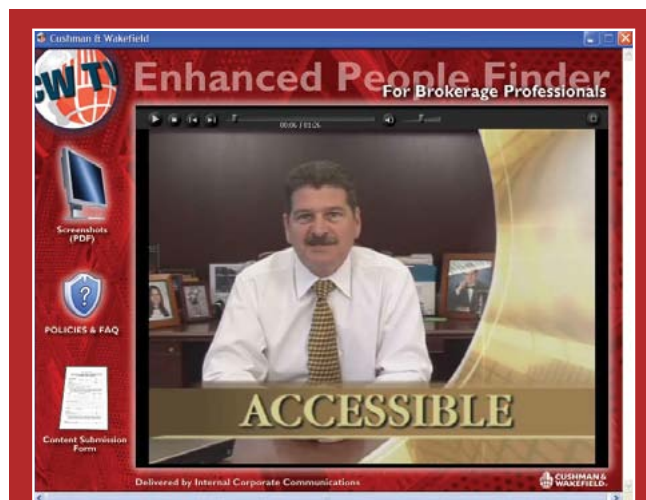
Ignite offers the Content Delivery Solution, which actually is a software-as-a-service-based offer that allows an organization to manage the entire lifecycle of content publishing and distribution. It not only delivers large files on the customer's behalf within the customer organization, it also can integrate with employee e-mail; support the delivery, creation, protection and measurement of live, on-demand and push content; and enable workers to rate and subscribe to content within the corporate network.

The 11-year-old company has 25 customers, including Accenture and Bank of America. In fact, Bank of America is one of Ignite's largest peer-to-peer customers. The financial organization, which delivers TV-quality video to 320,000 of its employees' desktops and laptops, leverages Ignite's Direct to Desktop for new executive introductions, quarterly updates, town hall meetings and strategic initiatives.

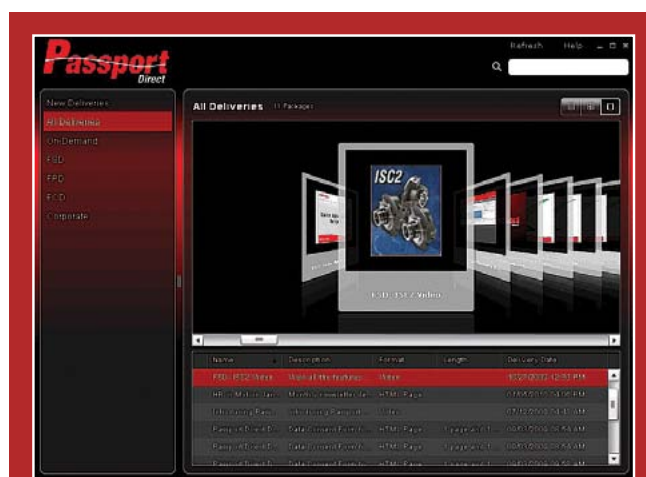
The solution allows the organization to deliver content to employee computers prior to an event and, if desired, alert the employee that content has arrived. Employees also have the option of viewing the content offline after the event, if they are at a remote site or on a flight, for example.

Skip Taylor, senior director of enterprise product management at Smith Micro Software, who spoke during the Managing the Mobile Workforce session last month at ITEXPO East in Miami, adds that the growth and more widespread use of multimedia applications are creating a pain point around large file transfer.

He explains that because some corporate networks block the delivery via e-mail of files larger than a certain size, it's sometimes difficult to know whether large e-mails have been received. To address all that, Taylor suggests that companies might consider a cloud-based approach to large file delivery that can reduce support costs associated with e-mail and ftp; make large file transfer easy to use



This is the customized user interface for Cushman & Wakefield, an Ignite customer.



This is the customized user interface for Flowserve, an Ignite customer.

and manage; track file deliveries companywide; and help a company meet compliance requirements.

IT folks typically have had a lot of control over what devices and applications employees use to access corporate networks, he continues. With the rise of smartphones, wirelessly-enabled laptops and tablets, Wi-Fi, Mi-Fi and the like, however, IT departments now are now grappling to regain control of corporate networks

to make sure they are secure; comply with regulations; and offer a view into who's connecting, when and with what endpoints, he says. The consumerization of wireless devices means that employees are bringing into corporate environments the endpoints and applications and operating systems of their choice, without first getting the green light from IT.

"Before IT had all of the control," Taylor says. "They've lost all that."

Meanwhile, the amount of traffic on networks is going through the roof given the number of connected devices and the popularization of video and other data. Taylor says that given more than 1 trillion devices are expected to be connected within 15 years, and we're already seeing what he calls ubiquitous media consumption and a shift toward content creation, traffic loads are only going to get heavier over time.

To give businesses a better handle on what users can access what content, Taylor says that organizations might consider creating an app store within the corporate environment. That would enable employees to use the apps available from the store while on the corporate network, but block all or some other apps that are not. He says Smith Micro offers a Symbian-based platform to enable this today and will introduce the platform for other operating systems in the

Ignite's Content Delivery Solution provides

- the ability to deliver high-quality video, audio, podcasts, PDFs, PowerPoint files and other documents;
- the ability to deliver content live, near live (recorded and scheduled), on demand, or download – depending on content type and viewer's location, network connectivity or preference;
- the ability to integrate with other corporate IT systems, LDAP and Active Directory, portals, and learning management systems; and
- the ability to manage digital rights of content and to reach users on varied network connections.

future. For now it's in alpha tests with select enterprises, he says, but the company is still just working with businesses to better understand their needs on this front. **IT**



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Test and Measurement Key to LTE Deployment and Operations Success

Carriers are deploying LTE to meet the fast-growing demand for always on, always available mobile services. But the introduction of LTE substantially increases the complexity of monitoring and troubleshooting mobile data services.

LTE introduces many new end user devices capable of delivering high-bandwidth services supported by a much more complicated radio and core network in terms of service delivery despite the simplification in structure. Service providers must successfully plan and execute LTE trials and solve the problems that will inevitably occur during deployment. After deployment, service providers must troubleshoot and manage quality of service issues to avoid costly outages while dealing with the high number of test points and large volumes of data that need to be correlated across the LTE network. Efficient LTE test solutions will help service providers manage these issues and meet customer demands in 2011 and beyond.

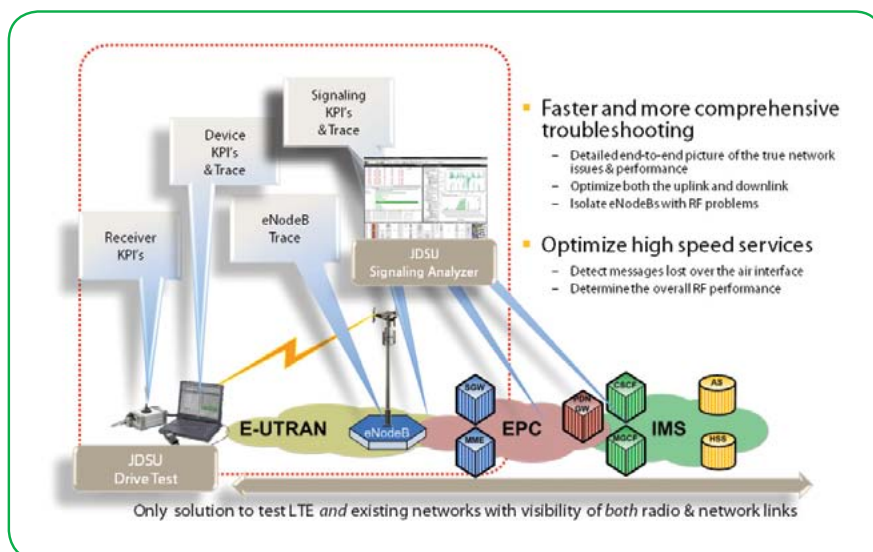
LTE provides a single global standard that secures and drives higher economies of scale. With the HSPA mobile broadband eco-system in place, LTE is the natural migration choice for GSM/HSPA operators. As a result of collaboration between 3GPP, 3GPP2 and IEEE, there is a roadmap for CDMA operators to evolve to LTE as their clear mobile broadband system of choice. The majority of LTE commitments and deployments are for the paired spectrum (FDD) mode. The LTE TDD mode for unpaired spectrum is complementary and key for several markets. LTE TDD also provides a future-proof evolutionary path for TD-SCDMA, another 3GPP standard. According to a Global Mobile Suppliers Association (GSA) report, 132 operators in 56 countries are investing in LTE and 113 LTE network commitments already have been made in 46 countries. GSA expects that at least 55 LTE networks will be in service by the end of 2012.

Well planned and executed LTE trials are critical to service providers because they help develop the knowledge and experience needed for successful deployment. LTE base stations and core network equipment are deployed as part of these trials to verify functions that are critical for future LTE services. Trials enable service providers to anticipate problems and develop effective coping

strategies for issues that do arise. Trials also provide the potential to compare different equipment with the goal of reducing operating costs – a critical consideration when revenue per bit is falling. LTE testing is technically and logistically complex, and incomplete or inaccurate results can mislead as much as inform. Extra preparation during trials can prevent huge headaches and save millions once the network becomes operational.

Fully integrated test platforms that provide on-the-fly measurements from the radio access network to the network core are needed to provide measurements during LTE trials. These tools enable trial teams to replicate services in as many different scenarios and environments as are practical for all relevant standards and on different frequency bands. Testing can verify all functions critical to future LTE services, including data capacity and throughput, network coverage, end-to-end network latency, seamless handover with legacy networks, interoperability of multi-vendor devices and QoS. The latest testing tools support LSTI Field Trial Test Cases, flexible key performance indicators, correlation of user plane and control plane data, interactive measurements with preferred user equipment devices and the latest permutations of LTE standards. The tools need to work for all vendors' equipment and enable apple-to-apple comparisons. The result is that operators are able to make LTE equipment purchasing decisions on objective criteria.

Centralized data and payload management cut costs and accelerate analysis by providing multiple users with simultaneous access to the same probes from less expensive PC/server systems. Multi-user access increases the productivity of the trial team. With centralized management, one user can make configuration changes while other users need only copy the changes for test-





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ing to proceed. Hardware processing that separates control and signaling plane traffic from user payload traffic reduces storage requirements and speeds analysis of the relevant data. Special purpose hardware maximizes efficiency by allocating much of the processing to hardware probes and by removing inessential user plane data while keeping what is important.

The latest generation of tools offers access to multiple air interface data sources as well as air-probe devices. Real-time traffic flow statistics correlate network performance and utilization with the control plane, enabling multi-gbps per user and per service analysis. Carriers can install a 10gbps Ethernet blade that delivers real-time data without packet loss to improve data throughput and take advantage of 10gbps Ethernet deployments. This approach enables real-time delivery of all control plane data in high volume environments and significantly reduces storage requirements.

Service providers must ensure that they can identify and troubleshoot any user, service or network problem in a very short period of time to deliver the highest possible standard of customer care.

Efficient LTE test solutions can play an important role in resolving these issues. Composite KPIs can reduce the number of KPIs without losing detail while providing flexibility about what sequence of messages a KPI relates to. Operators will most likely need to capture all of the control plane data but can be more flexible about the user plane. An intuitive interface makes it easy to understand signaling messages and clearly highlights failures. On-line real-time filtering allows users to narrow investigations to focus on events related to a cause and provides a sequence diagram for each failure, enabling faster diagnosis.

Newer assurance tools go one step further by analyzing subscribers' networks and service interactions, correlating these transactions into a single context and tracing them from real time to several weeks

The complexity of LTE technology increases the risk of QoS issues compared with 3G networks.

Leading edge testing tools deliver a comprehensive range of intelligent measurement and analysis applications such as a robust decoding engine that provides bit-level detail to full multi-interface performance and optimization analysis. Call tracing capabilities correlate and track all procedures and functions across each involved interface, enabling full end-to-end analysis that is essential to root cause isolation. Real-time measurements are provided against KPIs defined by LTE standards, enabling organizations to see at a glance that something has gone wrong and then quickly drill down to the root cause. Results can be collected over extended test times, enabling system regression and historic analysis. The same toolset can be used for network trials, load and stress testing, optimization and deployment.

The rise in complexity of 4G services is matched by more exacting user demands. Customers expect a seamless, robust service and are quick to migrate to other providers if they perceive any drop in standards or performance. Yet the complexity of LTE technology increases the risk of QoS issues compared with 3G networks. These challenges are complicated by the high number of test points that must be managed and large volumes of data that need to be correlated across the network. LTE's complexity means there are far more interfaces that need to be tapped for the relevant data and the signaling that goes with service delivery is much more complex. As service providers try to be first to market with high-quality service and understand how customers would use 4G services in 2011, they must troubleshoot and manage issues to avoid costly outages.

in the past. For example, successfully setting up a call requires that many different individual transactions be completed across the entire network. Effective troubleshooting demands that this series of inter-related transactions be presented in a single end-to-end view of the complete LTE network. This view enables the operations team to diagnose complex issues quickly and reliably to ensure customer satisfaction and protect revenues. For example, a pictorial sequence diagram of a user's session provides a detailed analysis of signaling procedures. This approach moves troubleshooting from a domain occupied by a handful of specialists to one in which a much broader group of users can effectively diagnose problems.

Because of its technical benefits and the enormous revenues that are at stake, service providers are moving to rapidly deploy LTE networks. The move to LTE greatly increases the complexity of the task of monitoring and troubleshooting mobile data services. Service providers need to develop, deploy and manage the technology in a way that ensures a high QoS while minimizing capital expenditures and operations costs. The latest generation of test and measurement equipment helps evaluate and deploy equipment that meets specifications and quality standards, verifies new services, and accelerates problem resolution cycle time. Carriers that get test and measurement right will have many highly profitable customers loyal to their network and brand for the long term. **IT**

Paul Gowans is global marketing manager for LTE test solutions at JDSU (www.jdsu.com).

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Flying High with Skycasters

Given companies have come to rely on broadband for many business-critical functions, more applications are moving to the cloud, and it's important to stay connected when disaster strikes, satellite seems to make more sense today than ever.

Skycasters is a 10-year-old outfit that provides satellite Internet, data and VPN services. The privately-held company, which is profitable and debt-free, hawks reliable and affordable full-time and backup broadband satellite solutions to businesses nationwide as well as to customers who are outside DSL and cable Internet footprints.

INTERNET TELEPHONY recently spoke with Skycasters President Mike Kister about the company and its customers.

Tell us about the formation of Skycasters and its beginnings.

Kister: Skycasters started out as a VAR of HNS back in the direct wave days. We were really targeting the higher end business users. As the service grew in popularity it became clear that their service wasn't really living up to the promises of the glossy brochure. And so we determined that in order to provide the service level that we had promised our customers, and to meet the needs of that customer base, to build our own teleport. So we started in 2005 and, built our first satellite uplink. We now have three uplink antennas here in Akron and have transitioned our customers to our own service where we can control the quality and performance and really give them all of the high level of service that they need in these kinds of industries.

What is the predominant application for which customers use your service?

Kister: We tend to be kind of a niche player in high performance service, so either in disaster response – police, fire, EMS, first responder type of applications where they're serving multiple and trying to coordinate the efforts of multiple disaster recovery firms or organizations like there might be a fire brigade group and there might be a rescue emergency hospital setup and everybody is sharing that connection. We also work a lot in the oil, gas and mining industries where we provide connectivity for exploratory drilling rigs. So you have a crew out far off the grid and they're drilling and this is the primary communications link back to the world and back to headquarter. Finally, we provide backup services to terrestrial connections. So if somebody has a fiber or a metro Ethernet connection or some high-speed connection like that, it's critical to their business; if it goes down, they failover and it goes to the satellite.

What's the typical alternative to your service and why is your option a better one?

Kister: There's a couple different ways to do continuity. You can either use a different terrestrial connection over a diverse



Mike Kister

path, but ultimately you still have connection into the building and it's really hard to get truly diverse fiber. Other people have looked at it as kind of an aircard solution; but again the aircard has a couple of drawbacks. It's a little bit slower, obviously, and it still relies on the local infrastructure. When we talk about it we say 'Our infrastructure is 23,000 miles up.' So that's true diverse path.

Who are your customers?

Kister: We run the gamut from relatively small home office specialty kind of organizations all the way up to Fortune 100 organizations that are either trying to service a very remote branch location or where we're backup to their primary connectivity in a lot of locations. We do a lot in oil exploration, that's been a very growing area for us. And then in the first responder market, state-level departments of homeland security, state-level departments of health, port facilities, various county-level border patrol activities in the Southwest. It's basically any kind of an organization whose mission it is to go to a spot and do their work and they don't know what that spot is going to be, whether it's responding to a disaster or a security threat or whatnot. That's where they find us to be most applicable, both the mobility aspect and then also because of the infrastructure, the invulnerability of the infrastructure. I'll give you a quick example: A couple of years back Indianapolis hosted the Final 4 NCAA. Indiana Department of Homeland Security deployed our satellite systems all over Indianapolis and basically

established a completely independent parallel communications network, all satellite based, and maintained it for the duration of the Final 4. The modern thinking in terrorist preparations is that a terrorist incident isn't just going to be an attack like we saw on the towers, but also is going to include elements of trying to take out the infrastructure – communications, water supply, power, whatnot. And so as part of the response planning now these organizations are making sure that they have the ability to provide these infrastructures on an emergency basis.

How many customers does SkyCasters have and where are they?

Kister: We've got a couple thousand customers. North America, Canada, U.S., Central America and the Caribbean, so we basically cover the Northern half of the Western hemisphere.

How many satellites at what orbit do you operate?

Kister: We operate on two satellites. We lease capacity from

Intelsat on G28 at 89West, and we lease capacity from Telstat on T11n 365West.

When you go to sell to potential customers, what's your pitch?

Kister: I ask them if the CEO of Hughes Net has ever come out to see them. We've got 40 employees here, so the escalation chain is very short. I know many of my customers on a first name basis. And we have all of the control right here at the teleport. If you're doing business with an HNS reseller and there's a problem, they're going to go to HNS, and it's going to have to go through their chain, and it could be days before a problem is even identified. Here, if there's a problem and one of my tech support guys is fielding a call and something doesn't look right or is odd, I walk down the hall and stick my head into one of the engineer's offices and say 'come and take a look at this.' We're right there and actively engaged with our customers. **IT**





By Erik Linask

Telepresence and Multitasking, Natural Enemies

A recent episode of Big Bang Theory got me thinking: Is video communication really the next logical evolution of voice? It was an episode during which Sheldon Cooper engaged in several video calls, both via mobile device and laptop.

Of course, videoconferencing provides a unique forum for increased understanding and collaboration, thanks to face-to-face communications and asset sharing capabilities. Indeed, conference rooms and executive suites and offices with telepresence capabilities offer businesses enhanced communications environments, enabling them to function and make decisions more effectively.

And, of course, despite the economy and the communications market beginning to rebound from the recession, businesses are hardly likely to increase their budgets any more than absolutely necessary, now that they have learned how to do more with less.

members or crossover colleagues (those who also might be considered friends).

Think about your own recent conference calls and lengthier phone conversations with colleagues or clients. Odds are you have engaged in other, unrelated activities during those interactions – multitasking. Yes, multitasking is nothing more than taking some of the attention away from one task and focusing it on another in an effort to get more done in the same amount of time.

It's a fact of life today. But, it's also a barrier to personal video solutions. After all, as you check e-mails, sign invoices, read the latest issue of INTERNET TELEPHONY, even put the call on mute to answer questions for a colleague who may have stepped in – or whatever else you find yourself doing as you multitask – do you really want the other party on the call to know they do not have your undivided attention?

Multitasking is a fact of life today. But, it's also a barrier to personal video solutions.

So yes, video communications get a definite thumbs up for conference room-type scenarios, where there is a need for multi-party engagement, including complete telepresence suites (for those businesses that can afford them). The caveat is that vendor interop is required to allow more businesses to enjoy the benefits more frequently, but that is already in the works (much like increased carrier peering will drive the growth of HD voice).

Big Bang Theory provided yet another viable video communications scenario, whereby friends and families are very likely to leverage video capabilities on their mobile devices and PCs, though they will tend toward free services, like Skype and others.

There's a reason that Facetime has received as much attention as it has. There are countless use cases for consumer video calling, including saying good night to children while traveling on business, sharing experiences (like a baby's first steps) with other family members, or simply chatting via video with your closest friends, as opposed to voice-only calls.

But that may be where video calling hits a firewall, so to speak.

When it comes to desktop solutions, there may be occasional uses for video calls – though most will likely still fall into the familiar category – conversations with family

Try as you may, it is impossible to give two people your undivided attention.

Now, I'm not saying it's always poor judgment to do so – there are many instances where peripheral conversations take place during multi-party calls that involve only some attendees. Why not maximize on the time to accomplish other goals?

Don't feel bad. I'm not trying to portray multitasking as something evil. Just be aware that, as surely as you multitask while on calls, you are on the other end of the same scenario with equal frequency. I repeat, it's the world in which we live – do more with less.

It's that very mantra that will preclude personal video calling from having the same impact in the business space as it will in the consumer markets. Then again, I'm not entirely certain that most calls would be enhanced due to video presence – the ability to multitask while getting as much from a call as we need is what helps us maintain productivity.

Sure, there are very viable scenarios where personal telepresence or desktop video increases results – especially in certain vertical markets for certain tasks (e.g., health care and education). But, for most, the overall benefits will not justify the cost. For those situations where video presence will be a significant benefit, conference room video systems will suffice for now. **IT**



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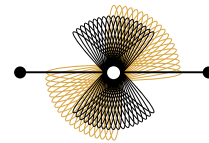
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