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Planes, Drones, Automobiles, and The New Normal

When I think about the year in review a few things really stick out for me. On a personal level, I think about all the good times I've had with my wonderful husband and child, all the successes and great experiences said child has had, and how I myself made it to the finish line in my first organized bike event. From a professional standpoint, I think about all the mergers and acquisitions we've seen recently (see related story), some of the hot trends like SDN and WebRTC (see other related story), and as well as the Jetsons-type concepts that are actually becoming reality during my lifetime.

The Amazon drone is the latest idea to knock me off my chair. It was a top story on the network news last night, and the video is captivating. Imagine ordering a softball mouth guard or the new best-seller and having it delivered to you by an unmanned flying machine.

That's weird and wonderful – but also a little unsettling. I mean, if people have relatively easy access to flying machines that can deliver packages, can't they also use those machines to invade our privacy in yet another way, or to arm them to launch attacks. It works for the military. (And don't even get me started on 3D printers!)

I don't mean to be a fear monger, but this kind of thing certainly gets you thinking. But, then, if we never invented and adopted anything just because it could potentially be put to use for negative purposes, it would be difficult to move forward on much of anything.

The package-delivery drone is just the latest in connected, unmanned transport. The other one that comes to mind is Google's driverless car. That – and other connected efforts by leading car brands and their partners – will be in the works for a while, both because of technical and regulatory reasons. But there is plenty of action in terms of connected car entertainment, safety and insurance-related efforts. Indeed, by 2022 there will be 1.8 billion automotive M2M connections.

Speaking of communications and transport, one of my favorite new developments this year include the ability to use my smartphone throughout the entire duration of my flight. I'm not too keen on the idea of airlines allowing passengers to gab on their phones during flights, however. That's something we may see soon as well, since the Federal Communications Commission has given airlines the green light on that possibility.

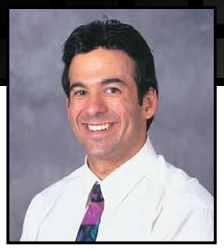
Some of the other exciting new applications of connected technology include digital signs that can updated and controlled remotely, garbage cans that can monitored from afar to know when they need service, and even radios that can attach to trees in the Amazon Rainforest to track them if they're removed from protected areas.

On a separate note, this was yet another year in which I was thankful to have a job – and a job that I love, no less. Not everyone has been so lucky.

I mention this in part as a segue to an interesting article I read recently by Gary Burnison, CEO at Korn/Ferry International. The piece was titled "2014: A New War for Talent", and it talked about how there was rapid growth from the mid 1990s to 2007, followed by six years of global economic turmoil, and now, an age of slow growth but fast change.

This new environment, according to Burnison, calls for a new kind of leadership that is both mature and agile. By maturity, Burnison means someone who can manage things with grace in a highly complex situation. And by agility, he's referring to a person who can figure things out even when the situation is entirely new or there's no clear path to follow.

"Taken together, leadership maturity and agility is the best combination of factors to predict readiness to outperform in the new normal," wrote Burnison. "Both can be measured fairly accurately, and benchmarked against leaders in the relevant industry and markets – critical considerations to ensure the pragmatic use of these factors in business. Most importantly, both can be developed over time, giving a clear line of sight to leaders focused on enhancing the ability of their teams to win in the new normal." IT



ZipWhip: What if Every Phone Number Could Text?

Back in 2005, yes, 2005 I wondered when WiFi phones would allow text messaging – I suggested there was an opportunity for companies to take advantage of the merging of the VoIP and consumer electronics spaces. Of course eight years later the world is a different place. The iPhone was two years from being introduced back then, BlackBerry was in the early days of becoming king of the smartphone market and Microsoft and Nokia were strong players. Now Apple and Google are dominant and the others mentioned above are scrambling. Remember when Android made us think of robots, not phones?

Eight years later the need to expand the universe of texting devices still exists. In a recent conversation with ZipWhip CEO John Lauer we spoke about the company's landline texting solutions, which unify your texting across devices, home phones and 800 numbers.

The benefit to doing this is to open up texting more broadly. I know many adults who never e-mail, they only text because they aren't that technical and aren't comfortable with email. Yet they want to communicate with others who all text. Even though there are a slew of OTT options like Facebook, texting is still a crucial communications medium.

This is obviously the case across the globe, meaning it isn't just the younger generation using their fingers to do the talking.

To facilitate the merging of all phone numbers as texting vehicles, Lauer told me his company has provisioned millions of texting lines in the cloud and now 800 numbers and landlines. Users simply communicate with apps and a webpage, which are associated with a telephone number.

Businesses such as hair salons and law offices use ZipWhip to communicate with their clients. We all know younger consumers use phones more for nonverbal communications than talking and if companies want to interact with customers in the way they are most comfortable, adding the ability to text makes a lot of sense. Moreover, texting is asynchronous, which means just as consumers can text with multiple people at once, so can a business. This means you can service more simultaneous customers via text than talking and, of course, this saves businesses money.

If you count iMessages as texts (most users don't know the difference) and add in landline texting, the market is still growing, according to the company.

Another benefit is these solutions allow the use of a full-sized device to communicate and multiple people can access an account as opposed to many mobile phones, which don't easily allow for access by more than one person.

John and I discussed the OTT competition, and he feels that texting is extremely relevant and will remain the universal medium connecting everyone. He exclaimed, "It is not a walled garden." Moreover he says that many phone numbers are like dotcom domain names and text-enabling these numbers lets you communicate using this valuable real estate.

ZipWhip has solved what I consider to be an important problem. It text-enables all phone numbers and allows texting in the cloud so individuals can communicate asynchronously via multiple devices – some which actually have full-sized keyboards. Businesses with clients who are comfortable text-messaging should certainly explore using ZipWhip's services for the reasons outlined above. **IT**

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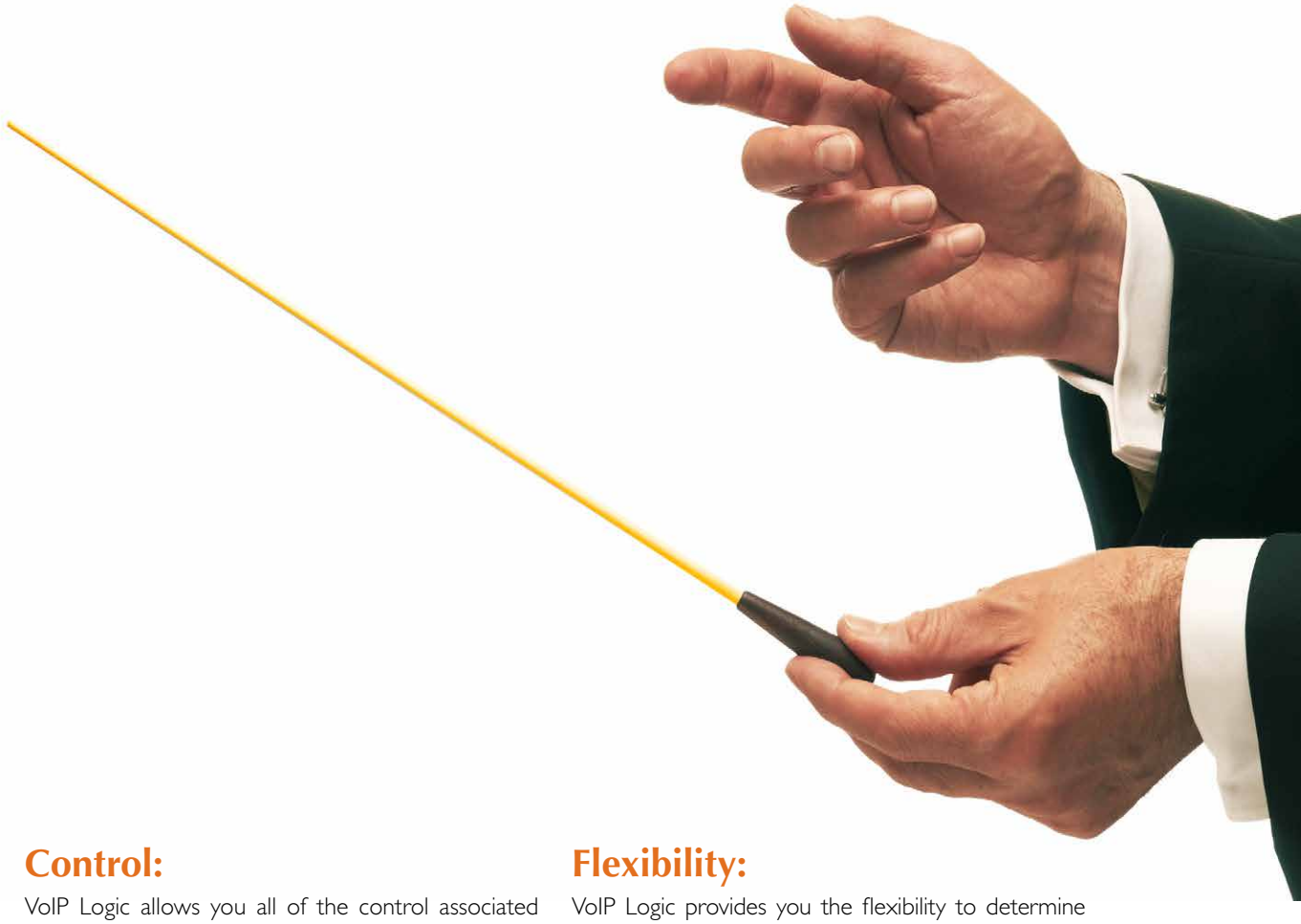

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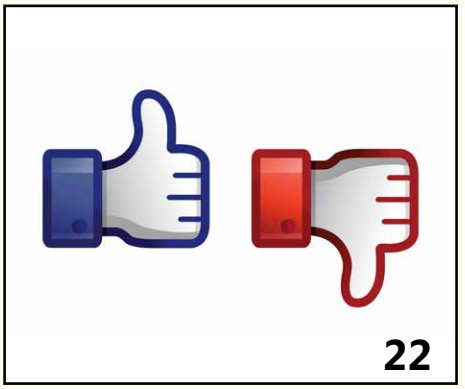
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By Barlow Keener

Google and Microsoft: Delivering Global Unlicensed Super Wi-Fi

Google and Microsoft are priming the pump for using super Wi-Fi to deliver wireless broadband outside U.S., the birthplace white spaces. Africa is the key focus. Even Facebook through Internet.org is talking about creative ways to deliver Internet to the unconnected in Africa.

It all started in the U.S. with the TV White Spaces FCC 2010 order approving the unlicensed use of UHF and VHF TV channels. The channels were vacated after the Digital TV reshuffling in 2009. Because certain TV channels were occupied in some geographies but not in other geographies, the FCC created a novel method of preventing interference by requiring new white spaces unlicensed point to point and point to multipoint radios to connect to the Internet and contact every 24 hours an approved database provider. The database checks the geo-location of the radio and compares the location with the transmissions contours of nearby operating TV stations. If the radio is located within the TV contours, the database uses an on/off policy to turn off the white spaces radio automatically forcing it to either change channels or stop operating.

Africa has been bullish on white spaces. Only 15 percent of African homes are Internet connected. A University of Malawi physics professor, Chomora Mikeka, has organized a white spaces trial with the Malawi Communications Regulatory Authority to serve the rural town of Zomba. The trial uses Carlson Wireless radios. The Malawi team works with the International Center for Theoretical Physics in Trieste, Italy.

Microsoft is conducting trials using solar power in Nanyuki and Kalema, Kenya, and working with the regulator, Ministry of Information and Communications, and Indigo Telecom.

In South Africa, TENET (the Tertiary Education and Research Network), under the leadership of Arno Hart, conducted a trial funded by Google using Carlson Wireless radios. The vision is to use white spaces radios to deliver Wi-Fi hotspots to populated areas without Internet located in large (million+) urban cities. White spaces would provide the backhaul through foliage and buildings to radios that use a Wi-Fi card to then deliver Wi-Fi to the local residents free of charge. South Africa regulators creatively used the TV guard band channels, those channels next to TV station-assigned channels, for white spaces unlicensed transmissions. The trials showed that there was no inference with the TV station transmission or reception. Use of the guard band channels is prohibited in the U.S.

The FCC is the only regulatory body to have passed final white spaces regulations. Ofcom is scheduled to deliver its final order in the fall of 2014. Canada is expected to complete its regulation in the winter of 2014. While Canada and Singapore are basically following the U.S. FCC model, Ofcom did not fall in line. Ofcom's database method breaks down the geography in the database by geo-pixels of 100 x 100 meters square – or very small geographic areas. If the radio is transmitting in a particular pixel geography, the database instructs the radio not always to turn off but to lower or raise its power to a predetermined maximum level. The Ofcom database also calculates power levels based on known clutter in the pixel area like buildings or trees.

A regulatory pothole looming for white spaces' international regulation, and innovative growth, is the U.S. FCC TV Incentive Auction. The TV Incentive Auction is likely to result in a nationwide swath spectrum dedicated for unlicensed use granting more white spaces in urban areas like Washington, D.C., than exists today. However, the uncertainty factor of not having a final incentive auction rulemaking is holding back other countries from completing their white spaces regulation.

A regulatory pothole looming for white spaces' international regulation, and innovative growth, is the U.S. FCC TV Incentive Auction.

The mobile industry is pushing for a single, large harmonized 700mHz band of spectrum that will be the same in all countries. The FCC's Incentive Auction model selling of TV spectrum will be used globally as a model regulatory scheme. Speculation about what may happen to the TV spectrum is holding up regulators from entering into final white spaces orders authorizing commercial use of the same TV spectrum for white spaces.

Technology could outpace regulation creating the equivalent of spectrum gridlock where the roads are not yet completed but millions of automobiles (or unlicensed white spaces radios) start filling the roads as they did in the 1920s and 1930s when there were no highways completed. Like the automobile revolution, regulators should not impede the free market, and the buying public, from using unlicensed TV white spaces devices to deliver the Internet. IT

Barlow Keener is the principal with Keener Law Group (www.keenerlawgroup.com) out of Boston.

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S E E T H E B I G P I C T U R E

By Hunter Newby

Innovation's Infrastructure Investment

The "Innovation and the Economy" Financial Times Special Report from Clive Cookson published on Oct. 17 reads: "Policy makers need to embrace a broader vision of innovation, and shape infrastructure and regulation accordingly."

The European-centric report connects technological innovation and economic growth. Its context may have been local, but its lessons and impact are most certainly global.

Here's how it begins: "Innovation – now seen as the most important driver of growth and productivity – has become one of the biggest buzzwords in politics and economics." The "now seen" part is curiously desperate. Only now it is seen? Perhaps in Europe things are economically better than in the United States, but any fiat-based economy is bound to the same fate – grow, or implode. Therefore, what Europe is now seeing is most certainly something the U.S. must see as well.

The U.S. just raised its borrowing limit again, the Federal Reserve Bank continues to print money, and we all hold our breaths waiting for the economy to recover on its own. How is it possible to believe that a recovery can occur when the financial goalpost keeps getting moved further back through more debt, interest and currency dilution?

All that the politicians can do is kick the can farther down the road, borrow more, and the Fed must continue to lend to the U.S. all just to buy time for the economy to somehow magically grow at a rate that exceeds the payment obligations of the government and the Fed's printing press. It's ironic that business must generate a profit, but that profit is denominated in fiat currency that is controlled by this central bank – government relationship that constantly issues itself whatever it needs to function and reduces the value of that profit in the process. This needs to end.

The report is spot-on and for several reasons, not the least of which is the inclusion of infrastructure as a key ingredient of innovation and that innovation drives economic growth. One could argue that the only hope of an economic recovery strong enough to build up the escape velocity required to evade the fiscal black hole we are circling is to seek and support economic growth from a new source as the old economies of agriculture, retail, manufacturing, etc., do not have the mass or speed required to reach a successful level of entropy.

At least with technological innovation there is a chance that somewhere out in the future true economic growth will surpass the printed and borrowed variety and someone, anyone and hopefully everyone will believe it to be plausible. At the moment the world has nothing to use as a rationale to accept the policy du jour other than the alternative, which is oblivion.

The report states that the European Council will hold a special meeting on innovation to specifically address Europe's need for it and how they have arrived where they are in need of it.

"To be blunt, we are lagging behind, and the reason behind this is mainly because we've invested too little in the infrastructure, skill and organizational changes that are needed to reap the benefits of these technologies – and that is a disgrace," said Herman Van Rompuy, president of the European Council.

Europe, due to superior population density metrics, has much better infrastructure than the U.S. Basically this means that the U.S. should be paying attention and following along, but in reality, it's leading this investment strategy.

A document has been published ahead of this meeting, Plan I(nnovation) for Europe. It came from the Lisbon Council in Brussels and Nesta, a London-based foundation. The plan has seven key recommendations, one of which is to build a 21st-century infrastructure (including super-fast broadband and smart grids).

Apparently Europe doesn't have what it needs in terms of network infrastructure to support the desired/required innovation and economic growth. Europe, due to superior population density metrics, has much better infrastructure than the U.S. Basically this means that the U.S. should be paying attention and following along, but in reality, it's leading this investment strategy.

The report concludes with a stark comparison to China and its sustained technological and industrial growth. It is not without flaws and growing pains, but the magic formula is referred to as absorption – combining the best ideas from around the world and essentially mashing them up to see what comes out.

China has gone beyond recognizing the need for innovation and a massive investment in the infrastructure to support it and moved on to building what is essentially a national laboratory and culture for mutated innovation development. From the new species of ideas created will be born new models that will destroy the old and give power to those that have them first and control them. This context is global, but will most certainly have local implications if the U.S. does not act now. IT

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

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By Ken Myer

Collaboration and the Contingent Workforce

For IT leaders faced with the challenge of prioritizing dozens of strategic and tactical issues, one important trend is emerging that deserves attention sooner rather than later: the expansion of the contingent worker.

The data has been mounting for several years, and it is now very clear that a significant percentage of the U.S. workforce in the future will be contingent workers. This is the new normal, not just a temporary artifact from the last recession. Smart IT leaders will understand this trend as it applies to their own businesses and will move aggressively to put in place the needed systems and tools to support this evolution.

According to the Aberdeen Group, in 2012 more than 25 percent of employees were contingent, and in 2010 Oracle reported that the contingent workforce is expected to increase to 40 percent by 2020. Whether as temporary employees, interns, consultants, contractors or outsourced workers, it's clear that contingent workers could represent nearly half of the workforce within the decade.

There are many reasons for the trend: a lack of needed skills in the market, generation Y's attitudes about work/life balance, and the growing number of baby boomers who will return to work after retirement. According to AARP, 60 to 90 percent of retirees will go back to work in some capacity.

Whatever the reason, IT leaders need to ask some fundamental questions about their readiness to handle this new workforce:

* How do we provision users across all the tools – both web- and premises-based – so they get productive as fast as possible?
* How do we quickly orient contingent workers to the organization and culture of our business so they can quickly become maze bright?
* What is the information architecture that provides appropriate horizontal (company-wide) information while offering the necessary vertical or functional information for particular assignments?
* When the company's relationship with a contractor comes to an end, how do we ensure users are de-provisioned and company assets are no longer exposed?
* How do we create an open, consistent and collaborative flow of communication between employees and contingent staff in an environment of remote work and BYOD?

It is this last question that deserves special focus, given the rise in collaboration tools on the market, and here are a few items that may make sense to include in your checklist as you evaluate vendor solutions for communication and collaboration software:

Can they deliver voice/video collaboration no matter what device or location?
Can they deliver it when no corporate IT asset is used, for example, from a browser on any device?
Do they deliver secure collaboration that can be tied to a user profile—to quickly turn on and off capabilities?
Can they embed communications capability into the business applications you use most?
Do they leverage social technologies that enhance collaboration?

These are a few of the questions that will help identify the right solution for your organization. There is no turning back the tide of contingent workersv– it's clearly a trend that's here to stay – so planning ahead to make those workers productive as quickly as possible allows IT to visibly support the company's bottom line. IT

Ken Myer is an advisor, board member and interim executive to technology companies. He currently is on the board of directors at both Data I/O (www.dataio.com) and Esna Technologies (www.esna.com.).

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By Jon Arnold

Video – Which Way Now?

I haven't written about video here for some time, and there is a lot to catch up on. To whatever extent you're currently using video in your business, I'm sure you've noticed an increasing number of options over the course of 2013. I'm also pretty certain that whatever you have seen, there will be even more coming in 2014. Given the spirit of this column, the current state of video should definitely give you cause to re-think its role in your overall mix of communications tools as well as how you support employees to be more productive.

This month's column was inspired by my recent participation at Tech Day with LifeSize at its Austin, Texas, headquarters. LifeSize is owned by Logitech and is one of the more innovative players in the video space. When you get an in-depth look at a particular vendor's roadmap, it affords the opportunity to take a broader view of what's happening.

LifeSize represents what they call the fat middle of the market. This is primarily the SMB space, which is highly underserved with video and just starting to recognize its potential. For these businesses, high-end telepresence is too costly and impractical; they would love to have the immersive experience but could never justify the investment. Conversely, they have dabbled with desktop video applications, but realize the limitations don't make this a long-term choice. The price may be right, but the quality is just okay, and being a standalone service, most offerings have limited ability to integrate with other communications platforms. LifeSize is a great example of a vendor that is clearly focused on addressing that middle ground.

Moving up-market, we have the tier 1 vendors, all of whom are tightly integrating video with their overall UC platforms. Prime examples in the news lately would be Avaya and Unify, nee Siemens. Avaya's latest iteration is IP Office 9.0, where video is a key pillar of its overall collaboration solution. The same applies to Siemens, whose enterprise business just went through a complete re-branding, and is now called Unify. The name says it all, and under the Project Ansible umbrella, video is one of several applications that form a unified environment to make collaboration as seamless as possible. These are pretty broad ambitions, but this is clearly the direction all the big vendors are going. Microsoft and Cisco have similar story lines, and these vendors aren't talking too much now about stand-alone video systems.

Going the other direction are the cloud-based video players, and I encourage you watch this space. These companies are taking a very different approach to video and are showing there is a ready market for stand-alone video. In terms of a value proposition, they are catering to different needs than the tier 1s. As well, their business model is very different, since very little hardware is involved and their offerings are on a pay-as-you-go subscription service.

This is where a lot of the innovation is happening in video, although it's still too early to tell if they can monetize their good work on a large scale. Three companies getting early traction here are of particular note – Blue Jeans Network, Fuzebox and Vidtel. Blue Jeans and Fuzebox will get even more traction by virtue of their recent funding – $50 million and $26 million, respectively. Vidtel is the smallest of the three but has arguably been pushing the envelope more than anyone, especially in terms of supporting WebRTC. As a possible indication of what's to come with WebRTC, Vidtel was acquired in October by Fidelity Investments.

Three companies getting early traction here are of particular note – Blue Jeans Network, Fuzebox and Vidtel. Blue Jeans and Fuzebox will get even more traction by virtue of their recent funding.

There are many other startups at this end of the market following a similar path, and given how wide open the video space is, businesses have many options to choose from. It remains to be seen how the tier 1 vendors will embrace WebRTC, but they are certainly moving quickly to the cloud.

Innovation and disruption will be the prime forces driving video in 2014, and if you follow where the money is going, it's clear that startups can have just as much of an impact as the majors. As such, whatever your notions are of what video can do for your business, and what type of vendor will be the best choice, I'll bet a lot of you will be due for a rethink. IT

Jon Arnold is principal of J Arnold & Associates, an independent telecom analyst and marketing consultancy.

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By Mike Gruszka

Selecting a SIP Trunking Provider

When choosing a SIP trunking provider, consider them your other half. Your provider will become an expansion of you and your business, and ultimately, what your brand represents. This is why it is absolutely essential to ensure that the provider you choose to partner with is devoted to meeting your business needs.

Business communications are considered mission critical, which is why it is important for you to have a thorough understanding of your needs as well as conduct an assessment of the competition. Ensuring that your provider will properly represent you and what you care about goes beyond validating they are technically capable of supporting your preferred equipment and that their products and services will meet the needs of your customers.

An important thing to consider is the provider's leadership in the marketplace. Startups are great under certain circumstances, but in most cases, a veteran in the industry is what you'll want to look for. You want a provider you can truly rely on – one that you know will be around and one that has a proven track record of successful deployments through agent and OEM partnerships.

Additionally, you should check the reputation of the company to see how they resolve customer support issues. The Internet is full of forums with posts from happy and unhappy customers. Service issues will happen on occasion, but as many of our IT professionals say, what's important is the attention a company gives to resolving a service or technical issue. A provider's reputation is an important indicator into their ability to provide reliable service and quality customer support.

You also want a business that is 100 percebt dedicated to you – one that is genuinely interested in nurturing its partner relationships. What level of support does the company provide? Do you feel like you are part of a team that respects you and cares about your happiness? At the end of the day, that's the best thing you could possibly say about any successful partnership.

Broadvox offers a more detailed list of key considerations for selecting a SIP trunking provider in its SIP Trunking Buyer's Guide, which is available at the company's website. IT

Mike Gruszka is director of product management at Broadvox (www.broadvox.com).

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By Frank Yue

NFV Shines with Orchestration

ETSI released its first update to the NFV framework recently. This update includes several documents outlining the framework and scenarios where NFV can be applied and the communications service providers can benefit. This is an exceptional starting point to deliver on the value and vision of the NFV framework.

To understand what the ETSI working group and the CSPs are looking to accomplish, we can look at the objectives summary in GS NFV 002 (Architectural Framework) 4.2, summarized here:
* Improved capital efficiencies compared with dedicated hardware implementations: This is achieved by using commercial-off-the-shelf hardware (i.e. general purpose servers and storage devices). Sharing of hardware and reducing the number of different hardware architectures in a network also contribute to this objective.
* Improved flexibility in assigning VNFs to hardware: This aids both scalability and largely decouples functionality from location, which allows software to be located at the most appropriate places.
* Rapid service innovation through software-based service deployment.
* Improved operational efficiencies resulting from common automation and operating procedures.
* Reduced power usage achieved by migrating workloads and powering down unused hardware.
* Standardized and open interfaces between virtualized network functions and the infrastructure and associated management entities so that such decoupled elements can be provided by different vendors.

As discussed in my last column, NFV depends on four key components to be successful in design and implementation. That includes virtualization, abstraction, programmability, and orchestration. It is encouraging to see that all of these aspects are addressed in the objectives.

When we look at the details, though, it is not surprising to note that orchestration is not described in detail beyond the framework necessary to build the orchestration system. Details can be found within the Management and Orchestration working group. The NFV Orchestrator is a complex component that requires northbound and southbound connectivity using standardized communications models.

The biggest benefit of orchestration of the NFV framework is not the OSS coordination of the NFV elements. There is an opportunity for the NFVO to act as a central intelligence to collect, analyze, and act upon data and metrics received from the NFV components. This central intelligence should have the ability to perform network behavioral analysis like functions to collate and correlate inputs from multiple sources and multiple vendors.

The analysis is used to determine an appropriate course of action, whether that may be to spin up more virtual resources to meet demand, redirect traffic based on subscriber and content for intelligent traffic steering to value-added services solutions, or to apply rate limits and security measures to protect infrastructure and subscribers from security threats.

> The NFV Orchestrator is a complex component that requires northbound and southbound connectivity using standardized communications models.

Once analyzed and a course of action is identified, the NFVO should be able to make calls out to the NFV components to adjust or reconfigure them to apply the policy inline and in real time. The ability of the NFVO to receive the data from the NFV ecosystem and then direct the disparate components to enable to defined policy realizes the full potential of the NFV architectural framework beyond the immediate physical and virtual benefits. The CSPs want to create a synergy where the value of the solution is greater than the sum of the components. IT

Frank Yue is technical marketing manager with F5 Networks (www.f5networks.com).

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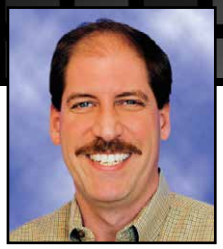


Life Cycle Management Considerations for Enterprise IT (Part 1)

By Jeff Hudgins

Today's IT organizations face aging infrastructure and shrinking budgets. This leaves little room to invest in new technologies that would otherwise help grow the business. Many of these solutions are legacy software running on older hardware that were purchased when new applications were being deployed. And while the business value of these solutions decreases each year, the cost of maintaining them rises and over time can eventually consume up to half of an overall IT budget. Having a complete life cycle management strategy from deployment to decommissioning is the best way to reduce this unwanted expense and free up valuable resources.

In part one of this two-part series, we will look at the top application considerations. First, understanding the level of redundancy among applications can be very enlightening. For example, companies may have legacy financial systems that were a result of acquisitions or left behind after new applications were deployed. These applications are often in silos and incompatible with other software applications. Moving these to a common repository can streamline access and reporting.

The next consideration is the effects on compliance management. Most companies have some level of trade compliance or regulatory requirements that invoke data retention needs. Maintaining legacy applications just to retain access to information is expensive and often leads to endless amounts of data storage. Reviewing the company data retention policy and then implementing an active data disposal program can dramatically reduce the data storage sprawl.

Finally, keeping the IT skills required to administer legacy applications can be expensive. And the unplanned cost of leveraging outside consultants will often blow the budget. Retiring application data to a common platform that can be accessed with standardized reporting greatly reduces the risk and lowers the investment in outdated skill sets.

So what's the final score? The costs of maintaining legacy applications is high, but the opportunity cost of not deploying newer applications is much greater and can impact the growth of the business. In part two we will explore the considerations when retiring legacy hardware. IT

Jeff Hudgins is vice president of marketing at Unicom Engineering (www.unicomengineering.com).

Opportunities Abroad – EU Considers Single Market Telecom Package

By William B. Wilhelm and Jeffrey R. Strenkowski

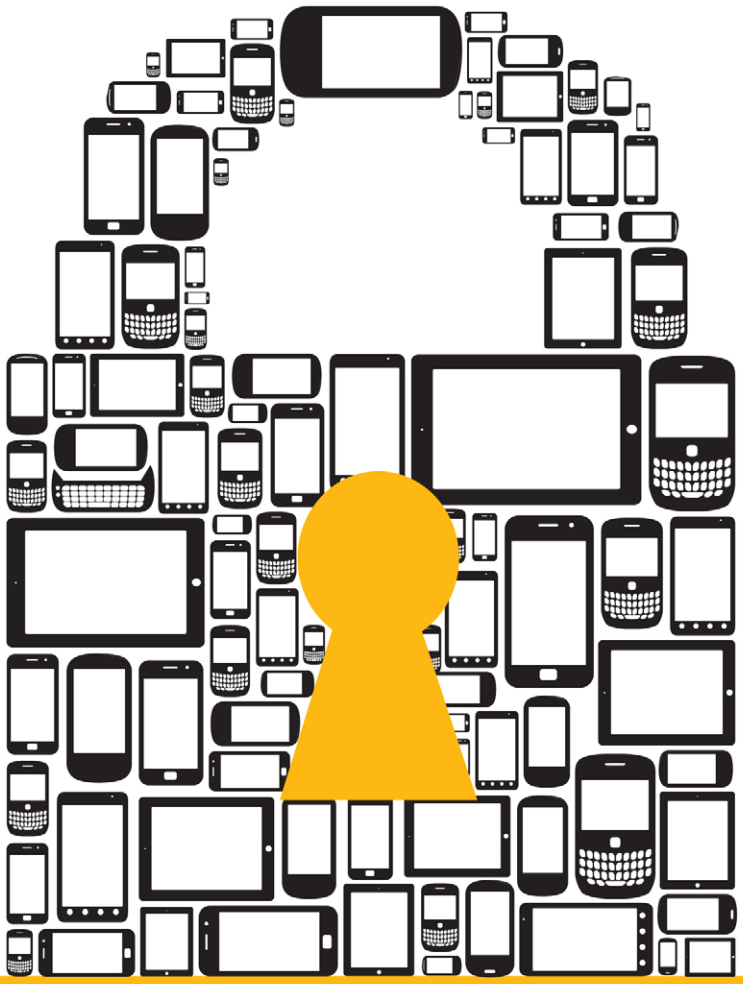
On Sept. 11, 2013, the European Commission released a proposed telecommunications framework aimed at further harmonizing the broadband market across the EU. If adopted, it would implement network neutrality rules and eliminate EU roaming costs. It must be approved by the European Parliament and by the EU Council before it becomes law.

There are several primary issues undertaken in the draft framework. First, it would create a single EU authorization system whereby operators would be able to provide services (including VoIP) in all EU member states after registering with one national regulator. It would also establish network neutrality principles that would require non-discrimination between certain communications, absent certain conditions. It would also eliminate EU roaming charges, establish certain end user rights (such as the right to terminate service within six months, increased transparency with respect to invoicing, facilitation of carrier changes, etc.), and harmonize spectrum allocation for EU broadband.

For VoIP providers, the most important elements in the proposed framework are the facilitation of a single regulatory entry requirement, and the establishment of network neutrality requirements. These changes could open doors to VoIP market entry by reducing regulatory authorization barriers, and limiting the ability of EU operators to block or degrade the services of competitors.

The framework is controversial and may not be adopted before the EU elections in May since it would reduce EU operators' roaming charges and implement network neutrality. Some national regulators and the Body of European Regulators for Electronic Communications, advising the European Commission, have spoken out against it because they were not consulted during the drafting process, and the loss of jurisdiction and the legal uncertainty it may cause. IT

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



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By Ken Osowski

The Ultra HD Rush

Ultra-high definition TV is the next generation of high definition TVs. Just like the industry push for commercializing the current HDTV standard that began 15 years ago, consumer expectations are high. The one primary difference between then and now is that streaming video services are available and mainstreamed so to speak. Back in 2000, there were no OTT video services. Consumers bought expensive and often large, 16:9 format widescreen TV sets that were more for bragging rights than they were usable to display native HDTV content.

These TV sets often included the ability to receive over-the-air broadcast HD content, so TV antennas became fashionable again. In many cases, consumers waited years for their local cable companies to offer HDTV channel content on their set-top boxes while they watched standard definition 4:3 video content. Satellite-based video service providers saw this as an opportunity to deliver HDTV content while the Cable MSOs lagged, but that competitive advantage was short lived.

This time, all players in the Ultra HD ecosystem are highly motivated to accelerate UHD adoption. Widespread adoption of current HDTV TV sets has significantly reduced pricing to the point where 60-inch HDTVs cost less than $1,000. TV manufacturers are bringing to market comparably sized LCD UHD sets that are selling for around $5,000 at this point, with much more expensive OLED display UHDs waiting in the wings.

Streaming video services like Netflix are ready and waiting to offer UHD, since they are looking to attract early adopters at the expense of the fixed broadband service providers. This is the market dynamic that is different than in 2000. Streaming video content service providers can now bypass broadband service providers and reach video subscribers directly, relegating broadband access networks to be the conduit for delivering UHD content. Consumers do not have to wait for cable MSOs and others to upgrade their subscribers' set-top boxes.

So where do fixed broadband service providers fit into the landscape of this new market dynamic? They are all eager to upgrade their network bandwidth for starters. Most of them are implementing new set-top box technology that is IP-based and will be UHD capable. Others have announced, and are just now rolling out, video streaming services based on partnerships with OTT video companies. Both Com Hem, a countrywide cable MSO in Sweden, and Virgin Media in the U.K. have already struck deals to offer the Netflix video streaming service integrated in their consumer set-top boxes. It has been reported that Comcast and Suddenlink in the U.S. are also in talks with Netflix.

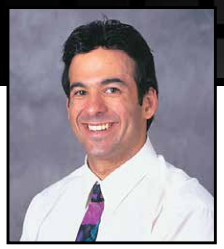
The challenge for all service providers is that UHD at 2160p resolution has four times as many pixels as the highest HDTV resolution available today at 1080p. This means that 6 to 8mbps of data bandwidth required for current 1080p viewing jumps to as much as 30mbps for a decent UHD 2160p resolution viewing experience. This level of Internet access speed is commercially available today, but it will put a resource strain on service provider networks as UHD services roll out.

Streaming video services like Netflix are ready and waiting to offer UHD, since they are looking to attract early adopters at the expense of the fixed broadband service providers.

So, how does DPI technology fit into the UHD ecosystem? Service providers are currently leveraging DPI already to gain insights into how much their subscribers are streaming video content in order to profile their usage patterns. The valuable video analytics derived from inserting DPI into the data traffic flow can help MSOs to first understand and then provide the best quality of experience for their customers who also subscribe to third-party video streaming services. DPI also enables service providers to introduce network elements that monitor or optimize video QoE, as well as transparently cache video content. These other video-specific solutions can be cost effectively integrated with DPI by using the technology to accurately identify and then divert video traffic flows to these platforms. DPI can enhance the efficiency and therefore the ROI of these video solutions by only sending them the video traffic that needs processing.

So, all of you videophiles need to save up some money for the next generation of HDTV, but you should know that you will have less time to do this than when first-generation HDTVs were introduced. While you're at it, save up a little extra in case you need to upgrade your multi-channel, surround sound amplifier if the hardware doesn't switch 4K UHD video/audio or support 1080p to 2160p video upscaling. Can you feel the rush? IT

Ken Osowski is director of solutions marketing at Procera Networks (www.proceranetworks.com).



Continuity Planning 101 – A Continuing Educational Series

Looking Ahead to 2014

By Rich Tehrani & Max Schroeder

Generally the December and January DPCF columns focus on the need for having a good plan in place for the upcoming year. We deviated a little in 2011 with a column titled "Eating Your Own Dog Food" to illustrate how TMC managed to cope with Hurricane Irene. October and November of 2012 brought more devastation but, again, TMC remained in full operation. The reason was simple. TMC had a robust and up-to-date BC/DR plan in place. This is a major reason for listening to our advice. We adhered to it, and it worked.

Now is the time of year for you to analyze your organization's plan and determine just what needs to be updated or changed. The quickest method is to start with a checklist of your present BC/DR plans. Then determine what components need to be updated or upgraded and if new components should be added to bring your organization into full compliance with the latest technologies available. The checklist is the easy part, but evaluating the latest technologies may require the advice of a reseller or consultant specializing in this area.

Selecting the right partner is critical in BC/DR planning and educating yourself first is always a good idea. Fortunately, ITEXPO, M2M Evolution, Cloud4SMB Expo, plus other co-located events run from Jan. 28-31, in Miami. This is a fantastic opportunity to personally look at the latest tools available. Certainly, the Internet provides everyone with a lot of easily accessible information, but only in Miami can you meet face-to-face with high-level experts and engage in two-way dialogues at their booths or seminar sessions. Also, you can move between the events to cross-pollinate your knowledge with other experts.

For BC/DR planners this is a must event. The industry is changing so rapidly that it is hard to keep pace, so you cannot miss this opportunity. TMC is the recognized industry leader in bringing new trends to light. The first issue of M2M Evolution was published in early 2013 yet this technology is already recognized as a critical BC/DR component.

Like the old adage "you only have one chance to make a good first impression", you only have one chance to survive your first disaster. Don't blow it. **IT**

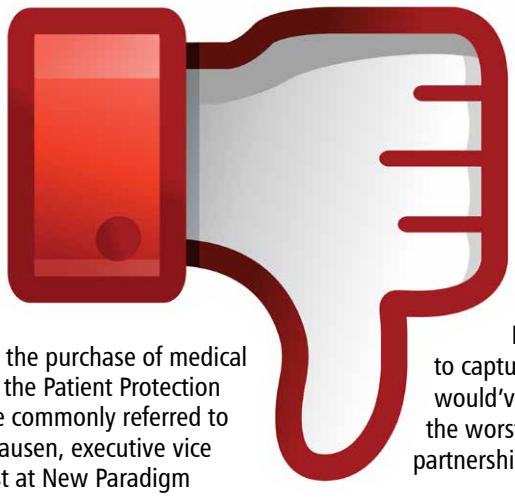
Max Schroeder is vice president emeritus of FaxCore Inc. (www.faxcore.com). Rich Tehrani is the CEO and group editor-in-chief at TMC, and conference chairman of ITEXPO.

By Paula Bernier

The Best & The Worst of 2013

Ask people to name the best thing that happened in tech in 2013, and you'll get a wide variety of sunny answers. Ask for the worst, and one reply is likely to rear its ugly head.

That said, let's take our medicine first, and leave the best for last.



WORST OF 2013

The Healthcare.gov Debacle

"Without a doubt, the biggest tech failure of 2013 was the Health Insurance Marketplace, the software system developed to facilitate the purchase of medical insurance as mandated under the Patient Protection and Affordable Care Act (more commonly referred to as Obamacare)," said Craig Clausen, executive vice president and principal analyst at New Paradigm Resources Group Inc.

"Given the central importance of the system to the new health care law, this failure to function would put this as the most significant tech failure of the year," Clausen continued. "However, there are compounding factors that solidify the marketplace's position as the most significant failure or the year. Nearly $1 billion was spent on developing the system and based on previous experiences in software development, NPRG anticipates that correcting the systems flaws will cost approximately 60 to 80 percent of what initial development costs ran. Finally, the Health Insurance Marketplace holds the position for this year's (decade's) biggest boondoggle because of the project managers' lack of knowledge and experience."

Peter Bernstein, a telecom veteran and TMCnet senior editor, concurred.

"As critical a part of the Obamacare implementation as it was/is, made it absolutely the biggest tech failure of 2013 – or almost any other year," said Bernstein. "Others have used the term catastrophic to describe the lack of preparation and testing, I would use the word inexplicable."

Michael Stanford, a veteran VoIP entrepreneur and strategist and a monthly columnist for this magazine, agreed that healthcare.gov earned this dubious prize, but sees it more as a PR failure than a tech failure.

"Forty percent of major ERP projects come in more than four months late," noted Stanford. "Assertions that commercial sites don't have problems like this are plain wrong. High-profile commercial sites frequently go down, sometimes for days, like the Apple Developer website in September, or the entire AT&T wireless data network when the iPhone was introduced. So misses like this are business as usual in tech."

Here's a fourth comment on healthcare.gov, just for good measure. It comes from Frank Stinson, partner and senior analyst with IntelliCom Analytics: "Well, that is a pretty easy one – the launch of the Obamacare federal exchange website. It was not exactly built using state of the art technology from what I understand, but it would be hard to imagine a more high-profile failure given its budget and lead time."

Bad Fruit

Had healthcare.gov not arisen in the fourth quarter to capture the worst of 2013 prize, perhaps BlackBerry would've claimed the title. In fact, BlackBerry was named the worst of tech 2013 by Karl Dahlin, director of strategic partnerships at VCI-Group.

"BlackBerry [experienced] one of the biggest falls from industry hero to zero in modern business history," said Dahlin. "Yes, they've been struggling for a while after plenty of early success, but they've had so many chances to get back in the game and become relevant again but failed to execute on a viable turnaround strategy in 2013."

The fall of BlackBerry was pretty bad, but let's not be hasty in giving it the silver medal.

The End of Privacy

It seems to me that should instead go to the PRISM scandal.

While it probably shouldn't come as a surprise to any of us that the U.S. government has been listening in to our exchanges (remember The Patriot Act?), the extent of this practice and the low level of worker to whom such information was (is?) available likely ramped up excitement over all of this.

Telecom people already knew this was going on, but it came as a shock to the general public, according to Stanford, who said PRISM stands as a marker of the official end of privacy.

"… privacy is obsolete, thanks to phone tracking, click tracking, call tracking, street view, traffic cams, satellite imagery, and the mass storage and big data software technology that makes all that data storable and mine-able for all eternity," added Stanford. "George Orwell had it right, except he missed by 20 years, and by the scale. It isn't just Big Brother watching you:

anybody can, and you fuel it with your Facebook Likes and Instagrams. This is a fundamental change in social reality, ranking with the printing press and the Industrial Revolution."

Bernstein, who has deemed Edward Snowden as the most interesting person in tech-2013, added: "We are still dealing with the repercussions of the rolling thunder of revelations. These are already impacting how the Internet is used; how data is stored and accessed; how risks are addressed and mitigated in the government and commercial sectors; and will likely lead to new laws around the world regarding privacy and security. It will also set off an explosion of purchasing in the areas of encryption and other types of security measures."

Aged Infrastructure

Indeed. And the fact that we are all increasingly connected makes this issue all the more important. That brings us to the discussion of the underlying network. While we have made many gains in adopting and building on IP communications, expanding our possibilities via broadband networks, and allowing rich media sharing even to mobile users through new LTE networks, there's still a lot of old plumbing and gear that's moving along our voice traffic.

Here, let me interject my own nomination for worst of 2013: the legacy voice switch network.

Legacy telephone switches have far outlived their initially stated product lifecycles of 20 to 25 years, yet they still bear most of the load of the nation's telephone traffic. In fact, they still support billions of dollars in revenue. There were approximately 13,000 legacy voice switches in operation in the U.S. at this time last year.

Recognizing that America's traditional phone system is not as dependable as it used to be, the Federal Communications Commission in October ordered phone companies to start collecting statistics on calls that fail to complete. That's because at least one estimate indicates as many as one in five incoming long-distance calls doesn't connect, which may have something to do with the decay of traditional landline infrastructure.

Most operators believe that they can rely on the grey market to provide critical cards for continued operation, according to a white paper put out earlier this year by GENBAND. But, it noted, most cards have been recycled through repair and return processes multiple times and, according to one analysis, about 40 percent of used cards do not survive a power cycling of being put back into a live switch. If they do survive, the switch becomes dependent upon key control cards from the late 1970s or early 1980s, which may have 200,000 to 300,000 operating hours on them.

"This is comparable to buying a rusty old rebar to repair an aging bridge: it's an improvement, but it will only slightly delay the bridge's demise," according to the paper.

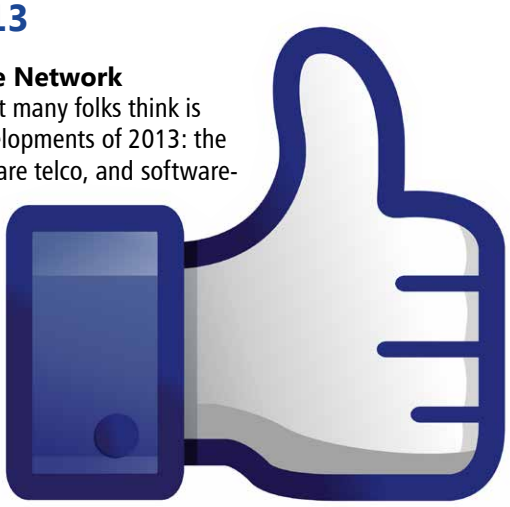
The problem of outdated legacy switches remains such an important issue that Metaswitch just last month announced that it has extended its service and support to include a range of legacy Class 5 switches, including the Nortel DMS-10 and DMS-100 switches and Alcatel-Lucent 5ESS Class 5 switches. Many legacy voice switches are no longer supported by their makers, some of which are companies that have been acquired at least once in recent years, said Phil Harvey, director of corporate communications at Metaswitch.

Harvey explained that Metaswitch is not so much interested in helping carriers maintain out-of-date infrastructure as it is freeing them from worrying about such concerns so they can turn their attentions to migrating to IP environments.

"We want our customers looking forward and not backward," he said.

We think that now is the time for carriers to be transforming their networks," he added. "TDM switches will not run forever, and available expertise is running short."

BEST OF 2013



Software Eats the Network

That takes us to what many folks think is among the best developments of 2013: the concept of the software telco, and software-based networking in general.

This idea, which is frequently closely identified with network functions virtualization and software-defined networking, stands to offer service providers and other network operators big benefits in terms of flexibility, network optimization, scalability, and time to market.

"As organizations move beyond virtualization of production workloads, attention is shifting toward the management and automation of the software-defined data center," said Peter ffoulkes, TheInfoPro's research director for servers and virtualization. "Over the next two years, the foundations for enterprise cloud computing will be deployed with cloud platforms standing out as the hottest technology and the most critical strategic decision to be made."

TheInfoPro, a service of 451 Research, in December released new research indicating that spending on infrastructure will slow down over the next two years as attention shifts to software-defined data centers. It explained that cloud platforms stand out as the hottest technology for adoption in the next two years, followed by the management and automation functions required for production and virtualized data centers.

"The three pillars of the cloud are storage, the data center computing environment and the networks, i.e., the ones connecting data center elements and data centers to each other," said Bernstein. "Whether it is the enterprise in the form of private clouds, the public cloud services, or the telecommunications global infrastructure, all aspects of ICT are rapidly become software-centric. SDN and NFV, while both in their infancies, are the future. In fact, how fast we get to the so-called software telco is going to be fascinating to watch as service providers seek to transform themselves in a rapidly changing world and exert their relevance in the face of OTT competition."

The cloud, NFV and SDN will effectively turn carrier networks into living beings that can change as needs require, said Paul Miller, vice president of technology and strategy at GENBAND.

"The whole thing has to grow and shrink almost as if it were a living organism," he said.

It's early days for the software telco. Indeed, at this point software telco is more idea than reality. But this concept has legs. Several leading vendors, not to mention noted startups, already have introduced products to help enable the creation of the software telco; several standards efforts on NFV and SDN are under way; telco trials are in the works; and it doesn't hurt that some of the world's leading telcos are leading the way on NFV.

Cloud: Still Rolling In

As the comments above reflect, the cloud plays a central role in software-based networking and virtualization. But whether we're talking about NFV and SDN or just networking in general, the cloud has become a – if not the – central theme in the communications and IT space.

When asked for the three most important tech developments of 2013, Phil Edholm of PKE Consulting LLC responded: "Cloud, cloud, and cloud." New technologies like WebRTC and HTML5 are changing the landscape, he added, but behind it all the biggest and most important development is that cloud is changing the business of IT and information.

"Just like the Industrial Revolution changed manufacturing from a bespoke cottage business to mass manufacturing, cloud is changing information and communications," said Edholm. "The big difference is that things will cost much less, but will be available in a wide range of defined options. Just as in the hardware store you can choose between 10 hinges, but you cannot specify a unique hinge. Similarly, technology is becoming a range of choices, but not customized in each implementation."

The impact of cloud networking is far and wide. For example, it now enables people to store and share video, pictures and presentations via the Internet using services such as Dropbox. It gives even the smallest businesses quick and affordable access to computing, infrastructure and platform as a service offerings, meaning upstarts can get to market faster and easier – and compete much more effectively with their much larger competitors. And the cloud provides organizations of all sizes access to services, such as unified communications offerings, that otherwise may have been out of their reach due to costly upfront investments and ongoing maintenance requirements.

There are a variety of approaches businesses adopting cloud solutions can take, of course. As Stinson noted, the cloud today is a bifurcated market where public cloud services have had the most success with small businesses while large enterprises have gravitated to private clouds hosted from their own data centers.

"In 2014," he said, "you will see greater provider focus on hybrid approaches blending public and private cloud implementation to bridge that gap. And whether it is through your customers, partners, or own employees, the user experience of new applications and technologies will remain a key area of emphasis going forward."

Ovum's Sapien, meanwhile, sees the connection of clouds proliferating in many dimensions – clouds connected to other clouds, clouds connected between private and public clouds, enterprise applications using multiple clouds within one application, and cloud service marketplaces where applications will be a combination of cloud services and not one service cloud. He also talked about the importance of cloud-network integration.

"Cloud providers of all kinds will be connecting to each other, many networks and many different applications, but the difference here is the network and cloud will be integrated and controlled from one portal or vendor," he said. "Cloud providers will be integrating the required network, and telecom providers will be integrating the cloud services. SDN will be one of the catalysts or ingredients."

Big Data

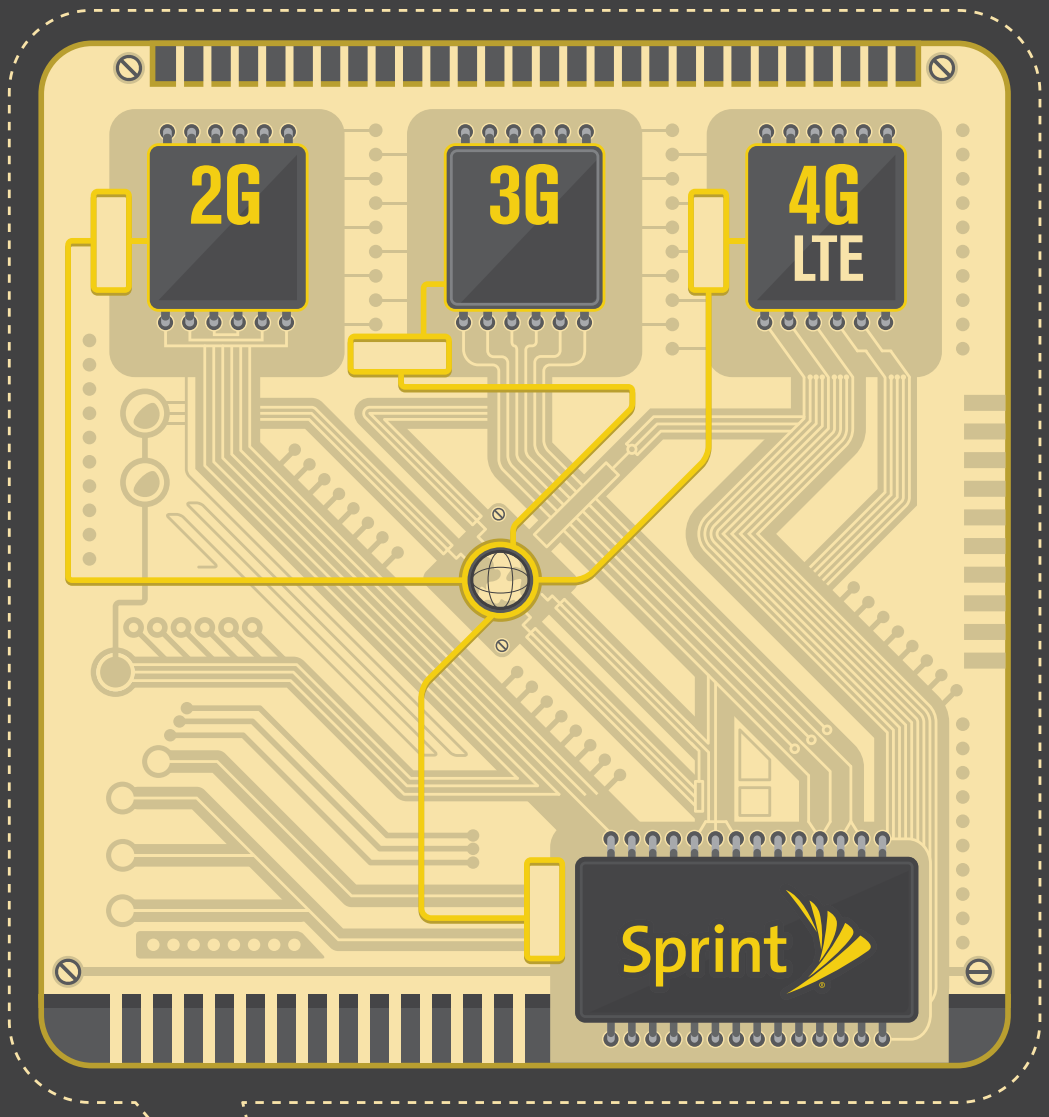
Big data was another important trend of 2013, and will obviously continue to grow during 2014 and beyond.

The proliferation of structured and unstructured data within organizations, including service providers like telephone and broadband service providers, among others, creates opportunities for these organizations to analyze and aggregate information to better understand such things as customers' past and likely future buying habits, the customer experience their own organization is providing, how to most efficiently deploy a fleet of vehicles, or even how to better engineer a network.

For example, a new company called Mobile Pulse has developed technology that gathers cellular and Wi-Fi network granular data from mobile devices, explained Clausen of NPGR.

"Initially, it will be used to analyze wireless network performance by network, carrier, device and geography," said Clausen, who considers Mobile Pulse the top startup of 2013. "However, the technology coupled with the richness of the data it can provide

Sprint



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holds tremendous potential for delivering insights into a range of network and usage related areas. Mobile Pulse's technology will also contribute another component of the big data picture."

But combing through and analyzing big data into something that's useful is no small task, said Mark Ricca, partner and senior analyst of IntelliCom Analytics.

"The majority of companies in the world today are not suffering from a lack of data; instead they are challenged by an abundance of data and a lack of intelligence," he said. "Enter providers recognizing the need and opportunity that have solutions that can tailor the big data into relevant and meaningful intelligence."

M2M & The Internet of Things

The ability to mold multiple data sources into meaningful intelligence will become even more important as more of our world becomes connected. Increasingly, not only will we want to use and reuse information gathered from and about smartphones, Internet usage, customer service interactions and the like, but we will also be hunting for and gathering data relative to unmanned connected devices in factories; within homes and neighborhoods (Did you hear about the Amazon drone?); and on planes, trains and automobiles. That's not to mention the connected devices we are, or will be, wearing on our bodies. That includes things like Google Glass, the tattoo-like tab Google is working on (see our sister magazine M2M Evolution for more), smart watches, football helmets, personal health and wellness meters, and more.

The ability to mold multiple data sources into meaningful intelligence will become even more important as more of our world becomes connected.

"While these devices have been the butt of late-night comedians jokes, they are positioned to expand the way we interact with our surroundings, much the way smart mobile devices transformed the way we communicate and access information," said Clausen.

Global M2M cellular connections are forecast to hit the 374.9 million mark by 2017, expanding at a compound annual growth rate of 26.5 percent from 91.4 million in 2011, according to research firm IHS. Berg Insight, meanwhile, forecasts that M2M devices with cellular connectivity will increase by 22 percent this year to reach 164.5 million in emerging markets, and estimates that M2M connections will grow at a CAGR of 24.4 percent with 489.9 million connections in 2018. And Analysys Mason says the M2M market will be worth $88 billion in the next 10 years.

To get there, M2M will have to overcome at least some of its challenges, which include fragmentation within the marketplace and an absence of established business models. The good news is that M2M appears to be poised for big things. Just look at the expanding adoption of these solutions, the decreasing costs of hardware, the growing array of products and businesses in the M2M space, and rising interest from investors in machine-to-machine companies.

"The next Internet wave will be the M2M revolution, where almost anything – from an automobile, to a shipping container, to a home electricity meter – can become a part of a vast network," said Sam Lucero, senior principal analyst for M2M & Internet of Things at IHS. "Cellular communications will play a key role in in this new era of the Internet of things, serving as the glue that connects hundreds of millions of nodes together. However, the cost and complexity of developing, deploying and operating cellular M2M applications is daunting, leading increasing numbers of companies to outsource cellular M2M application development, deployment and – in many cases – operation, to VAS providers."

WebRTC

While it's very early days for WebRTC, we would be remiss if we didn't mention WebRTC as among the best of 2013. The events that Technology Marketing Corp. puts on in collaboration with Edholm are in themselves an indicator of all the interest in the WebRTC space. The most recent event drew around 700 attendees.

WebRTC is already supported on more than one billion endpoints, according to Google, a key proponent of this new technology. Disruptive Analysis expects that to grow to 3.9 billion by 2016.

"I consider 2013 to be the year of WebRTC," said Dahlin of VCI-Group. "This was the year we moved beyond the hype and were actually able to use commercial products and see why the world will be forever changed going forward because of WebRTC."

Bernstein agreed, saying: "WebRTC is possibly the most disruptive thing to hit the communications industry in over a decade. It literally holds the promise to transform the way in which all of us interact professionally and personally."

Evolve IP's CTO Scott Kinka added that WebRTC, while still a couple of years away from widespread adoption, will begin to see applications beyond the enterprise, adding benefits for customer, partners, suppliers, and beyond. According to Infonetics Research, 20 percent of Americans currently work from home, a number that is expected to increase by 63 percent in the next five years, he said. That points to the growing need for problem-free videoconferencing, he added, and the eventual adoption of WebRTC will facilitate this. IT

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By Paula Bernier

The Most Interesting People of 2013

INTERNET TELEPHONY recently polled industry analysts and other experts for their input on the most interesting people of 2013.

Many of the names that surfaced are familiar ones. But our analysts' reasoning for these selections were what was really interesting. Here are some of the responses.

"The most interesting person to me this past year is Tony Fadell," said Craig Clausen of New Paradigm Resources Group. "Among other things, Tony was the lead inventor of the iPod when he was with Apple. He is now CEO of Nest, a Silicon Valley startup.

"What's intriguing (and impressive) to me is that Mr. Fadell is now taking common household appliances most people rarely give much thought about and turning these into devices that incorporate additional sensors and intelligence allowing them to 'learn' users behaviors to provide not only improved performance but also enhanced functionality," he said. "Fadell's current work initially focused on thermostats and has moved onto smoke detectors – those simple boxes that sit on our ceilings, unnoticed until we go through the semi-annual ritual of changing their batteries when clocks are adjusted due to daylight saving. With the additional sensors and intelligence Fadell has built into them, as well as their ability to be networked and communicate with one another, these devices are the first steps in moving toward the development of a system that creates a truly smart home environment."

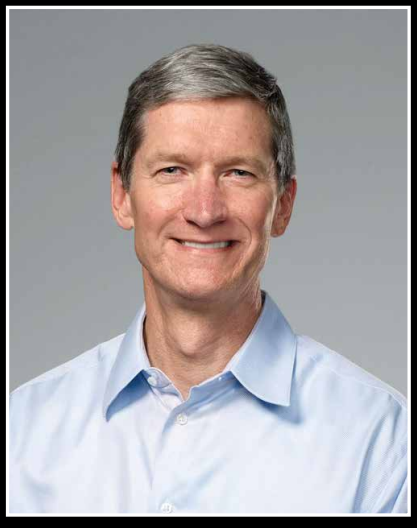
For Ovum analyst Mike Sapien, Apple's new leader Tim Cook is the most interesting person of 2013. Cook is noteworthy because he is at the helm of the iconic Apple, directly following in the footsteps of Steve Jobs, said Sapien, but it's more than just that.

"[He was] able to create his own persona as well as manage Apple at a critical time," noted Sapien." Plus, he also was just promoted for the passage of a bill against workplace discrimination. [He has] just a wide range of interests – and the impossible job of replacing a legend."

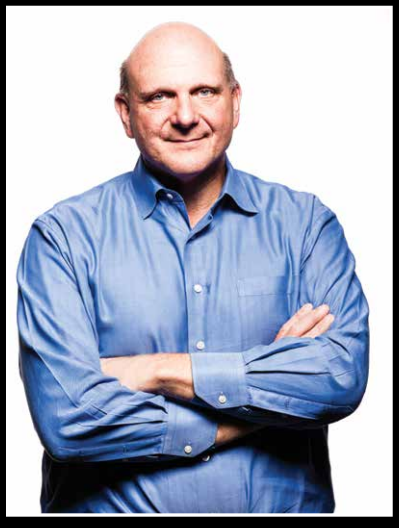
The next and final person of the year nominee also replaced a legend. In this case we're talking about Steve Ballmer, who long ago took the reins at Microsoft from founder Bill Gates. This year, however, Ballmer announced plans for retirement.

Phil Edholm of PKE Consulting LLC, noted that the announcement that Ballmer will be leaving the CEO role at Microsoft "puts one of the foundation stones of most organizations IT infrastructure in a state of transition.

"Who comes in to run Microsoft and their vision of the company over the next decade will have a huge impact on IT and organizations," said Edholm. "The acquisition of Nokia's handset business and the movement to hardware after years of being a software vendor is the icing on the cake of interesting." IT



Apple's Tim Cook



Microsoft's Steve Ballmer

Nest's Tony Fadell

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By Paula Bernier

What Happened in M&A This Year

And What We Might Expect in the Near Future

This year finished with a bang in terms of M&A activity, with deals like Verizon's $130 billion buyout of Vodafone and Softbank's $21.6 billion investment in Sprint raising the stakes. But perhaps the most talked about 2013 acquisition in tech was Microsoft's $7.2 billion acquisition of Nokia's device business.

"It's encouraging to note that even with the sluggish pace of economic recovery and continued concerns over Washington's fiscal crisis, very few surveyed individuals expect a slowdown in M&A activity in coming months, and most see a good chance of recovery to pre-recession levels within five years," said Morrison & Foerster's Robert Townsend, co-chair of the firm's Global M&A practice. "While deal volume remains at a relatively low level, a number of high-profile, high-priced acquisitions have occurred this year that suggest large corporations are again willing to turn to M&A to address fundamental competitive challenges."

The number of tech transactions in the third quarter increased 97 percent over the second quarter, according to PricewaterhouseCoopers, which said the average deal value increased to $440 million, up from $253 million in the first quarter and $433 million in the second quarter of 2013. The deal value in the third quarter – during which eight transactions in excess of $1 billion closed – totaled $27.7 billion, doubling that of the second quarter, PwC reported.

"After a struggling start in the first of half of 2013, the third quarter demonstrated robust growth in both volume and value of closed deals, to put technology M&A on an upward trajectory toward a strong finish to 2013," said Rob Fisher, PwC's U.S. technology industry deals leader. "Additionally, there were a significant number of large deals announced during the quarter. Private equity funds are increasingly active in the technology sector, and with growth a constant focus for technology businesses, we anticipate the abundance of cash at home and overseas held by corporate acquirers to spur deals in the months and quarters to come."

Microsoft & Nokia

Although it's the smallest of the three combinations mentioned above, Microsoft's move to snap up partner Nokia generated a lot of industry commentary – and several INTERNET TELEPHONY most important acquisition of 2013 nominations.

Announced in early September, and receiving DoJ approval in early December, the deal gives Microsoft substantially all of Nokia's Devices & Services business, the ability to license Nokia's patents, and the license and use Nokia's mapping services.

"Without a doubt the most noteworthy acquisition of 2013 is Microsoft's play with Nokia," said Karl Dahlin, director of strategic partnerships at VCI-Group. "We all know mobile communication has a big future and this allows Microsoft to keep up with Google and Apple in this important space, not to mention bailing Nokia out of a difficult situation. Win win."

Michael Stanford, an entrepreneur and strategist in VoIP and a monthly columnist for INTERNET TELEPHONY magazine, sees it a different way.

"The most noteworthy acquisition was Microsoft's acquistion of Nokia's devices and services businesses, because it marked some kind of end for the non-smartphone market," he said. "Nokia's phone software has always been user-hostile; this is only an irritant on phones that don't do much, but now that the phone business is pretty much synonymous with the smartphone business, Nokia's capitulation to Windows had some business-strategy sense: get the software from someone who knows how to do software right."

The problem is that Microsoft is not necessarily that company, Stanford added. But it went with that option, he said, because its other choices – being an Android me-too player or sticking with Symbian – were perhaps even more bleak.

"Microsoft acquires Nokia sounded great at first, because Nokia has a gold-plated intellectual property portfolio, and Microsoft already gleans substantial license fees from every copy of Android," said Stanford. "So that's Microsoft consolidating a strength, right? No, because Microsoft didn't buy Nokia. It bought half of Nokia, and that half didn't include the intellectual property trove. But maybe Microsoft didn't need the Nokia patents, since it seems to be doing better with its Nortel patents than Google is with its Motorola ones.

"So maybe it wasn't such a bad business proposition, since Microsoft can't come up with anything else to do with its cash pile, and it got a license to all the Nokia IP plus $15 billion in annual revenues for $7 billion," he said, "and there are plenty of people to fire (synergies in business-speak) to get the profit margins up."

Softbank & Sprint

The second most commonly cited M&A move of 2013 in INTER-

M&A activity in previous half-year

Survey date	More active	Typical level	Less active
October 2013	40%	24%	36%
April 2013	40%	24%	36%
October 2012	39%	24%	37%
April 2012	51%	26%	23%

Source: M&A Leaders' Survey from 451 Research / Morrison & Foerster

NET TELEPHONY's pundit interviews was Softbank's deal with Sprint. Completed July 10, this effort involved Softbank investing $21.6 billion for a 78 percent share of the service provider.

"There is a lot of industry restructuring going on which is the mega-trend," said Peter Bernstein, TMCnet senior editor and a long-time industry analyst and telecom employee. "Put feet to the fire, the Softbank acquisition of Sprint probably is No. 1, although Microsoft getting the handset business of Nokia is right up there since it means Microsoft still has a chance in the mobile device market."

Clearly, someone was going to step forward to claim Sprint sooner or later. Indeed, the Softbank move followed a bidding war between Dish and Softbank for Sprint.

Japan-based tech powerhouse Softbank has also made a few other interesting investments lately, including taking a controlling stake in Miami-based wireless distributor Brightstar Corp. for $1.26 billion, and forging a $1.5 billion joint venture with mobile game producer Supercell Oy.

Verizon & Vodafone

This year also saw wireless service providers Verizon and Vodafone sever ties as the former ponied up $130 billion to acquire Vodafone's share in the companies' 14-year-old joint venture. This reportedly marked the third largest corporate deal in history.

"It was finally time for this relationship to change, and the alliance had outgrown its original intention and objectives," said Mike Sapien, who is responsible for Ovum's U.S. Enterprise Practice. "The two companies were both being hindered by this joint ownership, and now both companies can be free to go their own ways. I also think it was a true win for both companies. Joint ventures are always tricky and have a certain lifecyles, and this one has hit its end of life. When it was created, it was needed, and the relationship created one of the world's strongest wireless providers in the U.S. Most of these relationships don't succeed in any fashion and are usually unwound with both companies taking a huge write-off. Kudos to both sides on this great success that generates a new opportunity for both companies."

Other Noteworthy Deals

Here's a quick rundown of a few other noteworthy deals in the past year.

Oracle in February announced plans to buy session border controller pioneer Acme Packet for $1.7 billion. The company said it was a move to expand on its telecom strategy, which had some folks scratching their heads wondering "what telecom strategy?" But the worlds of telecom, data and IT have, of course, been on a collision course for some time now and remain on that track today. And SBCs, Oracle's existing software, and data center expertise together can help address the industry's move toward more software-based networking.

On a separate front, and indicating growing interest and activity in the automated sales and marketing space, the third quarter also saw Oracle buy both BigMachines and Compendium. BigMachines offers cloud-based solutions that enable sales people to more easily generate quotes and pricing for their customers. Compendium offers cloud-based capabilities that help companies create, monitor and promote their mobile and other online content. The tools and individuals from Compendium will be combined with the assets Oracle got through its recent acquisition of Eloqua, another cloud-based marketing automation outfit.

In addition to Acme Packet, another well-known name in telecom circles was acquired this year. In October, Tellabs was purchased by Marlin Equity Partners, which also recently snapped up NSN's optical networks business and Sycamore Networks. Tellabs has been struggling lately, but its technology and expertise are a good match for the Marlin portfolio, according to Ovum.

"Globally Tellabs ranks twelfth in the optical networking market, ninth in service provider switching and routing, and seventh in PON," said Ovum's Ron Kline. "Overall Tellabs was the twelfth-ranked wireline equipment vendor in the second quarter of 2012 with a 2 percent share of the $40

billion market. At the end of 2010 Tellabs ranked eighth among all telecom wireline equipment suppliers, however revenues from optical networking and switching and routing products have been under pressure, dropping every quarter since, pushing annualized revenues down 49 percent to $637 million in the second quarter of 2013, from $1.25 billion in the fourth quarter of 2010."

In October, VoIP services pioneer Vonage Holding Corp. completed the acquisition of Vocalocity Inc. for $130 million. And November saw cloud communications and collaboration solutions outfit 8x8 move to acquire for $18.4 million privately-held Voicenet Solutions, a leading provider of cloud business telephony and communications services in the United Kingdom.

"As you all know, the hosted voice business is hot – hotter than a NYC sidewalk in July," analyst Blair Pleasant wrote in a September blog. "There are many service providers in this space, and the number keeps growing – it is well over 100 at this time. We're expecting to see a big uptake in hosted communication services, with a great amount of the interest coming from SMBs, but also from larger companies."

Japan-based tech powerhouse Softbank has also taken a controlling stake in Miami-based wireless distributor Brightstar Corp. for $1.26 billion, and done a $1.5 billion joint venture with mobile game producer Supercell Oy.

Aspect, Avaya, and Genesys also have all made acquisitions this year in cloud entities in moves to bolster their cloud contact center offers. Genesys in February purchased Angel. Aspect followed suit a few months later, buying IVR outfit Voxeo, Omer Minkara, senior research analyst–contact center for Aberdeen, noted in a recent blog. And just last month Avaya bought a collaborative cloud and content center outfit called ITNavigator, a privately held business out of Israel that Minkara said is a pioneer in cloud, social media, reporting, and management solutions.

"It's clear that customers are moving toward the cloud for communication services, including for contact center capabilities," Pleasant said. "Cloud solutions make a lot of sense for contact centers – it's easier to add staff and resources for seasonal and cyclical needs, makes it easier to enable at-home or remote workers, etc."

According to Phil Edholm of PKE Consulting LLC, another noteworthy acquisition was this year was the purchase of VidTel by Fidelity Investments.

"While most acquisitions are based on technology, team or customers and have a strong link to the core products and technology of the acquiring company, this one is different," he said. "Fidelity is not a technology powerhouse looking to fill gap or add some strength, so what is going on? However, Fidelity is all about money and relationships and video is poised to transform that arena."

Next Up

So which companies are on the most-likely-to-be-acquired-next list?

Well, Research in Motion would certainly seem to be a top contender.

"The company is beyond the point of being able to resurrect itself, and its attractive customer base and portfolio of patents make it an attractive acquisition target," said Craig Clausen, executive vice president and principal analyst at New Paradigm Resources Group Inc.

Marla Ellerman, a veteran of telecom marketing and publishing who is now organizer of the Mobile Payment Conference, which is co-located with ITEXPO next month, agreed.

"BlackBerry, just a quick look at the financials shows why," she said. "Most likely, only parts of the company will be purchased by different companies, rather than BlackBerry being sold as a whole."

Videoconferencing outfit Polycom is another one to watch, according to VCI-Group's Dahlin.

"Polycom is a prime candidate for acquisition in the next 12 months," he said. "They are without a clear leader or strategy but have very good collaboration technology that would be a great addition to a larger UC portfolio."

Frank Stinson, partner and senior analyst with IntelliCom Analytics, added: "There are several legacy enterprise voice providers either up for sale by their parent company or at least partially owned by private equity and at a point in the lifecycle of these investments where their owners may be looking for an exit strategy. Cisco's continued strength in this space, combined with Microsoft's current heavy push around Lync 2013, limits the growth prospects for the legacy players in the absence of some further consolidation." IT

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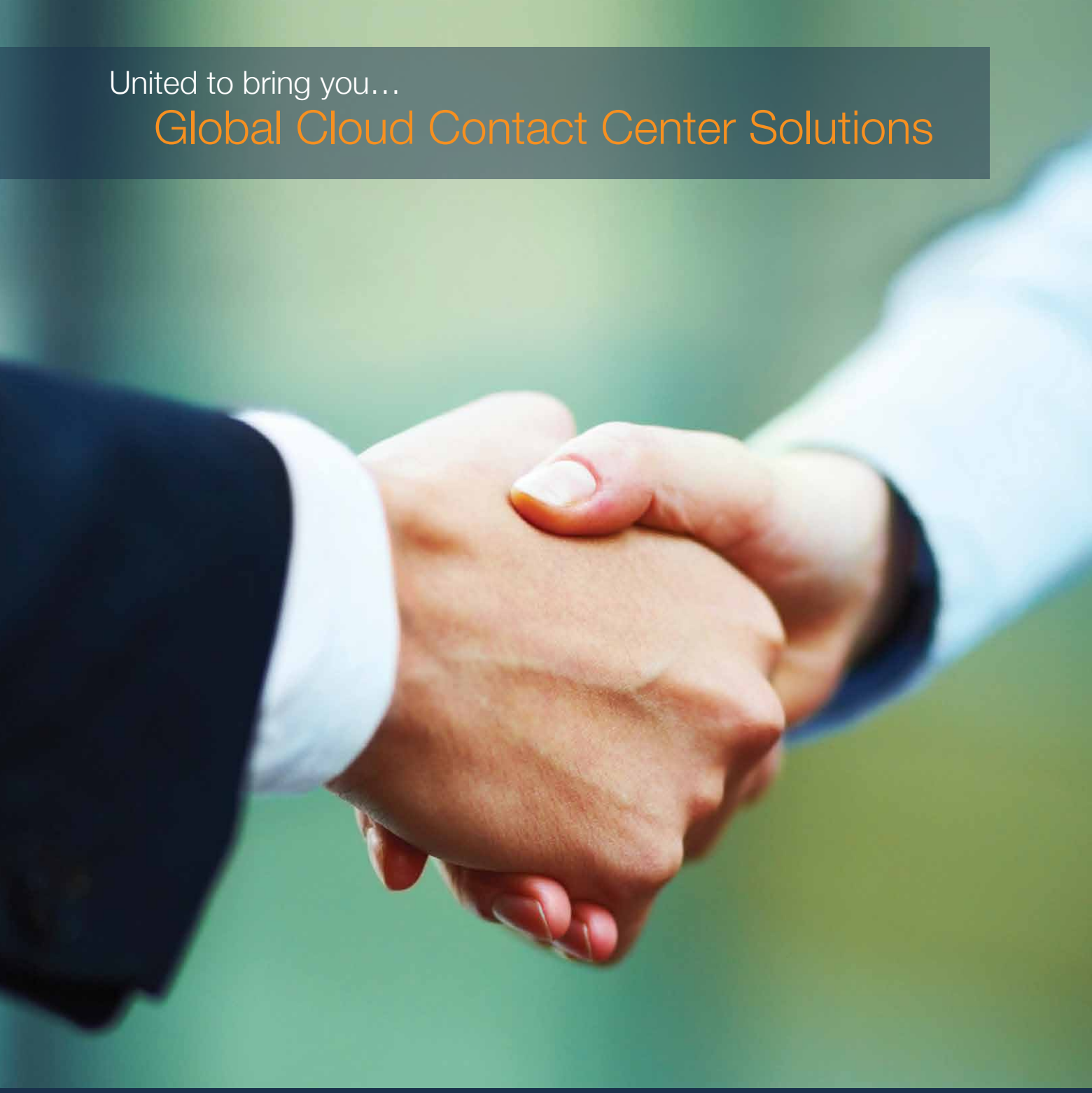

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By Paula Bernier

2013 Marks Google Fiber's First Birthday

But Despite All the Attention, the Company Is and Will Remain a Broadband Baby

Last month marked Google Fiber's one-year anniversary in Kansas City. That means it had been a year since the first customers began receiving the 1-gig connectivity. By the time this issue makes it to press, most if not all of the areas targeted for Google Fiber will have been installed.

Meanwhile, Google Fiber installations have begun in Provo, Utah, where the company opened up sign ups to several thousand Provo residents in early October.

"City officials promised that Fiber would come to Provo by the end of 2013, and it looks like they've made good on their promise," boasted an Android Community blog dated Nov. 13.

The company expects to expand the sign-up process to others in Provo in January, according to a posting by Mike Kretschmer, customer solutions specialist at Google Fiber. This process in Provo is different and faster than the process used for Austin and Kansas City given that the Google network in this city is not a greenfield build.

"In KC and Austin, we need to install thousands of miles of brand new fiber-optic cables, which requires many months of planning, engineering and construction before we can open sign-ups and bring service to customers," said Michael Slinger, Google's director of fiber business operations. "Here in Provo, we purchased the iProvo network from the City of Provo, so a lot of this network already exists — we just needed to upgrade it to make it faster. Veracity customers get the first crack at signing up for Fiber service — they're already hooked up to our newly-upgraded fiber because they've been connected to the former iProvo network, so it will be efficient and quick to install Google Fiber for any of them who want to switch providers."

According to DSL Reports, Comcast responded to Google Fiber's $70 1gbps offering in Provo by offering residents the Digital Premier channel bundle, 105mbps service, and either Xfinity Voice or Xfinity Home Secure for $120 a month for three years.

The third city to which Google intends to bring gigabit-speed fiber networks is Austin, Texas. According to a Venture Beat article posted in October, Google has indicated it won't launch Google Fiber there until mid-2014, and it hadn't decided which areas would be targeted for the high-speed connectivity.

That apparently left an opening for AT&T to get first-mover advantage in Austin. AT&T expected to launch a service called GigaPower Internet Dec. 1 in Austin. Venture Beat went on to say that despite the name, AT&T's Austin service will provide just 300mbps of bandwidth – at least initially. AT&T will then be able to upgrade GigaPower subscribers to 1gbps next year.

"There are still plenty of unknowns, though," according to Venture Beat. "Chief among these is the monthly price of GigaPower, which AT&T seems to be staying silent about for now. For comparison, AT&T's Uverse broadband TV/Internet service costs $65 per month for the highest tier package of Internet (45mbps). If you want to add television to that plan, you're looking at another $60 - $120 per month. (By contrast, the Google Fiber service in Kansas City is just $120 per month for both Internet and TV.)"

The Verge reported that AT&T apparently received the same concessions as Google to build out its fiber-to-the-home network.

"Specifically, AT&T is allowed to pick and choose where it'll build out its gigabit Internet service," according to The Verge. "The company is letting neighborhoods voice their interest in the service to 'help influence future deployment' — just as Google has done in Kansas City and elsewhere. This does mean that less wealthy neighborhoods are unlikely to see fiber service."

In addition to AT&T, regional and local Internet service providers in Minnesota, Nebraska, Seattle and Vermont have responded to Google Fiber by announcing their own gigabit services, according to The Motley Fool.

Creating this disruption has made Google Fiber one of the most important developments of 2013, said Craig Clausen, executive vice president and principal analyst at New Paradigm Resources Group Inc.

"With its fiber network launch in a number of U.S. cities, Google is firing a shot across the collective bows of telecom and cable carriers and sending the clear signal that 'if you guys can't construct the appropriate access networks needed by users to effectively access Google's future services , then we (Google) will.' If the message isn't heard, Google will continue to ramp up the pressure by building in additional markets."

However, research firm IHS says Google is and will remain a minor player in the U.S. broadband market.

"While the deployment of Google Fiber to the cities may capture attention, the company's plans are miniscule compared to what its competitors undertake in the overall market," said Dexter Thillien, senior analyst for multiplay at IHS. "AT&T and Verizon have spent many billions of dollars establishing fiber networks in larger population centers, something Google is unlikely to be able to match." IT

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ETSI Group Issues NFV Specs

Less than a year after beginning work on the effort, ETSI has published the first five specifications for network functions virtualization. The industry organization revealed the news in October. The specs address NFV architecture, a framework for coordinating and promoting public demonstrations of proof-of-concept platforms, requirements, terminology, and use cases. More detailed specs are slated for completion and release in 2014. "We have been especially concerned not to impede progress with a protracted standardization effort in NFV ISG. As a result, these initial specifications have been developed in record time – under 10 months of intensive work. This is a major achievement for the industry. We hope to maintain this momentum and produce additional guidance soon," said Verizon's Prodip Sen, who is chairman of the ETSI Network Functions Virtualization Industry Specification Group. AT&T, BT Group, Deutsche Telekom, Orange, Telecom Italia, Telefonica and Verizon drove the creation of this ETSI group.

NFV, SDN Could Change Makeup of Marketplace

Ericsson is the clear leader, and Huawei is next in line, for market share in the mobile network managed services space, which overall has been pretty flat this year at just below $11 billion in revenue. That's the word from ABI Research, which discusses details in its CEM & Managed Services Research Service report. ABI Research says it based these projections for the year on what happened during the first three quarters. "Ericsson is under no threat to its commanding market share even though revenues have not grown as in previous years," says Joe Hoffman, research director. "If Huawei continues its upward momentum in the fourth quarter, we will see it land in second position."

Survey Rates Cisco No. 1 in SDN

Cisco Systems Inc., VMware, Juniper Networks, Big Switch and Brocade are among the leaders in software-defined networking, according to survey results published by IT Brand Pulse. The analysis firm says Cisco is the leader in the areas of SDN ASICs, SDN controller, SDN platform, SDN switch and SDN virtual switch. Runners up include VMware in the category of SDN platform; Juniper for SDN ASICs and SDN controller; Big Switch for SDN virtual switch; and Brocade for SDN switch. Cisco was identified as a leader in the areas of innovation, performance, price, reliability, and service and support, according to IT Brand Pulse. Other price leaders for SDN switches, according to the survey, are Intel and SanDisk. Seagate was recognized in the area of storage for its market, price, performance, service and support, and innovation. Western Digital/Hitachi GST received top honors for reliability, and also came in second for the other categories. Toshiba placed third on this front. In terms of SDN orchestration software, Accedian Networks came out tops. Huawei came in second, and SDNsquare took third. VMware was the leader in the categories of layer 4-7 SDN services platform, and VXLAN gateways. F5 Networks was second, and Citrix was third. HP also won in multiple product categories, including microserver and open compute product server. Dell was a runner up.

F5 Unveils SDN Strategy

Synthesis is the name F5 Networks has given to its software-defined networking architecture, which is based on software defined application services, the company's trademarked version of SDN. Zeus Kerravala, principal analyst at ZK Research, said: "The company's approach to SDAS fits in step with the broader industry's focus on SDN topics. With an emphasis on fabric-based networking, programmable application services, simplified purchasing options, and dedicated reference architectures, F5 is evolving its sales and marketing practices to better align with organizations' need to rapidly and efficiently deploy, provision, and prioritize IT services." The architecture can scale to support up to 1.28 million instances (both administrative domains and virtual instances), offers 20.5 TB of throughput, and can enable as many as 9.2 billion connections. Its centralized management system does automated discovery, topology, and provisioning, which expedites service delivery and makes these processes more cost-effective, efficient and repeatable. "F5 is highly aware of the shifts transforming the application delivery controller market, based on ongoing dialogue with customers, partners, and industry influencers," said Manny Rivelo, executive vice president of strategic solutions at F5. "With Synthesis, we are better aligning around the priorities and deployment preferences of enterprises and service providers to best address the direction IT is headed – billions of users, trillions of Internet-connected devices, and millions of essential applications. To support this growth, we view the ability to massively scale services, elastically provision resources, and interoperate with a variety of open and proprietary platforms as non-negotiable."

Cisco Jumps on BroadHop

Cisco has announced plans to buy policy control outfit BroadHop in yet another move by the communications equipment giant to enable smarter and more scalable networking. The move comes less than a month following Cisco's move to purchase network planning and traffic management outfit Cariden BroadHop sells the Quantum Network Suite of policy management solutions. The explosion of data on U.S. service providers' networks is creating a lot of interest in policy management. Such solutions can be used by service providers both to put the lid on heavy data users and to segment their market and create bundles targeting low-, middle- and high-end customers.

By Paula Bernier

Lexifone 2 Enables Natural Phone Conversations in a Variety of Languages and Dialects

People who use different languages but want to communicate with one another have a few options to make that happen. They can learn a new language. They can call on the services of a human interpreter. Or they can use a book or an automated solution like Google Translate. But all of the above options can be expensive, time-consuming, clunky, or some combination of the three.

A better option, suggests Ike Sagie, Lexifone founder and CEO, is to use Lexifone 2 – his company's new phone-based automated, asynchronous language translation service.

Unveiled today, Lexifone 2 offers natural and real-time translation for several major languages and dialects. Those include English (Australian, U.K. and U.S. versions), French (Canadian and European), German, Hebrew, Italian, Mandarin (Chinese and Taiwanese), Portuguese (Brazilian and European), Russian, and Spanish (European and Mexican).

While Lexifone's original translation service via phone required users to pause between sentences, keep individual utterances to a certain length, and push keypad buttons to switch languages based on the speaker at any particular time, Lexifone 2 processes voice as it hits the airwaves and doesn't require speakers to change their voice patterns or stop to press buttons along the way. Sagie said the service is based on a patented technology that leverages computation linguistics/linguistic optimization.

"Our goal will always be to come closer and closer to translated speech that mimics exactly the way we speak and hear conversation in our native tongue," said Sagie. "Lexifone 2 is a leap forward in this direction. Nothing like this has ever been available on the market, and we'll continue to improve its performance and add features."

The service can be used in consumer or business settings, but Lexifone is targeting its sales and marketing efforts at small businesses and organizations such as government agencies, hotels, importer/exporters, law offices, and others. The service is sold through Lexifone's website and through major telephone companies, which Sagie declined to name.

"One very big telco in Europe has already signed an agreement, but it is still confidential," Sagie told TMCnet. "We are in very advanced stages of agreements with a couple more."

Before the end of 2013, he said, Lexifone will likely be able to announce a couple major worldwide operator partners.

To use the service, visit www.lexifone.com, select and purchase a plan, dial the access number published by Lexifone, select the language, and enter the destination phone number. The other party does not have to be a Lexifone subscriber. (Sagie added that while NTT DoCoMo offers a similar translation service in Japan, both parties must be NTT subscribers to use that.)

While Lexifone customers can access the service from any wireline or wireless phone, the company now also offers an Android mobile apps that allows for direct calling to the service from the user's contact list. An iOS mobile app is in the works.

Lexifone offers two plans for consumers. One is a prepaid plan that costs $10 upfront and has per minute fees ranging from 20 to 40 cents a minute, based on the destination of the calls. The other involves a $10 per month fee with per minute charges in the 12 to 20 cent range. The Lexifone service available via carrier partners will sell for around $25 per month for unlimited use, according to Sagie. Lexifone also provides a straight international calling service, which doesn't have to include the translation component. IT

Snom Names CEO

IP desktop business phone outfit snom has appointed Brian J. Kelley as CEO. Kelley, who previously managed snom's business in the Americas, is now responsible for expanding snom's market presence and leading its growth in all its core markets along with Michael Knieling, COO and Usman Tahir, CTO, in Europe, the Americas and Asia Pacific. "The worldwide VoIP and Unified Communications markets are growing by double digits as businesses seek to reduce telecom costs and leverage the productivity enhancing features of these voice-driven IP communications services," said Kelley, who joined snom in 2012 after serving as chairman, CEO and president of Tii Network Technologies, and as president and CEO of Cognitronics Corp. "snom has established a strong foothold in this highly competitive market and is well positioned to take advantage of these growing opportunities."

WebRTC Enables Video Mixers

A new WebRTC-based website hopes to help form new friendships with CreateAMixer, a social network that encourages visitors to attend video mixers based on topics created by users. It's sort of like the online video version of Tinder: When users join a mixer, they can go through a slideshow that has photos of other guests attending. If they see someone they're interested in, they click on that photo, and if the interest is reciprocated, a video session will initiate. The website uses WebRTC. "The plus side for this is that there are no plugins needed, including Flash, for Firefox and Chrome users," said Chuck White, president and creative director for Wyanet, LLC, the company behind CreateAMixer.

Deloitte Recognizes Telesphere

Telesphere ranks No. 282 on Deloitte's Technology Fast 500, which looks at the fastest growing technology, media, telecommunications, life sciences and clean technology companies in North America. "We're extremely gratified to be recognized by Deloitte's 2013 Technology Fast 500," said Telesphere CEO Clark Peterson. "Our private IP MPLS network has grown to become one of the largest of its kind in the nation, offering our national enterprise customers a single provider able to handle all of their communications nationwide and unify all of their office communications with their landline and mobile devices. Telesphere's cloud-based services allow businesses of any size to enjoy all the latest voice, video, Internet, mobility, and collaboration features of large enterprise systems without the costly investment of on-site equipment."

Zultys Rolls Out New Cloud-Based Solution

MXvirtual, an integrated unified communication solution and IP phone system, was recently unveiled by Zultys. The solution, which can be deployed on existing VMware infrastructure, features an integrated contact center solution, smartphone integration, advanced call routing, conferencing, large scale call recording, advanced SIP trunking with an integrated session border controller, and more. "The MXvirtual platform was simple to deploy into our existing VMware environment. We're excited about the level of scale and flexibility that this breakthrough brings to the MX platform," said Colin McGuire, director of engineering at Coactive Technology Solutions.

Siemens Enterprise Communications Rebrands

The company formerly known as Siemens Enterprise Communications hence forward shall be known as Unify. The name change, according to Unify, builds on the company's June unveiling of Project Ansible, which is a new communications and collaboration platform that leverages secure, dynamic collaboration, universal content aggregation, and a consumer-like experience. Customer deliveries of Project Ansible are now expected to begin in July 2014. The platform will be available initially as a cloud-based, software-as-a-service offering complementing OpenScape solutions and corporate telephone systems from competitors.

Genesys Caters to Mid-Sized Contact Centers

Genesys last month announced its first integrated solutions, specifically architected for mid-sized contact centers: Genesys Business Edition, and for smaller contact centers, Genesys Premier Edition. These all-in-one solutions are designed for rapid implementation and for future flexible growth as individual customer needs change. These new editions are built on the Genesys Customer Engagement platform and the integrated Angel, Soundbite and Utopy technologies Genesys acquired over the last year.

GCF Certification Effort Addresses RCS

The Global Certification Forum has launched a certification scheme for client applications. Its first use will be for RCS client applications. A new GCF membership category – Client Vendor – has been created to enable application developers to take advantage of client certification. RCS clients certified through GCF will be listed on the GCF website. Client vendor members will also benefit from opportunities to work closely with the world's leading mobile operators and device manufacturers through GCF's regular meetings. "Services delivered through standards-based clients have the potential to give consumers worldwide new ways to communicate, irrespective of which device, OS or network they use," said Lars Nielsen, GCF operations manager. "The launch of Client Certification and Client Vendor Membership highlights how GCF adapts to meet the evolving needs of its members and the wider mobile industry."

By Warren Grimes

Forced Bundling of Pay TV Channels

No Longer a Tenable Marketing Model

The forced bundling of hundreds of TV channels is no longer tenable. This marketing model, the result of 60 years of evolution, has been immensely profitable for TV programmers. Understandably resistant to a change that could cost them billions of dollars annually, programmers must recognize that the model is failing. The two largest cable TV companies have reported their latest quarterly customer attrition. Comcast lost 129,000 subscribers during the third quarter of 2013. Time Warner Cable, with a substantially smaller customer base, lost 306,000 subscribers during the same period.

While customers frequently switch distributors, the loss for Time Warner Cable is also attributable to the temporary blackout during its August fee dispute with CBS. Above and beyond these factors, the trend for all TV distributors is decidedly negative. And satellite distributors are even more vulnerable because they have difficulty including Internet service with TV service. The story lies not simply in the number of cord cutters, but also in the never corders – young consumers who never have and never will subscribe to costly pay TV. These consumers vote with their wallets because they find the unwieldy forced bundling too costly – the average monthly cable bill is now $95 and rising rapidly. Recalcitrant viewers rely increasingly on other sources for video programming, such as Internet streaming.

A keystone feature of the current elephantine bundle, known as expanded basic cable, is the dominance of sports programming. Although 20 percent or fewer of TV viewers regularly watch sports, the cost of sports programming represents approximately half of the total bill – and that share is increasing over time. For example, pay TV viewers in the Southern California market will pay an estimated $5 per month to receive telecasts of the Dodgers and Lakers games even if they never watch them. Viewers throughout the West are paying $2 per month to receive regional college games (the Pac-12 network). Again, this is not a matter of choice. A consumer must pay the increased fee to get any of the channels included in the oversized bundle. A consumer revolt is inevitable, and it is happening.

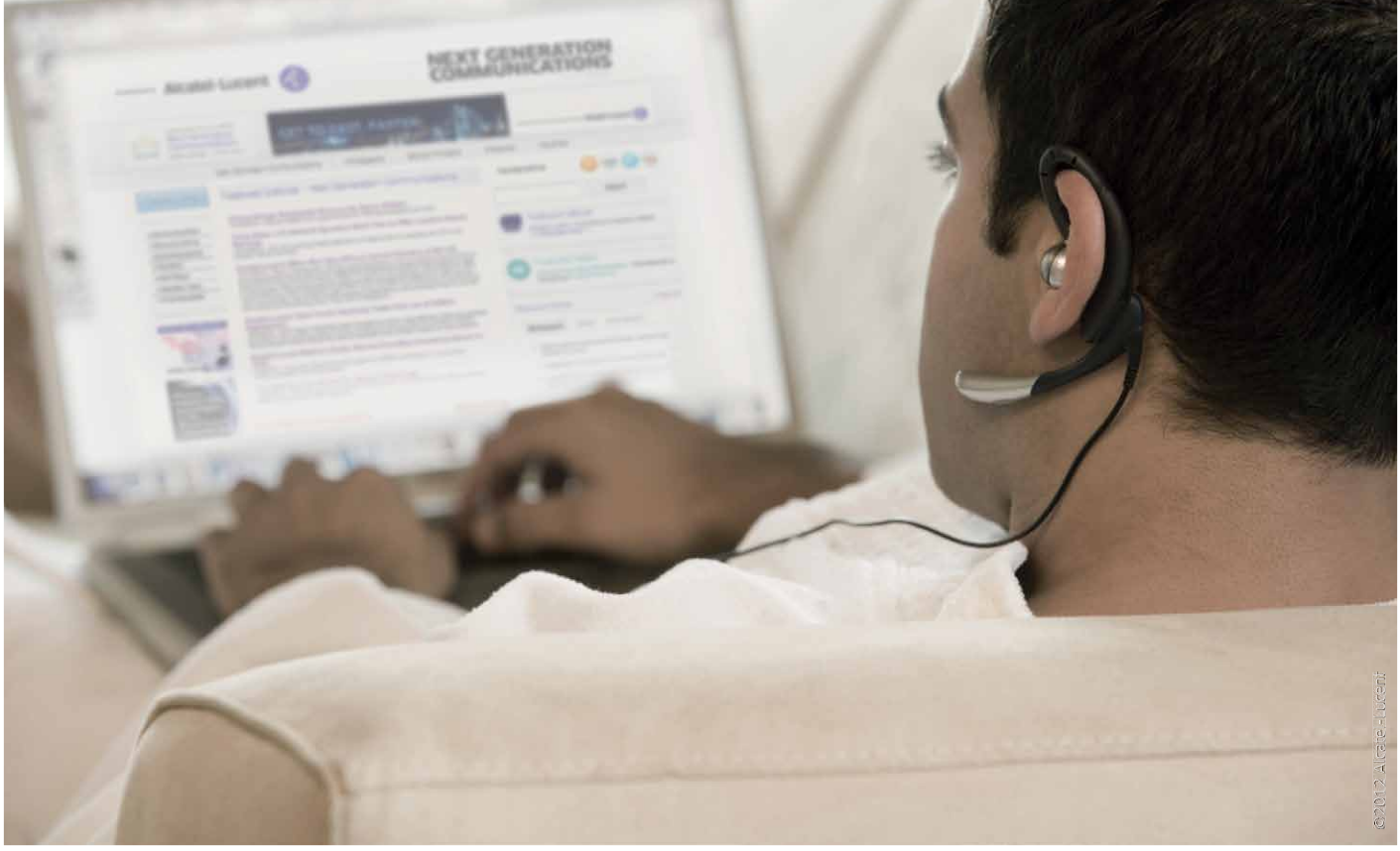
A number of distributors, seeing the inexorable downward trend in subscriptions, strongly oppose the bundling forced upon them by programmers. One distributor, Cablevision, with public support from Direct TV and Time Warner Cable, has sued Viacom arguing that the programmer's forced bundle violates the Sherman Antitrust Act. Time Warner Cable itself, because it acts as a programmer for Los Angeles sports teams, has been sued for violating California unfair competition law. If consumers prevail, Time Warner Cable could charge only those consumers who affirmatively opt to receive the telecasts. In Congress, Sen. John McCain has introduced legislation that would force distributors and programmers to offer television programming on an a la carte basis. Standing in the background, the FCC could be moved to intervene to protect consumers in the manner that its Canadian counterpart has long since done. Even if none of these interventions occur, the steady drop in pay TV subscriptions will, over time, ultimately force the issue.

Meanwhile, programmers such as NBC Universal (owned by Comcast), Fox, Disney, and Viacom continue to cling to the over-sized bundling. My estimate, based on a comparison with the Canadian system that offers substantially more choice and lower cost options, is that U.S. consumers are paying $30 billion or more in excess charges every year. The overcharge benefits programmers. Yet, given the inevitability of change, it is in the programmers' interest to be proactive in giving consumers meaningful lower cost choices. Both programmers and distributors will benefit when consumers are allowed to make their own entertainment choices at reasonable prices. Sound marketing and good public relations go hand-in-hand.

Smaller, interest-specific bundles and more a la carte offerings would increase overall pay TV subscriptions, and advertising revenues linked to increased subscriptions would also rise. These gains would offset a portion of the revenue lost from abandoning the elephantine cable bundle. Cable providers, some of which are also programmers, could also increase their sales of related products, such as high-speed Internet service, as their public image improved. In addition, by offering concessions to distributors and potential regulators, programmers have a better chance of preserving the beneficial and income generating aspects of smaller, consumer-attractive bundles.

Programmers must face the inevitable. Maintaining sustained profitability requires running a business responsive to consumer demand. Programmers and distributors that act responsibly and ethically will ensure their long-term survival by offering consumers meaningful choices and lower cost options in purchasing pay TV. IT

Warren Grimes is a professor at Southwestern Law School in Los Angeles and co-author of a noted antitrust treatise. He has written a forthcoming scholarly analysis of the competition issues in distribution of pay TV. He can be reached at wgrimes@swlaw.edu.



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AT THE SPEED OF IDEAS™

By Cheri Beranek

Using Microduct in the Cellular World

With the onset of LTE and other broadband hungry technologies, cell tower owners and operators have seen the need to not just bring fiber to the base of the tower, but to take fiber up the tower as well. Unfortunately, the boost in performance achievable with fiber is seen as a trade-off with the cost of installing it.

Cheri Beranek

Nonetheless, radio and antenna manufacturers have begun to equip their products with fiber-ready connections. The struggle today is what to do with the large coaxial cables that both weigh down the tower structure and add to wind loading. There are a number of towers that were not designed to take the extra loading that the LTE technology adds.

The answer to this is microduct.

Microduct not only reduces the cost of installation, but it lowers the weight placed on the tower as well. It has such a small footprint, yet can provide nearly 100 times the capacity of broadband over that of a typical coaxial cable. By taking the microduct up the tower (using the traditional hardware), then breaking out the fiber into a distribution box on the tower deck and running the same style of microduct to each radio location, the tower crew can remove all the coaxial cables and replace it with one 10mm microduct.

On a multi-carrier tower, this can remove in excess of 40,000 pounds from the tower and provide monumentally greater capacity. Since top quality microduct can house 24 fibers, there is no need to run multiple ducts up the structure. Incidentally, the same microduct can be used to provide service to the tower from the local carrier.

The cost associated with a typical tower installation crew of four people (twoclimbers and two ground people) comes to an average cost of $75 an hour per person. A typical installation would involve taking six coax cables to the tower deck using a capstan or a crane. Crane costs are upwards of $3,000 per day. It would take an experienced crew 15 hours to run the cables up the tower and place them at their designated spot on the tower. This does not account for routing into a hut or other structures on the ground. If a crane is used, that cost alone is typically $6,000.

In contrast, a typical microduct installation would consist of taking one microduct up the tower to a breakout box, then running microducts to each radio head. The structure is now ready for fiber. If the operator orders a fiber with a pre-connectorized Clearview Cassette, the tower crew only needs to pass the tail down the microduct to the splice point at the base. After the tail reaches the bottom, the crew simply snaps the cassette into the breakout box. Each radio with a microduct can be turned up by simply pushing a FieldShield pre-connectorized jumper through the duct and plugging it in on each end. The work on the tower deck is now complete. Because of the small size of the FieldShield fiber, the climbers can take the fiber up the tower with them. Again, there's no need for expensive cranes on site.

The average time for this style of installation is between two and Three hours. Multiplying the time required by the labor rate of $300 hour, the labor costs will equal $900. With no crane costs, the total cost of a microduct installation of 24 fibers is under $1,000.

For comparison let's assume we have the same four people on a crew for a traditional installation. A traditional installation is estimated to require 15 hours at a rate of $300 an hour. Multiplying time by rate and adding the $6,000 crane costs, and the total will easily exceed $10,000 for a typical installation of six coax cables.

With the price point of fiber falling below copper and the lower weight of the medium reducing wind sheer, it would seem that microduct is the easy choice. But, be cautious – traditional microduct designs have and will fail over time in this type of deployment. With the advancement of polymers and coatings, today's microducts and fibers (when used as a system) can and will withstand the rigors of direct placement in environmentally harsh environments. Further, attention must be given to the distribution of the fiber at both the top and foot of the tower to ensure appropriate protection and management of the fiber over time. IT

Cheri Beranek is president and CEO of Clearfield Inc. (www.clearfieldconnection.com).

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By Philip Howard

Exploiting The Internet of Things with Investigative Analytics

From call detail records and network logs, to device and GPS information, there's an ever-increasing stream of machine-generated data in the telecommunications industry. More cell phones, mobile devices, clickstream data – and anything with a sensor or RFID tag – are being instrumented, a phenomenon dubbed the Internet of Things.

This presents both an opportunity and a challenge, as companies now have the ability to analyze more and richer information. While it can help organizations improve network performance and planning (among other things), it also creates an overwhelming amount of data to analyze.

Applying Investigative Analytics

Investigative Analytics is a term coined by Curt Monash as a function for "research, investigation and analysis in support of future decisions." It can help telcos ask a series of quickly changing, iterative questions to better understand what happened or might happen, why, and what to do to optimize for a particular outcome in the future.

Monash defines investigative analytics as "seeking (previously unknown) patterns in data." It supports the ability to discover a pattern of past activity that points to some likely outcome in the future across any type of data, regardless of its form and origin. For example: Is this data part of a pattern that indicates recurrence? If so, what is that pattern, and how can we can leverage it for business purposes?

As the Internet of Things becomes more of a reality, the proliferation of non-human devices (including cell phones) contributing data into networks, will force organizations to rethink how their analytic systems are designed and deployed. As more of these devices participate in the mobile ecosystem, the Internet of Things will vastly expand the opportunity for telcos to apply investigative analytics to monitor and analyze network traffic, including:

- Discovering the root cause of dropped calls and determining what to do to prevent it going wrong in the future.
- Discovering why something went right so that you can build processes to support an increased likelihood of repeating that behavior in the future. This could include monitoring and analyzing mobile usage, such as sales of location-based services, to encourage up-sell or cross-sell opportunities.
- Planning mobile capacity to cost-effectively support requirements and service level agreements. This is critical in the telecommunications industry, where forecasting and meeting future demand are essential. Investigative analytics is a good fit for gaining insight gleaned from complex, machine-generated data sets. Anywhere that machines or devices generate information, there is scope for investigative analytics.

Investigative Analytics in Telecommunications

For both performance and planning purposes, telcos need to monitor and analyze traffic. Key elements are hot spots (areas with particularly high usage) as well as failures. A proper understanding of hot spots, and how these develop over time, will be critical to future investments in new infrastructure. Conversely, any failure within the network is an immediate problem that needs resolution as quickly as possible. Failures may lead to connections being dropped (a well-known potential indicator of customer churn) or reduced service.

By applying investigative analytics to areas such as hot spots and failures, companies can combine usage trend data with location-based and demographic data to improve planning for future infrastructure investments.

For example, instead of merely analyzing a canned query of "what happened?" – e.g. when and where was the failure? – mobile network operators can dig into the "why did it happen?"

An investigative analytics series of questions around mobile networks might follow a flexible sequence of interrogation like this:

- "Where are we seeing the most network failures in California?"
- How about social media: "Are we experiencing a rise in customer service complaints that align with those geographic areas in California?"
- Or, drilling in on an individual basis: "Why is this loyal user all of a sudden complaining about bad service on Twitter?" By combining different data sources, maybe you can determine that the customer has moved and needs to access a cell tower closer to his new home.
- "In what states are we seeing the biggest increase in cross-sell opportunities?" And: "Are those tied in with social media engagement? Is there a pattern between cross-selling/up-selling and network performance?"

Data Store Requirements

Because telcos need to store and analyze a lot of data, they will need a technology platform that enables them to exploit this data to reduce costs, identify new revenue streams, and improve competitive positioning. However, because investigative analytics must support fast, interactive queries, a simple batch-based analytic environment will not be sufficient.

Recommended database requirements to effectively power machine-generated data analytics are:

1. The solution must be scalable enough to hold all the data you need for long-term analytics. And it must have good enough compression to store this economically.

2. It must be fast enough to ingest the data within a reasonable timeframe, providing for real-time query processing and alerting.

3. To minimize costs and resources, the system shouldn't require manual tuning or administration such as the creation of indexes. Indexing data as it is loaded significantly slows down loading processes and increases database size.

4. The system needs to be fast and flexible enough to efficiently support ad hoc queries and complex analytics. Databases that use indexes or other constructs, such as projections, to achieve fast query performance will not typically provide adequate performance for ad hoc queries.

5. Since it must support mission-critical applications that drive real-time operations, it needs to be highly available (catering for unplanned downtime without stopping) and, preferably, continuously available (catering for planned downtime as well as unplanned stoppages).

Investigative Analytics in Action

The Internet of Things calls for new analytics solutions. Telcos have the opportunity to evolve analytics from simple network monitoring to all areas of operations, product development and customer service.

Take Polystar, for example, a leading supplier of service assurance, network monitoring and test solutions for the telco market. Polystar embeds Infobright into the company's Jupiter visualization application suite, providing network and mobile operators with real-time data access and investigative analytics for insight into subscriber behavior.

While Polystar initially used Infobright's analytic database technology to deliver data access for network monitoring, the company has since expanded its use to help customers glean customer insight. For example, marketing departments can compare subjective survey input on quality of service with actual network measures to determine effective outreach. Customer care agents, as well, perform in-depth analytics to determine why subscribers from a certain geographic area may be changing carriers.

Improved customer insight drives improvements in SLA root cause monitoring, customer support resolution, marketing research, roaming analytics and product development, thereby reducing churn and boosting revenues. With Infobright, Polystar mobile network operators are equipped to keep pace with unprecedented levels of detail on network and user behavior as the velocity and volume of subscriber data grows exponentially. IT

Philip Howard is research director at Bloor Research (www.bloorresearch.com).

Chip Giant Buys Small Cell Assets

Intel has announced its planned purchase of the small cell assets of Mindspeed Technologies, the rest of which is being bought by chip maker M/A-COM Technology Solutions Holdings. The Intel-Mindspeed deal, which is expected to close in February, is interesting because it gives Intel a stronger play in the mobile operator network world and at the same time taps into the exciting software-defined networking trend, on which Intel already has been working with China Mobile and SKT.

Mobile Data Boom is Drives Interest in Diameter

Sonus Networks recently announced the acquisition of Performance Technologies for $30 million. As a result, the session border controller vendor can now bring a Diameter solution into its product portfolio. Diameter solutions address network signaling, policy control, and subscriber data management, which allow communications vendors to deliver, control and monetize personalized communications services. David Tipping, vice president and general manager of the SBC business unit at Sonus Networks, told INTERNET TELEPHONY: "The market itself is looking for ways to integrate signaling, security and sessions." This deal brings to mind Oracle, which in February bought SBC outfit Acme Packet and followed that up in March with the purchase of Diameter solutions provider Tekelec.

Cellcos Leverage SON to Control Opex

In an effort to keep network operating expenses under control, mobile operators are placing a big bet on self-organizing networks, notes Stéphane Téral, principal analyst for mobile infrastructure and carrier economics at Infonetics Research, who adds these carriers are also uneasy with automation. "Nonetheless, the ultimate goal is to use cell planning and field testing for zero-touch, self-healing networks," Téral continues, "But it'll take some time to get there. SON's just started, after all." Of those surveyed, 87 percent of operators have deployed SON in their networks. That's up 27 percent from a year ago. And that includes a few large incumbents that are using SON to optimize 3.5G networks.

SingTel Taps Ericsson for SON

SingTel has chosen Ericsson's SON Optimization Manager for WCDMA network automation. Tay Yeow Lian, SingTel's vice president of mobile core engineering, said: "With SON and other network enhancements, our customers will enjoy up to 20 per cent faster Internet access in crowded places that are prone to network congestion. The chances of encountering a dropped call at these packed locations will also be reduced by as much as 40 per cent. SingTel has invested heavily in its networks to deliver the fastest mobile services in Singapore. We are the only 4G service provider to offer speeds of up to 150mbps and nationwide dual-band coverage. By investing in new technologies, we seek to provide our customers with an even better experience with their communications and multimedia applications."

No Broadband Caps with Mushroom PortaBella

Mushroom Networks Inc. now offers an eight-port PortaBella business-class wireless broadband bonding appliance. "PortaBella removes the barrier to ultra-reliable fast Internet where traditional services are either unavailable or too costly," said Cahit Akin, co-founder and CEO of Mushroom Networks. "By combining the throughput of several cellular data cards, PortaBella delivers reliable fiber like speeds to remote offices, temporary construction sites, public transportation, or any place fast and reliable Internet service is needed on the go."

By Peter Radizeski

Focus on the Customer

With all the changes going on in the telecom industry, with all the chanting of cloud, BYOD, mobility, yadda, what should you do? My answer: Focus on your customer.

When I speak with agents, they tell me they get ink and move along – in search of the next customer. VARs are different. VARs don't like to sell, so they just have to get as much of the wallet share as possible from each customer.

Agents need to stay in touch with their customers. If this isn't your forte, outsource it to a virtual assistant or a marketing firm.

In the war for talent, it's actually a battle for attitude. Attitude trumps most skills. A grumpy CCNA isn't an asset but a liability.

Take a hotel chain. They have spent billions on the property, amenities, advertising, sales incentives to get you to the hotel, only to leave the whole thing up to an hourly clerk. The first impression at the hotel is the doorman, then the lobby, then check-in. Three low wage workers are responsible for your entire experience. Hopefully, the manager isn't stuck looking at a dashboard on a computer screen, but manages by walking around.

We all have horror stories about customer service. The bar is set so low in America. But it does not take much to knock it out of the park for your customers.

Tony Hsieh built Zappos to a billion-dollar business based on hiring mainly by attitude. Hsieh writes in his book, "Delivering Happiness", that the thing to focus on is outstanding customer service. Rackspace built a culture around fanatical support. Happy employees make happy customers make happy profits.

Customer experience is a huge factor in churn, repeat business, referrals, reviews (think Yelp), word-of-mouth and sales. Focus on the customer and the attitude toward your customer. IT

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

BPMonline Announces U.S. Program

Global customer relationship management and business process management solutions provider BPMonline has launched the Americas Partner Program. "We are finding that consulting and system implementation firms are looking for the next-generation industry-tailored CRM solutions to offer to the market, solutions which would combine core CRM features with BPM capabilities," said Ted Hartley, vice president of business development at BPMonline, Americas. The new program introduces commissions of up to 50 percent and no entrance fees. New BPMonline partners named at the time of the program launch include Architech Solutions LLC and consulting firm Hot Lead Key.

CohesiveFT Becomes Google Cloud Partner

CohesiveFT has become an official Google technology partner to help organizations regain control of network security and capitalize on new Google Compute Cloud features. CohesiveFT, a cloud-enabling enterprise software company, offers GCE users network virtualization with VNS3 and image management with Server3. "The Google Cloud Platform Partner Program enables us to integrate our product offerings for cloud networking and image management with the power of the Google Cloud Platform," said Chris Swan, CTO of CohesiveFT. "The Google Cloud Platform offers a broad set of application development, cloud storage, large scale computing, and big data capabilities that provides us with a way to offer GCE users control over server images, security, addressing, topology and protocols. With the addition of VNS3 overlay networking features and Server3 image management, GCE users can now create customer-controlled overlay networks made up of their custom server images."

Novus Gains Presence

Boutique telecommunications and IP distributor Novus has begun selling the Presence line of UC headsets by Sennheiser. The Presence series includes two premium Bluetooth headsets for mobile professionals, the Presence UC (for unified communications) and Presence UC ML (for Microsoft Lync). Both are compatible with leading UC platforms, and can switch easily between softphone and mobile calls. "Sennheiser is known the world over for their top-notch engineering and unmatched sound quality," said Chris Meehan, managing partner at Novus. "They've been a longtime partner and we are happy to offer our customers their latest innovation, the Presence line of UC headsets."

MetTel Partners with AT&T

A provider of IP-enabled communications services for enterprise and government customers, MetTel has joined the AT&T Partner Exchange reseller program. As a result, it is authorized to resell AT&T's IP networking, cloud and mobility solutions. "We continue to see demand for mobile Internet skyrocket and AT&T's 4G LTE network will help MetTel respond to what customers want from their mobile experience – speed, reliability, and the latest and greatest wireless devices," said Max Silber, MetTel's director of wireless services. "We expect our business customers and channel partners to be very excited about this expanded wireless product and service offering."

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TELMEX Launches Private Enterprise Virtual Data Center

In the wake of Cisco Systems' introduction of new software-defined networking gear and announcement it would buy the rest of SDN outfit Insieme, Cisco customer TELMEX launched a new service called Private Enterprise Virtual Data Center. The service, part of the company's infrastructure-as-a-service offerings, gives users access to computing and network resources in a secure environment. Clients can opt to leverage Private Enterprise Virtual Data Center as a stand-alone solution, or in concert with or as a backup to with their own data centers. Private Enterprise Virtual Data Center is powered, in part, by technology from Cisco Systems, a cloud partner of TELMEX since 2012, as are its other cloud-based offerings. The TELEX Business WEB conference solution is based on Cisco's WebEx solution. Virtual Servers are a TELMEX offering that provides businesses with flexible and scalable computing capacity. It also gives users the option to select from multiple applications, backup, security and operating systems. And it offers always-available support.

OCP Adopts Cumulus Solution

The Open Compute Project Foundation has adopted a new solution for installing software on network switches in an effort to advance the move to more flexible networking environments in the data center. Called the Open Network Install Environment, or ONIE, the boot loader defines a standard method of loading network operating systems on any ONIE-compatible hardware. ONIE also includes a modern Linux kernel.While OCP and Cumulus Networks, which submitted the network boot loader, didn't specifically use the terms network functions virtualization and software-defined networking in making the announcement, the press release does talk about applying this solution to bare metal switches, and quotes SDN startup Big Switch Networks. "We have collaborated with Cumulus Networks on ONIE since day 1, and are excited that it was accepted by the Open Compute Project foundation," says Mansour Karam, vice president of business development and strategic alliances at Big Switch Networks. "ONIE comes already loaded on bare metal switches from a number of vendors, which are available through a network of distributors in the U.S. It is a key component of the disaggregated network architecture, allows choice of hardware and network operating systems, and enables Big Switch's Zero Touch Networking capability."

Telstra Global Expands Data Center

Telstra Global is expanding its data center coverage. It now has North American data center coverage via locations in Chicago, Los Angeles, New York and San Jose; an expanded data center in Syndney, which includes 155 new racks of medium and high-density capacity in the heart of the city's Central Business District; extended Asia Pacific data center coverage via a new Tokyo facility; and, availability of low latency network connectivity services from its Singapore data center.

IBM Buys Aspera

IBM has announced an agreement to acquire file transfer specialist Aspera Inc. The California company provides technology for the secure and speedy transfer of massive data files throughout the world. IBM last month alone announced massive cloud computing deals in China working with energy distributor ENN Energy and data center service provider 21Vianet. IBM also helped Brazilian service provider Alelo migrate to a cloud data center and is working with several major institutions in the European financial sector on cloud infrastructure and managed services.

SAP Helps Companies Address Data

SAP AG recently unveiled the SAP InfiniteInsight solution. It leverages automation technology from SAP company KXEN to enable predictive analytics across the business. "As data rapidly expands, more and more companies are finding competitive advantage by combining advanced analytics and business intelligence to capture, analyze and predict trends," said Shekhar Iyer, global vice president, Business Intelligence and Predictive Analytics, SAP. "Our research shows companies need new ideas and tools in order to capitalize on their data. We constantly hear that the lack of skilled resources, high total cost of ownership and the manual iterative approach that existing legacy solutions have are all challenges for broader adoption. Put simply, the old approach is not working. SAP InfiniteInsight, along with our existing advanced analytics capabilities, provides a platform to help analyze business in real time and provide predictive insight across the enterprise by integrating predictive insight into applications, processes and decision-making."

Target Becomes a Target

Target in mid December was investigating a data breach that compromised millions of accounts in stores. The breach, which involved unauthorized access of its customers' names, credit or debit card numbers, expiration dates and CVV security codes, became big news just before the holidays. The company released a statement on its website confirming the unauthorized access, saying it is working with a third-party forensics firm to conduct a thorough investigation of the incident and look into how it can prevent similar incidents in the future.

SDN Controller, Ethernet Switch Market to Hit $3.1B by 2017

SDN controllers and Ethernet switches used for SDN in enterprise and data center environments will become a $3.1 billion market by 2017, according to Infonetics Research. "Wide scale in-use SDN deployments will occur first in the data center with large enterprises and cloud service providers, followed closely by the enterprise LAN," said Cliff Grossner, directing analyst for data center and cloud at Infonetics Research. "We're already seeing significant use cases for SDN in the enterprise LAN providing security and unification of wired and wireless networks, and enabling BYOD (bring your own device)."

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By Erik Linask

12 Days of Christmas, ITEXPO Style

As the song says, "It's the most wonderful time of the year" – not only because the holidays are a wonderful chance to spend time with family and loved ones, but because it also means that ITEXPO Miami is on the way. As if Miami Beach in January isn't reason enough, here are 12 fantastic reasons why you, too, should be at ITEXPO Miami. (Of course, being the season, I'll borrow another popular Christmas song to tell you about them.)

On the twelfth day of Christmas, ITEXPO gave to me…

12. The First Lady of Emerging Tech – The Chief Technologist, Innovation for HLS in the office of the CTO for HP is the featured ITEXPO keynoter and will captivate attendees with a look at how the latest emerging technologies will push innovation beyond existing limits.

11. Ways to Grow Profits – Since 1999, ITEXPO, the Business Technology Event, has always focused on how to leverage technology to grow your businesses. This year is no different, with industry experts at your disposal for four days of conference programming specifically designed to guide you on a path to business growth using the latest complementary tech innovations to increase your revenue opportunities.

10. Customer Engagement Tips – Our Customer Interactions track is designed to help any business – small or large, regardless of vertical market – understand how to more effectively engage existing and prospective customers. Your success depends on your customers; this is your chance to understand how you can create a uniquely positive experience.

9. Specialized Workshops – If you are fortunate to have already determined your technology roadmap or have already deployed, ITEXPO offers an opportunity to take deep dives into specific topics and products, including SDN, Microsoft Lync, session border controllers, Asterisk, SIP trunking, WebRTC, VoIP deployment, and more. Whatever your pressing need, training sessions and workshops at ITEXPO will ensure you return to your office ready to better leverage your investments.

8. Mobility for All – Whether your mobility needs center around BYOD, M2M, mobile payments, wireless spectrum, or unified communications, ITEXPO and its co-located events cover it all, both in dozens of conference sessions and on the show floor.

7. SDN Precon – Along with our Software Telco Congress, which just took place in Santa Clara, Calif., SDN Precon is your chance to hear from the experts how what many consider to be the most disruptive technology innovation since the advent of the Internet is poised to change the network landscape.

6. StartupCamp9 – Always a huge draw at ITEXPO, this exciting evening brings pitches from startups. You even have a chance to cast a vote for your favorite. Several StartupCamp winners have gone on to enjoy significant success in their business ventures. Last year's Miami winner, VerbalizeIT, appeared on Shark Tank, enticing investors Mark Cuban, Kevin O'Leary, and Robert Herjavek to each make solid offers, ultimately accepting O'Leary's offer. Since then the company has gone on to launch partnerships with Rosetta Stone, American Airlines, and Travelport, among others.

5. Networking Opportunities – Business is built on relationships, and ITEXPO offers countless opportunities to nurture connections with customers, partners, and members of leading media and analyst firms, and to forge new relationships.

4. Cloud4SMB – As the tech space has seen with many emerging opportunities, early focus has been on the big-ticket large enterprise market, even though the sheer number of SMBs seem to suggest that is the more advantageous market for cloud services. Cloud4SMB Expo is a unique event, uniting the entire SMB technology ecosystem, from cloud technology vendors to resellers, integrators, and MSPs to end SMB end users, discussing how to leverage cloud computing in the SMB market.

3. CaseStudyU – CaseStudyU returns with a full-day program where major enterprise CIOs and CTOs discuss their technology implementation stories, providing practical advice and best practices derived from real-world experiences. Key enterprise technology topics will include virtualization, BYOD, security, collaboration, and the new generation of IT priorities emerging in today's tech landscape.

2. All the Latest Tech – Our exhibit hall is packed from wall to wall with an A to Z list of communications and IT products and solutions to help you take your business to the next level. Regardless of your needs, the ITEXPO show floor has everything you need, and there's no better way to find out about each of them than under one roof in Miami Beach in January.

1. Some parts to a Mustang GT – Yes, for you Jeff Foxworthy fans, I borrowed this one from his "Redneck 12 Days of Christmas" but, the last event of ITEXPO Miami will, indeed, be a drawing for a new Ford Mustang. Don't forget to visit all the right booths to hear about the lastest business technology solutions and get your cards stamped while there. See you in Miami! IT

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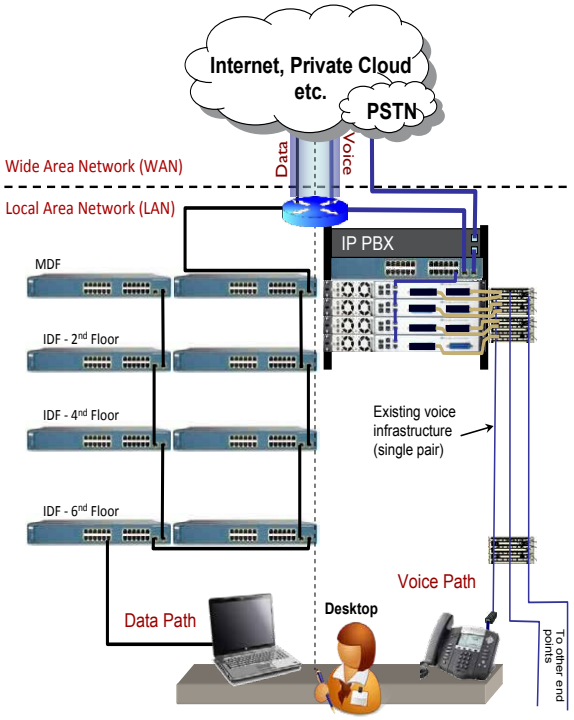

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