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Executive Editor, IP Communications Group,
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Circulation Director, **Stephanie Thompson, ext. 139**
(sthompson@tmcnet.com)

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By Paula Bernier

You Make the Call

When it is ok to call and/or record conversations with people has recently become a heightened area of debate in communications and legal circles.

One hotbed of activity on this front is in California, which has a somewhat unique legal approach to call recording, in that the state says it is allowable only in instances in which both parties have given consent. (Meanwhile, federal law requires consent from only one of the parties.)

The Golden State has seen hundreds of folks file class action lawsuits alleging calls in which they participated were recorded without their consent, and millions of dollars have in turn been doled out by organizations to settle these claims.

Restaurant Applebee's, retailer Bass Pro Outdoor World (which reportedly paid out a $6 million settlement), and financial outfit Capitol One are among the businesses recently targeted with call recording-related lawsuits.

Hilton Worldwide Inc. was also recently the subject of a call recording lawsuit. In this case, however, the case went to court and the judge ruled in favor of the hotel. The plantiff's claim that the company recorded his cell phone conversation in which he provided updated credit card information doesn't apply to the state statute, the judge reportedly ruled, because it doesn't apply to cell phone users.

Meanwhile, across the country in Maine, call recording practices and rules came into question when a reporter recorded a call in which the Maine Heritage Policy Center was meeting to decide how to respond to an ad targeting gubernatorial candidate and U.S. Rep. Mike Michaud. The argument here hinges on the group's claim that the reporter was invited to the call, and whether or not the reporter made his presence known on the call. No decision was made on this case as of press time.

At the recent SmartVoice Conference, which was co-located with ITEXPO in Las Vegas, Evan Kahan, COO at interactions recording company Numonix, said some of the things to consider when implementing a call recording strategy are how long to store and how frequently to purge recordings. He added it's also important to figure out how to inform people their conversations are going to be recorded. The answer is probably an easy one when it comes to incoming callers, who can be greeted with a recording letting them know their call may be recorded, he said, but what about people who are reached via outbound calls?

There's also a lot of legal action these days related to the Telephone Consumer Protection Act, which was created and signed into law in the 1990s in an effort to prevent people from getting calls and other communications that they have to pay for, but don't want to receive. And TCPA and FCC rules prohibit making auto dialed or prerecorded non-emergency calls to a wireless phone number for which the called party is charged a fee.

Litigation related to the TCPA has exploded in the last few years, and damages can be steep – up to $1,500 per call or text. A popular pizza chain last year agreed to pay more than $16 million in damages to settle a nationwide class action lawsuit alleging it unlawfully advertised its pizzas by unwanted SMS text messages. A vehicle maintenance brand shelled out $47 million in a separate settlement. And a major financial firm and three collections agencies recently announced a cash settlement of $75.5 million.

That said, companies that use auto-dialers need to know whether a phone number is a landline or associated with a mobile device, notes Becky Burr, deputy general counsel and chief privacy officer at Neustar. If it is a mobile number, she says, a company needs to verify it has prior consent to communicate using automated technology and that the person who gave consent still owns the number.

In yet another twist to TCPA, there's now a conversation circulating as to whether a voicemail delivery system that sends messages direct to voicemail is prohibited, notes The CommLaw Group. This conversation was sparked in July by a VoApps filing that requests a declaratory ruling to say its voicemail system does not violate TCPA. The FCC has issued a public notice seeking comment on the matter.

The lesson here, whether you're talking about call recording or TCPA compliance, is that it's important to keep abreast of these legal activities and, more to the point, be conservative in how your processes and solutions address these situations, given rulings on these things are varied and may differ depending upon geography. **IT**

By Rich Tehrani

Oljemark Takes the Reins at Ingate

Ingate Systems, in its quest to continue to be an innovator and leader in the SIP communications space, recently brought on Michael Oljemark from its board to become the company's newest CEO.

Oljemark boasts a 30-year legacy in the technology market, holding multiple leadership roles prior to joining Ingate, and having earned his Master of Science degree from the KTH Royal Institute of Technology in Stockholm. He comes to Ingate at a time when SIP trunking and its complementary technologies are enjoying unprecedented business adoption.

I had a chance to discuss how these trends will pave the way for Ingate going forward, and how Oljemark plans on continuing Ingate's growth. Here's what he had to say.

As a 30-year technology industry veteran, what is attractive about Ingate that made you accept the opportunity to lead the company?

Three things: Great products, great people and great potential. I find the combination of today's product portfolio of proven quality products, our global reach, and our competent channel to be very exciting in itself. Add to that all the great people in our team and the potential that right now lies in WebRTC, and we have a really attractive mission and an offer I just could not resist. Working with Karl (Stahl) as my chairman is also a fantastic opportunity. I think Karl is a great business entrepreneur and inventor that I admire.

How would you characterize Ingate's current position in the market? How can you build your competitive market presence?

I think Ingate's position is very strong with the customers, resellers and distributors that know us. What I mean is that once you have gotten to know Ingate and our products, then you are likely to be an Ingate fan. We probably suffer a bit from not being as well known everywhere as some other brands, and we will work on improving that in the near term.

How important is WebRTC to Ingate's future?

We believe there is a good chance that WebRTC will lead to a new paradigm shift in real-time communications. We have pioneered the WebRTC field, and we are determined to continue to be a substantial supplier and enabler also when the WebRTC market grows and matures. Our first offering in this area is a product called the WebRTC & SIP PBX Companion that brings all the features of WebRTC to PBXs, UC, and call center solutions. Enterprise contact centers will now also be called via context-sensitive talk or videoconferencing links on the company website or elsewhere rather than via telephones only. Using WebRTC as soft clients for the PBX brings mobility, excellent audio, and video to everyone in front of a browser. PBX, UC, and contact centers will get superior voice quality, multiparty videoconferencing, screen sharing, and mobility by using Ingate's WebRTC & SIP PBX Companion product, vastly increasing the efficiency and effectiveness of their existing PBXs and workforce infrastructure. There are and will also be other WebRTC-enabled products from Ingate such as Q-TURN, which will provide WebRTC quality and control.

Microsoft has made significant progress in the UC market. Is Lync the future of unified communications?

Microsoft has a long history of experience with SIP-based real-time communications on the enterprise LAN, from early 2001 with the Live Communication Server, which became Office Communication Server, which became Lync. WebRTC enables further developments allowing enhancements and bringing new features to Lync.

How can Ingate build on Microsoft's UC success?

I believe that will be the time when Microsoft enables WebRTC in Internet Explorer, and Ingate surely hopes to contribute to that Lync integration just like we do SIP trunking for telephony integration today.

Does the emergence of wearable technology offer Ingate another growth avenue?

WebRTC, especially its advanced telepresence-quality video, is both CPU and bandwidth hungry so it will take some time before it makes an appearance on small and lower-cost devices. But for sure, that will come with time and offer further opportunities for Ingate, especially on the network side, delivering high-quality bandwidth via our Q-TURN technology.

Will fully connected homes require consumer SBCs to manage inbound and outbound communication from connected devices?

Yes, when the fully connected homes want to run real-time communications using WebRTC, SBC-like functionality, in the access modem (cable, DSL, etc.) using Ingate's Q-TURN technology, will be required for many networks to achieve sufficient quality, especially as both real-time and data traffic will increase. IT

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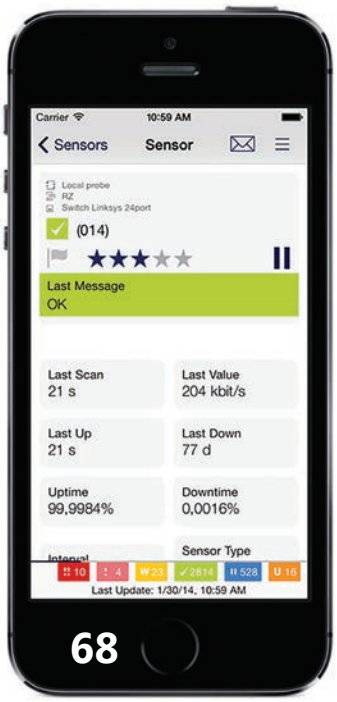

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By Narayan Menon

How Operators are Evolving by Investing in their Core Business

The wireless landscape is rapidly changing. Operators no longer have to worry only about their own traffic; now over-the-top players and technology giants are inundating operator networks as well. Unfortunately, operators are struggling to monetize the increased data demand effectively enough. As a result, they'll likely have to change business models, create new, innovative offerings and enhance network connections as a means to preserve consumer relevancy, grow revenues, and reduce costs. Rather than enter entirely new markets, most carriers are focusing on bolstering their core competencies, which is primarily taking place in the form of heavy network investments.

Specifically, there are three key areas where network infrastructure will evolve over the next few years.

Small Cells

As the amount of mobile data traffic continues to increase on a daily basis, wireless networks are already hitting capacity bottlenecks, especially in densely populated areas. Consequently, small cell deployment and operation will begin taking place on a mass scale. For operators, this is a natural step, as it's simply a part of their legacy business and an extension of macro cellular systems they have already deployed.

The idea behind this is to increase system capacity in dense areas, and to facilitate the provision of location-based services. By dividing the cellular system smaller and smaller, carriers are able to extend coverage to new areas where they don't have cell towers or to offload data traffic in highly populated, in-coverage areas by inserting small cells in confined spaces. In the same way, by targeting a smaller area, location-based user information becomes more granular and, as a result, more accurate. This enables a more targeted approach for advertising and product development purposes.

By targeting a smaller area, location-based user information becomes more granular and, as a result, more accurate. This enables a more targeted approach for advertising and product development purposes.

Currently, carriers are primarily responsible for deploying small cells, but small-cells-as-a-service is not far in the future. Using the service model, multiple operators could share small cells that are owned and operated by an infrastructure provider. Even further down the line, more vendors may begin to license solutions to operators or third-party providers that enable small cells to be managed.

Cloud

Much like any other industry, wireless network functionality is moving to the cloud to maximize efficiencies for obvious reasons: cost-reduced deployment and operation, improved scalability, and easy introduction of new services. Perhaps the most important of the three is the ability to offer new services – it's what will enable operators to achieve a cutting-edge status once again. With cloud-enabled flexibility, operators can select products and services from different vendors to build top quality solutions that meet unique customer needs.

Another significant benefit is the ability to share network resources on a larger scale. This is particularly useful when new or remote geographical regions are considered. For example, we'll see more network and spectrum sharing to avoid cumbersome infrastructure implementations and complex licensing agreements. We'll also see operators wholesaling more network bandwidth to third-party service providers including OTT players and MVNOs, which opens wide the door for monetizing the core network business.

Sponsored Connectivity

Lastly, sponsored connectivity will see a significant uptake over the next couple of years. Emerging OTT players will package sponsored network connectivity with the services they normally deliver in an effort to gain maximum market share, and operators will pursue this route to monetize their legacy systems in new ways.

The reason sponsored connectivity can be so attractive to third-party players is because it expands an existing user base, as it makes the service more attractive to users. Thus, it can increase the amount of advertising revenue and marketable user data.

Again, the cloud movement will facilitate sponsored connectivity as it allows for operators to wholesale network functionality to these types of companies.

Mobile operators are already showing strong interest in the areas outlined above, to the point where standards parties such as 3GPP are paying closer attention and dedicating efforts to solidify standards. Certain trends such as network functions virtualization are still in early stages regarding standardization but, because of the strong push by operators, there is a strong desire to establish common APIs and methods for various cloud components to easily access one another. While the growth rate for these trends relies on the extent of operator buy-in, it's just as heavily reliant on standards innovation. It will take a combined effort from both operators and standards bodies to achieve full network potential. IT

Narayan Menon is vice president of Innovation Labs at InterDigital (www.interdigital.com).

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By Steve Johnson

Interoperability Is Still An Issue

The key to any successful SIP deployment is, and has always been, interoperability. It was a key issue driving the development of SIP: when the Internet Engineering Task Force first introduced SIP, one goal was to create a streamlined protocol that would pave the way to seamless interoperability.

Vendors know this, and have been redesigning their solutions to incorporate all of the legacy PBX functionality in a PBX which is built on a full SIP implementation. Why, then, is interoperability still an important part of the VoIP network design?

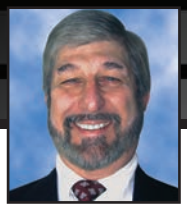
When implementing SIP trunking, interoperability must work seamlessly between two sources: the IP PBX and the SIP trunking service provider. Even though the IP PBX may be a full SIP implementation, there can still be a mismatch between that PBX and the SIP trunking service. The SIP standard, like many Internet protocols, is written to give the industry wide latitude in how various functions are performed. While this provides maximum opportunity for innovation, it also means that each vendor may choose how each function works. And there is no guarantee that both the IP PBX vendor and the SIP trunking service provider will have chosen the same methods. Without complete commonality of the methods chosen, the SIP trunking implementation will be difficult or impossible to complete, which is one of the roles that the enterprise session border controller can play.

An E-SBC is a tool that can make an IP PBX compatible with whatever SIP trunking service may be on the other side. Basically, the E-SBC can terminate the call from one side and reinitiate the call with modified header information to insure that it will be recognized by the other party. By resolving these interoperability issues, E-SBCs simplify installations – so much so that deployments can take just minutes rather than hours or even days.

One other interoperability requirement occurs when another device requires encryption of either the signaling, media, or both. In this situation, the E-SBC can add the encryption necessary to interoperate with the other device.

With a good E-SBC not only can the customer count on seamless integration with the SIP trunking service provider, and a good source of diagnostics, but in addition, and equally important, is security which the E-SBC provides as an integral part of its functionality. IT

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



By Max Schroeder

Old Dogs – New Tricks

Historically, the medical industry was a technology foot-dragger, but mobile and wearable technologies have now made it the hot game in town.

About 12 years ago I was tasked to write an article on health care. My research included office interviews with some local physicians for a personal, in-depth approach. Their bottom line was consistent. If a new technology added even minimal time to their hectic weekly schedules, it would not be adopted. HIPPA compliancy plus secure and accurate patient records were also essential. These three requirements still top the list today.

My published article featured a university-affiliated hospital that had implemented Wi-Fi when it was still considered bleeding edge. The reason was simple. Portable units allowed the doctors and staff to login and move about the building freely without having to login/logout to a wired PC when visiting each patient's room. The time savings were substantial and validated the position that the medical community would adopt new technologies if they fit the requirements.

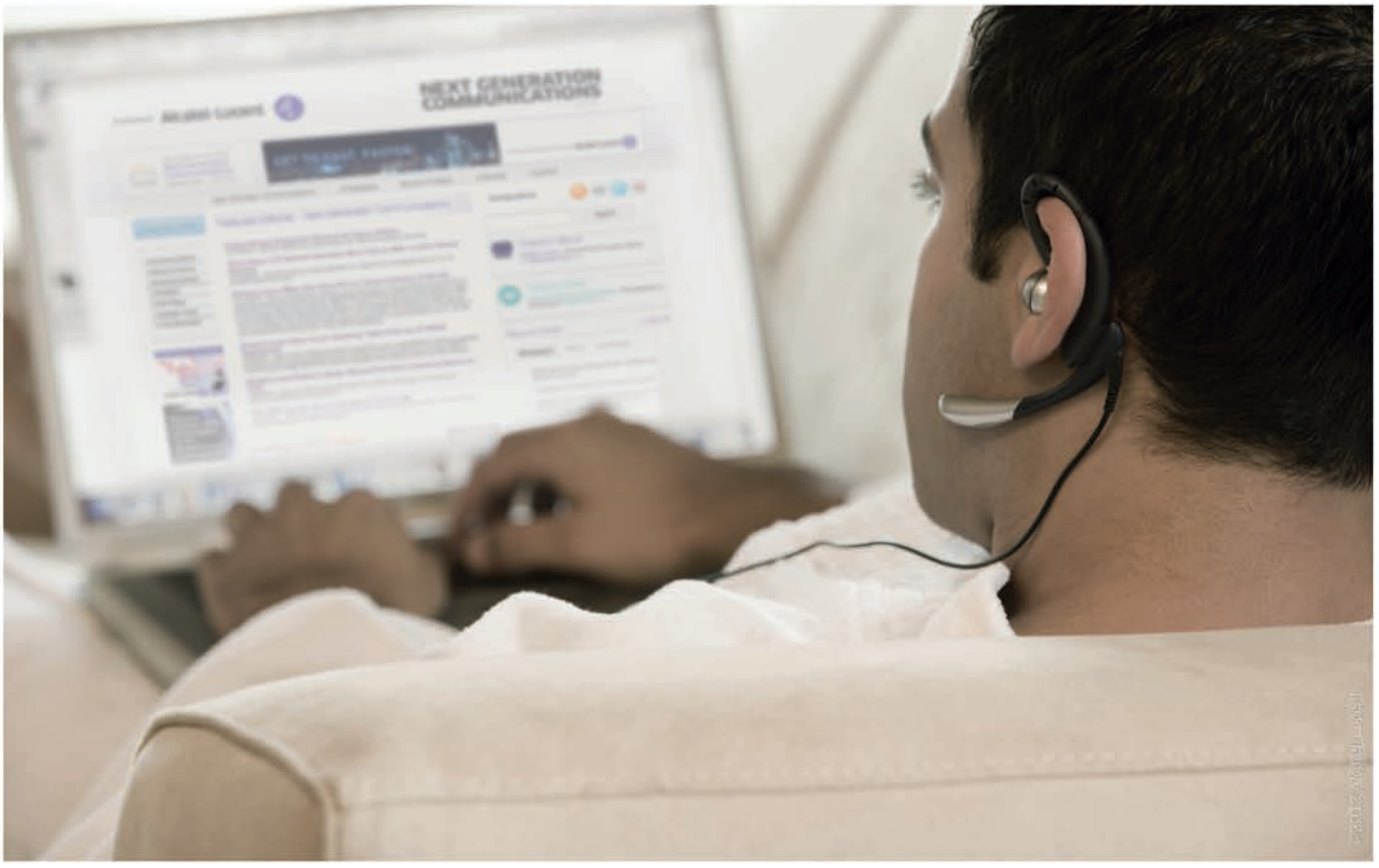
Today's tablets, smartphones and smart glasses make the technologies of the 20th Century look like dinosaurs but by adding 21st Century technologies many vendors have evolved their offerings and avoided extinction. The Holter monitor, a portable ECG, is an excellent example. They have evolved from uncomfortable heavy devices using audiocassette storage to compact units with flash memory and 21st Century communications. The updates have extended the monitoring time from one or two days to several weeks. Data can now be uploaded using a patient's smartphone, minimizing office visits and cost. One of my neighbors is currently wearing a Holter monitor, triggering its inclusion in this column.

Fax is still required by many health care and financial applications due to its communications security, time stamping, and legal document status. However, noting industry concerns regarding the security of patient data, Tom Linhard, president of FaxCore Inc., mandated that document encryption be added to its product. Now, confidential patient information included in faxed documents can remain secure even if a health care facility experiences a data breach.

A recently developed Google Glass app by Augmedix enters electronic health record data while doctors visit patients. The company claims that less than 1 percent of the records created required edits by the interviewing doctors. Perhaps the hospital I covered previously will be an early adopter.

Hop on board the health care train by starting at TMC's www.healthtechzone.com. IT

Max Schroeder is vice president emeritus of FaxCore Inc. (www.faxcore.com) and co-chair of the SIP Forum Fax-over-IP Task Group (www.sipforum.org).



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AT THE SPEED OF IDEAS™

By Micah Singer

Hosted PBX: Market Research Report

To better understand the hosted/cloud PBX and unified communications market, VoIP Logic conducts an annual market research survey focused on VoIP service providers and related organizations like telephony hardware/software manufacturers, resellers/agents of hosted PBX, consultants, and companies considering launching VoIP services like IT services, ISPs, data centers, ILECs, MVNOs, etc. It is hard work to get enough opinions from enough thoughtful professionals on enough issues to draw some conclusions, but with a free give-away of our previous report in exchange for a completed survey we have consistently managed to collect compelling information.

The complete VoIP Market Research Report for 2014 is available on our website at http://voiplogic.com/marketresearch/ with the completion of the latest survey. With the publication of the 2014 report, you can also download the 2013 VoIP Market Research Report without completing a survey from the same location.

There were many interesting findings. Two of the data points I want to discuss and share, presented in the graphs on this page, are the relative importance of different sales criteria and different operational criteria to VoIP service providers.

In the survey, we collected input from 116 different VoIP service providers that are demographically skewed smaller – 54 percent with revenues of $10 million or less and 23 percent with revenues between $10 million and $100 million – similar overall to VoIP Logic's target market. We found that the single best predictor of sales success (Figure 1) is an existing relationship – not surprising.

Pricing, bundling, and customer service are all a close second, we hear this a lot as we work with VoIP service providers. Enterprise customers do not want to be treated like a number and fit into a fixed sales package, they want their vendor to know them (existing relationship), create a package that fits their specific business needs (bundling and price), and then support them with a live recognizable human voice (customer support). Some respondents did underscore the value of online tools such as a knowledge base, detailed FAQs, and IM-based support as complements to a human voice.

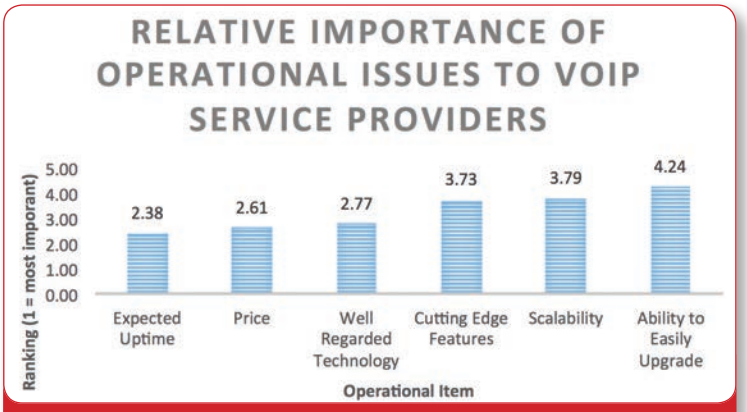

Figure 2: Operating Hosted PBX Services

When it comes to operating VoIP technology, service providers are decidedly less consistent. Expected uptime was the most important issue. In working with more than 30 service provider partners at VoIP Logic, I can vouch that this is indeed the most relevant issue by far. However, price comes in as the second most important issue when selecting technology – almost antithetical to expected uptime under the you-get-what-you-pay-for mantra that is generally understood both in pricing strategies and in purchasing strategies.

The trend continues – the third most important operational attribute is well-regarded technology, which is generally slang for more expensive. The least important items of the selectable options are both strongly correlated to service provider size and expected results in that they are only important if you grow large and successful (scalability and upgradeability).

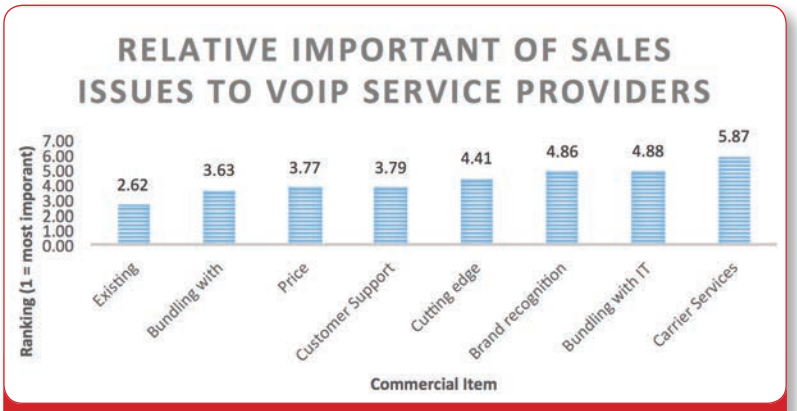

Figure 1: Selling Hosted PBX Services

Notably low on the list are cutting edge features. There is always considerable talk about the neatest applications and integrations for your voice technology but, ultimately, the basics of good service, low prices, and sound technology are what keep VoIP service providers growing today.
It is important to listen anecdotally to your service provider and enterprise customers, but it is also important to watch these kinds of larger trends in the market. Collecting and sharing this data hopefully makes us all better at what we do. IT

Micah Singer is CEO with VoIP Logic (www.voiplogic.com).

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By Hunter Newby

The Internet of Things (and Stuff)

The phrase Internet of Things is as popular as it is vague. Things is not a very descriptive word, and as if it was not vague enough, the phrase is commonly referred to as IoT.

Things as a word is a close cousin to the equally uninformative word stuff. Things & Stuff sounds like a chain of stores in malls across America that sell eclectic and mostly useless items that no one really needs to survive. On the contrary, the Internet has become something that almost everyone needs in our society today. So, what are these things, what do they mean to the Internet, and is any value derived from actually knowing?

Gartner Inc., the global research firm, defines things as consumer devices excluding PCs, tablets, and smartphones, and predicts that there will be 26 billion things by 2020. That's a whole lot of things, like toasters and stuff. Gartner also predicts the "component cost of IoT-enabling consumer devices will approach $1." That's a whole lot of cheap stuff. The lower the cost, the more devices the Internet will be imbedded into.

What do these things mean to the Internet? The IoT will create a sustained blizzard of mostly, if not exclusively, wireless communications sessions to end user devices with centralized and distributed data centers housing the servers that will collect data and ultimately control the devices. Every toaster, air conditioner, and other device will be equipped with Wi-Fi, will require an Internet connection, and probably will not work if it is not connected. In this dimension Gartner predicts that "'ghost devices with unused connectivity will be common."

This last bit is particularly interesting. Unused connectivity? There are two issues with this assumption. The first is that connectivity is not free, so this implies that someone is paying for something they are not using. That may be true since consumers currently pay a flat monthly rate for a certain amount of Internet access whether they use it or not, but how will consumers be able to afford that carrying cost? Also, imagine adding billions of devices to the equation and how much more connectivity that will require. That leads to the second issue. Where is all of that connectivity going to come from?

Everything wireless leads to a physical wire and, or ultimately a fiber connection at some point. Hopefully someone is thinking about all of the investment and actual work that will be required in building the fiber networks needed to support all of these IoT projections. Otherwise, it will be like adding billions of cars to the roads without adding any roads, or more lanes to the existing roads and Internet traffic jams abound.

Hopefully someone is thinking about all of the investment and actual work that will be required in building the fiber networks needed to support all of these IoT projections.

Gartner predicts that "the total economic value-add from IoT across industries will reach $1.9 trillion worldwide in 2020…." That is a fairly significant contribution to global gross domestic product considering that it is coming from just a sliver of what happens on the Internet, so there certainly is value in knowing the composition of the things. Knowing how the Internet and the things actually work together is another matter. Presumably that knowledge will bring even greater value to those that possess it.

As an overall assessment of IoT, the Internet itself is a fairly complex subject as to how it all works, so to add the word things behind it does not aid in solving any of the mystery to it. It seems that what is typically popular is also largely misunderstood, so maybe IoT is a concept like many others meant for the mainstream. Based on the current line of education about how it is all going to actually work for all, anyone knows IoT is just big and complicated, so don't ask and keep right on consuming. If you are looking for answers when your toaster oven will not make toast because it cannot connect to the Internet you might want to stop by Things & Stuff in the mall and pick up a Magic 8 Ball and ask it why. Then again, by that time the Magic 8 Ball will probably need an Internet connection too, so who knows if that will even work. IT

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

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By Jon Arnold

Another Take on the Internet of Things
Your Boss Just Heard from Your Tablet - You're Fired

My last column focused on the Internet of Things and why it could be good for your business. As per the namesake of this column, I'm also here to challenge you and rethink what's possible with today's communications technologies. This also means thinking about the potential implications – for you, your employees, your business, your customers, etc.

To do that, you sometimes have to approach the issue in a non-linear fashion, especially for something as far-reaching as IoT. This usually involves stepping away from the world of technology and to look at things from a different perspective. One way is to look at how the Internet is impacting areas other than business – the arts, science, education, etc. Lessons learned there can probably tell us something about what to expect when IoT becomes your next IT project.

If you really want to take a human-centric view of IoT for your business, do not continue reading this article until listening to Woody Allen's monologue.

Another angle is to look at the serious implications of IoT through the lens of a humorist. Readers familiar with my writing will know that I do this often, as humor gets to the essence – the soul – of an issue far better than any ROI or TCO analysis could ever do.

On that note, this post now becomes interactive and requires you to do some listening. I want you to spend the next 5:07 listening to the classic Woody Allen monologue about his relationships with machines. This dates prior to when most of you were born, and that probably means you've never heard this. You may not even know that Woody Allen is one of the all-time great standup comics, and if this post leads you to discover his routines, my work here will truly be done. If you really want to take a human-centric view of IoT for your business, do not continue reading this article until listening to Woody Allen's monologue.

Did you like it? Now, how do you feel about IoT? Last I checked, humans were still in charge, but when IoT morphs into IoE, far more machines will be interconnected than people. So long as we're making the decisions, these capabilities can become a great asset to any business. The key, of course, is to ensure IoT remains human-centric, and that will be your biggest challenge – and responsibility – when management tells you it's time to get on this path.

If this just becomes an afterthought where you defer to the IoT vendors for an end-to-end solution, you risk this becoming more of a machine-centric solution, where the true drivers are network and process-based efficiencies that employees – err, end users – must comply with. Nobody wants that, but it ultimately depends on who's in charge and what their vision for IoT is about.

What am I getting at? Without trying to date myself, here's a snippet of dialog from a film I can only assume you've seen and should recognize right away. The man vs. machine struggle doesn't get any more chilling than this, and with IoT it's far closer to reality today than you might think.

"What's the problem?"
"I think you know you know what the problem is as much as I do. This mission is too important for me to allow you to jeopardize it."
"I don't know what you're talking about, HAL."
"I know that you and Frank were planning to disconnect me, and I'm afraid that's something I cannot allow to happen."
"Where … did you get that idea, HAL?"

If you don't know the film or the iconic scene this is from, then you're not ready for IoT, so go Google it now.

The machines aren't winning – yet – but that all depends on what you connect them to. As you can imagine, sensors are becoming more powerful and adaptable for almost any environment. The AI world continues to advance, and as we've seen from IBM Watson, the human mind may soon be no match for that tiny processer Woody Allen cited in his killer punch line. **IT**

Jon Arnold is principal of J Arnold & Associates (www.jarnoldassociates.com), an independent telecom analyst and marketing consultancy with a focus on IP communications, and writes the Analyst 2.0 blog.

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By Tobias Goebel

Keeping a Reactive Customer Service Strategy

A Great Way to Say Goodbye to your Customers

The connected dependence of consumers and their always-on, always-connected mentality has dramatically altered customer experience expectations. A recent study done by International Data Corp. found that 25 percent of smartphone users couldn't remember the last time their phone wasn't within arm's length. And nearly 80 percent of them admitted to having their phones with them for all but two hours of their working day.

For this reason, reactive customer service, no matter how good, is simply not enough to meet these changing customer expectations. Outbound proactive and omnichannel communications enables companies to anticipate needs and resolve issues before they become too big or even before they are even noticed. When companies make the effort to proactively reach out, consumers feel as if the company they are doing business with is more aware and more appreciative of them as a customer. So with the growth of this always-on attitude, it's critical for companies to also be on 24/7 to anticipate and meet the needs of their hyper-connected customers.

With the growth of this always-on attitude, it's critical for companies to also be on 24/7 to anticipate and meet the needs of their hyper-connected customers.

Here are three ways enterprises can address this dynamic and implement outbound and omnichannel engagement strategies that can help them provide better and more consistent service to their customers.

Customer Surveys

Customers who feel that they're being heard by the companies they do business with are more likely to remain loyal. Surveys are a great way to engage with customers, through the channel of their choice, on their own time, to discern sentiment, identify promoters and detractors, and influence future interactions with customers. However, a robust survey application should include personalized content, adapting to each customer's individual needs and recent history; support open-ended feedback capture through audio recordings; offer customers the option of speaking to customer support in real-time; and allow opt-outs to ensure compliance.

Collections

Another way to step up proactive engagement with customers is through outbound messages regarding upcoming payments and past due accounts. Through an automated bi-directional communication channel, customers can submit payments immediately anytime, from anywhere, which increases collection rates and improves business efficiency. Collection tools should use a local telephone number to encourage connection; support compliant and secure collection of payment details over the phone; facilitate the use of best practices in collections for all types of financial products and industries; and provide a consistent message across all channels.

Reminders and Notifications

Lastly, custom proactive engagement applications allow companies to contact customers with outbound communications specifically tailored to their business needs. If you know something that the customer should know as well, notify them. If you know something that the customer already knows but might have forgotten, remind them. For example, outbound notifications on e-mail, SMS, or the voice channel can be used for order status messages, appointment and prescription reminders, as well as service outage notifications, depending on business needs. Ideally, proactive engagement solutions should speak on the channel of the customer's choice; allow you to be up and running in hours instead of weeks; operate safely and securely through SaaS deployment in the cloud; provide easy-to-use reporting on results and KPIs; and include a campaign manager and scheduler to drive outbound campaigns.

Intelligently designed outbound communications provide customers with the information they need, when they need it, and even before they need it. This means not only remaining flexible enough to go beyond voice and allowing customers to respond in the channel of their choice, but also giving them the power to decide when they want to communicate with you as part of one seamless conversation. It also sends a message to your customers that just like them, you're always-on and plugged into their needs. IT

Tobias Goebel is director of mobile strategy at Aspect (www.aspect.com).

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By Jim Machi

Is WebRTC a Threat to VoLTE?

A question that has been coming up more and more in the telco space is how WebRTC compares to voice over LTE, and which technology will win. Embedded into this question is an assumption about phone calls, similar to how Skype is eating away at regular landline minutes. Since you can make point-to-point phone calls with WebRTC, and since browsers are part of smartphones, then the assumption is that people will make WebRTC phone calls instead of LTE phone calls. In other words, over-the-top will win out again.

I do not necessarily see things through that lens. In my opinion, WebRTC is a way for voice and video to be integrated into communications applications, and that is really its ultimate power. Sure, you can make a WebRTC point-to-point VoIP call, which would technically compete with a VoLTE call, but WebRTC really comes down to the apps. So a more appropriate battle, so to speak, would be WebRTC vs. Rich Communication Suite.

The GSMA is starting to look into WebRTC and initiating working groups to incorporate WebRTC into the IMS network. This is how VoLTE will thrive alongside WebRTC, rather than compete against it.

Let's talk about WebRTC vs.VoLTE first. An offering by the carrier to the subscriber would include VoLTE as part of the voice (and video) package. Therefore, the subscriber may not even know (or care for that matter) that he or she is using VoLTE. If the 2014 numbers are any indication, VoLTE rollouts are gaining major momentum. As carrier networks move more and more toward IMS, VoLTE is becoming the preferred method of voice and video calls and the de-facto method for carriers that use LTE networks. Whether the move to IMS is because the network architectures are moving to IP, or because the next-generation network equipment is getting old and needs to be replaced, or some combination thereof, doesn't really matter. The fact is that IMS infrastructure is going in, and VoLTE is gaining traction.

Keep in mind that one huge advantage the carriers have over OTT players is built-in customers that will receive basic VoLTE service as part of their subscriber packages. VoLTE will also wield tight quality of service requirements. The subscriber is left with a choice between the basic voice service with VoLTE and the OTT voice play, which will be subject to the vagaries of mobile Internet bandwidth. In the end, you get what you pay for. If it's free, to whom are you going to complain? The carriers ultimately need to offer true flexibility and differentiation to cater to a range of customer needs. On a phone call, the added value of VoLTE would be noticeable, which inherently makes it something people would pay for.

However, as I stated above, it's not really about the point-to-point phone call with WebRTC. It's about value-added services and applications – and carriers can get in on the action too. WebRTC can be used by carriers to offer their own OTT voice or video apps and integrate voice, video, and data into a web surfing experience. Likewise, the OTT app providers themselves can use WebRTC in the same way. This is way beyond a point-to-point voice or video call, as I said.

If you want to look at it in a WebRTC vs. IMS/VoLTE way, WebRTC would really compete with RCS because, as I said above, this is all about apps. WebRTC could not only enable the carriers to offer their own apps more easily but really different kinds of integrated value-added apps. A service provider could easily offer WebRTC-enabled conferencing with a simple url. The carriers could also offer services to enterprises, for instance, so now enterprise offerings could include different kinds of more tailored apps. The GSMA is starting to look into WebRTC and initiating working groups to incorporate WebRTC into the IMS network. This is how VoLTE will thrive alongside WebRTC, rather than compete against it.

Because WebRTC is built into the browser, we will ultimately see a lot of apps that incorporate voice and video as elements of a larger communications application. That's where I see the ultimate benefit of WebRTC. We will see people talking to one another as part of a communications app, not as the only function of the application. IT

Jim Machi is vice president of product management at Dialogic (www.dialogic.com).

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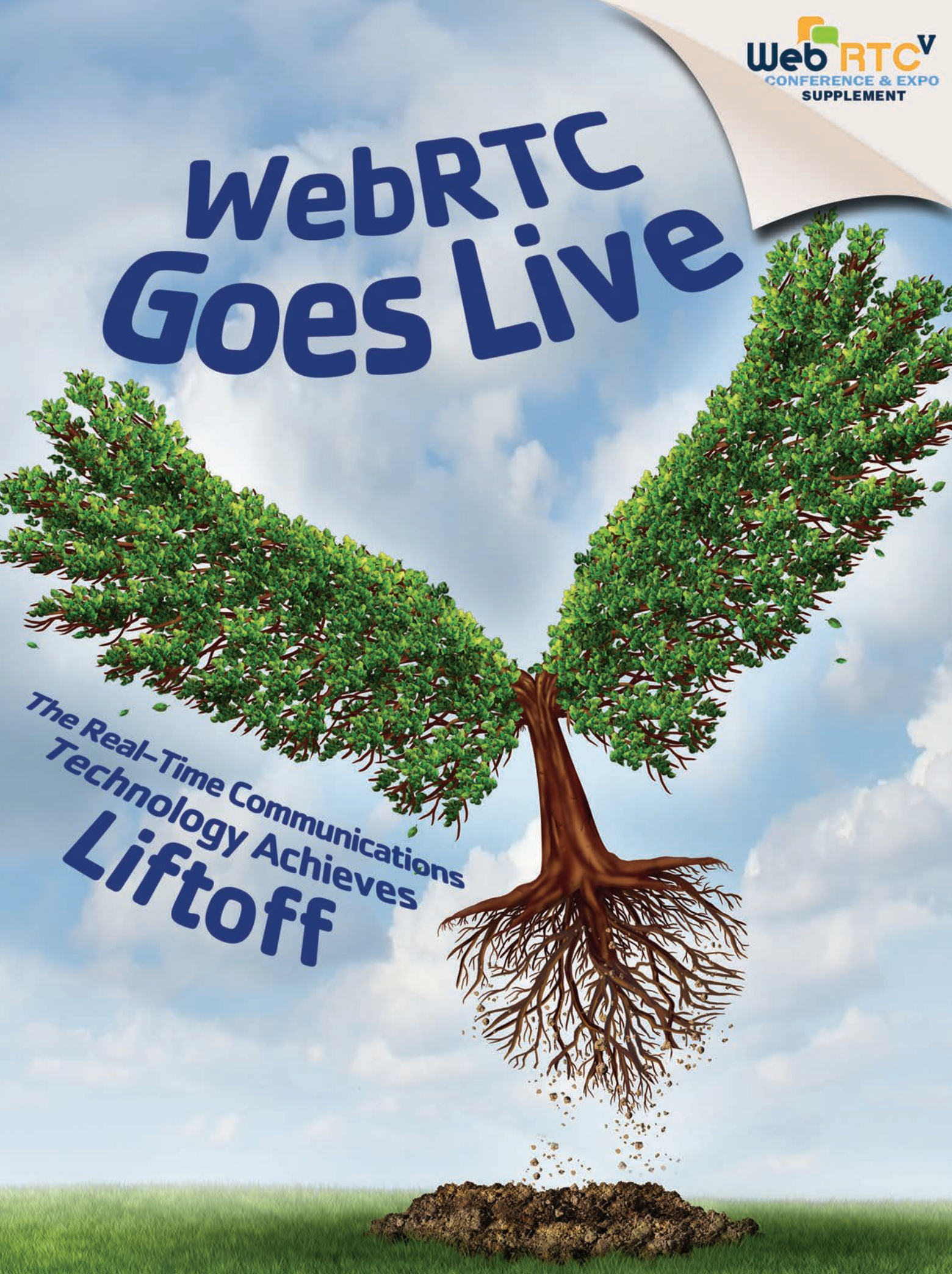

The Real-Time Communications Technology Achieves Liftoff

A WebRTC Primer

BY PAULA BERNIER

WebRTC is the term used to describe the growing trend of web real-time communication. The technology allows for real-time voice and video interactions from a web browser or other peer node without requiring special client software or requiring a server between the two endpoints.

It takes the components of a typical VoIP media engine into a browser or any other peer endpoint with a simple API that a web server can control. That means developers can build real-time communication into web pages, existing software applications, or wherever else they want – and do so more easily and affordably than they could've in the past.

A Little History

WebRTC got its start at Global IP Solutions, a company that provided the technology to such large VoIP companies as Avaya, Cisco, Nortel, and others. Google purchased GIPS in 2011, and shortly after that made its technology open source, which kicked off the WebRTC movement.

Google has been a leading advocate of WebRTC ever since, and today supports WebRTC in its Chrome browser. WebRTC is also supported in the Mozilla Firefox and Opera browsers. And, in an important recent development for the WebRTC ecosystem, a new specification called Object Real-Time Communications is helping to bring Microsoft and its popular Internet Explorer browser into the WebRTC fold. As of the deadline of this article, there was no word yet from Apple as to where it stands on WebRTC.

In any case, the WebRTC ecosystem and community continue to grow. It started in 2010 with a small group at Google, expanded in 2011 with a strong group of standards advocates, and then in 2012 with early evangelists and companies, and it continues to snowball.

Forecast for Transformation

ABI Research expects there to be 4.7 billion WebRTC devices by 2018.

WebRTC is interesting not only because it enables two endpoints to easily connect and conduct rich media sessions including data, video, and voice, or some combination thereof, but also because it puts us on a path to what Phil Edholm of PKE Consulting LLC calls the webification of communications.

"The webification of communications is not a single technology, but rather a transformation of the basics of communications," says Edholm. "Instead of having a single server that manages all of my communications, the webification process will free me to interact directly with millions of web servers to manage a succession of independent communications events, each tuned to the specific needs and requirements of the event, not an arbitrary vendor paradigm. Just as we all have hundreds of different web information experiences monthly, each web communications experience can be defined by the suite hosting the event."

The Possibilities are Endless

The possibilities for WebRTC are endless, but some of the first places we are seeing it in use are in customer care/contact center, and conferencing applications.

"WebRTC applications will both delight and amaze us," says Edholm. "While many WebRTC implementations will be extensions of existing communications solutions, many will emerge that will use WebRTC to deliver communications in contexts we have yet to imagine.

"The change of communications from a separate service or capability to being integrated with applications and other activities will become obvious," Edholm says. "With this we will see the emergence of asymmetrical communications solutions where the experience is different dependent on the role of each individual." IT

WebRTC[V] to Focus on User Adoption

BY PAULA BERNIER

WebRTC[V] Conference & Expo is being held later this month in San Jose, and the theme of the gathering this time around is customer adoption. That said, WebRTC[V], which will take place Nov. 18 through 20 at the San Jose Convention Center, will include lots of discussion and analysis on early adopters and implementations, explains Phil Edholm of PKE Consulting, which puts on the event along with Systemwide Media and TMC.

There's an entire track focusing on how WebRTC is being implemented in various business and government verticals. That includes sessions on WebRTC's use in cable and broadcasting, in e-commerce, in education, in finance, in health care, and in logistics.

Education about and recognition of early adopters at the show will also include the presentation of the WebRTC Business Transformation and Impact Awards. This special awards program will highlight companies and business leaders that have successfully leveraged or integrated WebRTC to solve a business issue, launch a new service, and/or create a revenue opportunity.

This award covers implementations across any vertical or application, including but not limited to general communications, service providers, contact centers, retail, medical, and supply chain. Candidates for this award will be selected based on their ability to show a successful launch of a WebRTC-related project. There will be multiple awards in various categories.

WebRTC customer adoption is poised to become even more widespread – in part due to Microsoft's recent embrace of the technology. Microsoft's move on this front, and the new specification called Object Real-Time Communications that is enabling that to happen, are also certain to be among the hot topics discussed at WebRTC[V] Conference & Expo.

In fact, Microsoft's Bernard Aboba, principal architecture, will provide a keynote presentation at WebRTC[V] Conference & Expo.

ORTC also will be the subject of a session in the WebRTC[V] Conference & Expo developer track. The spec comes out of a group called the W3C Object RTC Community Group , which counts Google and Microsoft among its members. (Google's Jan Linden, senior product manager, and Serge Lachapelle, product manager, will again be among the event's speakers.)

"ORTC is how Microsoft will support WebRTC," says Edholm.

That's important given that WebRTC can be more broadly embraced if more browsers support it. WebRTC already is supported in the Google Chrome, Mozilla Firefox, and Opera browsers, while Apple and Microsoft (until now) have repeatedly been called out for their lack of support for WebRTC.

WebRTC[V] Conference & Expo will also feature a track catering to the interests of service providers. Service providers need to pay attention to what's happening with WebRTC, notes Dean Bubley, director and founder of research and consulting firm Disruptive Analysis, because it is something of a double-edged sword for them.

"For the most imaginative and aggressive, it could bolster their enterprise presence by enabling innovative cloud video propositions, or adding value to IP telephony platforms. But at the same time, for those service providers already worried about the threat of so-called OTT players' incursion into their market for commodity voice, they will likely face additional and worsening threats," Bubley says. "For telcos, WebRTC makes opportunities larger, threats worse, and everything faster."

Service provider track sessions will focus on such issues as how to integrate WebRTC with IMS, the value of media services, WebRTC's impact on wireless business models, WebRTC's relationship to M2M, and more.

"The WebRTC Conference & Expo is the longest running global WebRTC ecosystem event," says Edholm. "It's where industry stakeholders gather with their user bases to explore how true browser-to-browser communications are revolutionizing the way businesses and consumers communicate and what economic impacts the technology is creating. This coming November, the focus is on the real-life deployments that are driving value for enterprises around the world." IT


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WebRTC in the Criminal Justice System

BY PHIL EDHOLM

While there have been many generic audio and videoconferencing uses of WebRTC, both by established conferencing vendors and new WebRTC-only entrants, the potential of WebRTC outside of being just another user interface in audio or video remains the huge potential of the technology. While some companies are focused on new areas like social, another major focus is on how WebRTC can be used in verticals.

For example, VIZICOM recently launched an application using the GENBAND Kandy platform that enables home care follow-ups after a hospital visit using a generic tablet. The use of WebRTC to enable vertically specific applicants has huge potential as communications is added and where the value of WebRTC is optimized to the business situation.

JurisLink is a company focused on using WebRTC to transform the criminal justice system by delivering a focused vertical application using WebRTC. I spoke at length with Slade Trabucco, CEO of JurisLink. Slade has made the move from being a defense lawyer to technology entrepreneur, and it is clear that he believes in the value of what his team has created.

JurisLink is a WebRTC-based app that is designed to enable defense lawyers to meet with their clients without traveling to the incarceration facility. JurisLink is a cloud service in conjunction with CaféX WebRTC technology, enabling confidential video meetings between attorneys and clients. Attorneys can schedule and conduct secure virtual meetings with clients from anywhere using WebRTC and an Internet connection, computer, and webcam. The client in the correctional facility engages the attorney through a web browser in a kiosk. Jail guards place the defendant in the video meeting room at the scheduled meeting time. Using WebRTC , the kiosk appliance is controlled remotely by the cloud-based JurisLink system, eliminating complexity and simplifying use.

The value of this vertical application could be huge. In the criminal justice system the vast majority of defendants are represented by court appointed lawyers or public defenders. In 2007, 964 public defender offices nationwide received nearly 6 million indigent defense cases. The result is an overwhelming demand for services.

The challenges may be best represented by New Orleans, where indigent people sit in jail uncharged, sometimes for weeks or even months, waiting for a lawyer whose caseload far exceeds reasonable standards. Legal guidelines suggest that public defenders handle no more than 400 misdemeanor cases in a year, a 2009 report found that part-time public defenders in

Orleans Parish handled the equivalent of 19,000 misdemeanor cases annually per attorney – resulting in about seven minutes spent by a lawyer on each case on average.

The challenge is that often a lawyer must meet with a client during the process, necessitating a trip to the jail where the defendant is incarcerated. According to legal sources, between travel and waiting time, an attorney may spend up to 10 billable hours just to have a 20-minute conversation with a client. The JurisLink system is designed to enable a lawyer to meet with a client without travel or waiting, dramatically reducing the time wasted and increasing the capability to cover cases.

JurisLink is currently deployed in just one of the court districts in North Carolina. There are currently only 108 lawyers using the system and doing about 300 meetings a month. The majority are court appointed lawyers and public defenders. Based on 2007 data, there were more than 4,000 public defenders working in state criminal justice nationwide and probably two to four times as many court appointed lawyers, so the current penetration is a small fraction of one percent of the potential use of this application.

However, the proven savings are huge. The NC State Public Defenders office has held more than 1,000 meetings using the tool, saving 20,000 miles of travel and reducing the time to get to the meeting by three days typically.

But the big savings is in the volume. The lawyers participating in the system are typically able to handle 25 to 50 more cases each month instead of sending them out to private court appointed attorneys. Each case sent out has a cost of $300. With an increased capacity of 40 cases per month, each lawyer using the system saves the state $108,000. For an office with 20 public defenders, that is $2 million in annual savings. In 2007 data, there were more than 4,000 public defenders working in state criminal justice nationwide, so the potential of using this technology nationally is a savings of almost $500 million tax dollars, not including travel and other costs.

In the use of the application in the federal courts using the JurisLink application, 400 meetings hosted resulted in $141,000 of saved travel time. This is a savings of about $350 per meeting. The reason is that federal prisoners are held in facilities often located a significant distance from the trial location where the public defender/appointed lawyer is located.

Slade and I talked about the fact that video use in the criminal justice system is not a new concept. Court systems have experimented with the technology for years. In fact I remember a video arraignment application we built at Nortel back in the early 1990s.

I asked Slade what has changed. What he said was interesting: The key is to make it truly easy to use. As most of the lawyers are court appointed, having a tool that is complex, requires downloads, and includes other complexity has assured it will not be used. The key to the success they have been seeing is the ease of use that WebRTC has enabled, from the lack of downloads, easy click to start the meeting, and seamless operation.

While the focus to date has been in facilitating defense lawyer-client meetings, the potential of other uses like arraignments or client-defense-prosecution meetings are on the roadmap, and the ability to easily add recording and other features are important. Also important is the ability to use the unique capabilities of WebRTC, such as adding an audio only translator into a privileged meeting. Finally, the security that WebRTC enables is paramount. Defense lawyers are inherently suspicious of communications, especially as those are transiting facilities of the incarceration facility. The inherent encryption and security built into WebRTC enables JurisLink to assure the lawyers that their communications will remain privileged and completely confidential.

Slade said that they decided to partner with a WebRTC platform vendor vs. developing the entire applications themselves to both accelerate development and assure quality. As Slade indicated, the challenge is getting adoption, and that requires that the applicant be optimized for the legal user and that JurisLink get its message out to the public defense community. By working with a platform vendor, JurisLink was able to focus on the application interface and marketing, not core development. The choice of CafeX was driven by the complete solution and tests that showed that the applicant would work in the challenging environments, including the need for TURN services to assure access both in the incarceration facilities and to a wide variety of law offices.

JurisLink is a great example of the innovation that will come as WebRTC rolls out in volume. Just as the web of information changed business, adding real-time simple interaction can change a wide range of businesses and other activities. WebRTC and the range of vendors that can assist in rapidly enabling solutions assure rapid and successful deployment. The key is understanding the specific need and how the solution optimizes solving that need.

JurisLink is demonstrating that and growing rapidly in solving a potential significant problem and opening a huge market. It is clear that the pervasive use of video in the criminal courts could save $2-5 billion per year. Assuming that 10 to 20 percent of that would be spent on the systems enabling the savings, the market is between $200 million and over $1 billion. It is easy to see why Slade is so excited about JurisLink's prospects. **IT**

Phil Edholm is the president and founder of PKE Consulting LLC (www.pkeconsulting.com).

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Exploring the WebRTC Ecosystem

BY PHIL EDHOLM

WebRTC and the webification of communications is poised to transform virtually all aspects of the communications landscape. This disruptive technology has created a huge opportunity for more than 200 companies that are already offering WebRTC-based products, implementations, consulting, and technology.

WebRTC World has worked with the leaders of the WebRTC and webification of communications communities to create a model that defines the WebRTC ecosystem in a structured and understandable way. WebRTC World, in partnership with Kelcor and PKE Consulting, is producing a WebRTC Ecosystem Report that will detail the more than 200 companies and how they fit and add value to the ecosystem.

This WebRTC Ecosystem includes the logos of a number of companies that have been identified in each category. At this point these are not exhaustive, but representative until the full report is complete in the fall. If you wish to have your company represented in the ecosystem or the report, please contact WebRTC World.

WebRTC World, in partnership with Kelcor and PKE Consulting, is producing a WebRTC Ecosystem Report that will detail the more than 200 companies and how they fit and add value to the ecosystem.

The webification of communications that WebRTC is leading is not a technology transformation alone; it is a combination of new applications and capabilities driving value to a rapidly growing WebRTC-enabled population. With forecasts of 5 billion WebRTC-enabled browsers, smartphones, and tablets by 2017, along with the ubiquitous bandwidth on modern 4G and access networks, the demand-side is driving WebRTC applications and their delivery.

The WebRTC Ecosystem has three layers. At the top are the business solutions and applications that use/enable WebRTC. As more and more of these emerge, it will drive demand for users to access these capabilities. At the bottom are the devices and experiences that WebRTC delivers. In the middle are the products, components, and technologies that enable or integrate WebRTC solutions, providing the basis for development and integration of WebRTC in a wide range of business solutions and applications.

Web-based communications solutions that use the webification paradigm of direct end device access to the application or solution will drive the use and adoption of WebRTC capabilities and experiences in the endpoints. The massive number of endpoints that support WebRTC will drive the inclusion of WebRTC-based next generation web-style communications in a wide range of websites, applications, and solutions. For more detail on the WebRTC Ecosystem, please visit the WebRTC World site.

In addition to the WebRTC Ecosystem, KelCor Inc. and PKE Consulting are responding to numerous requests made by many players and interested parties in the communication technology space to produce The WebRTC Ecosystem Report, a one-stop guide to all of the companies that are working with WebRTC. This partnership with WebRTC World will produce the most comprehensive view of WebRTC companies and resources. This guide adds detail to the WebRTC World WebRTC Ecosystem by profiling the companies that are offering products and services for WebRTC development and use.

The WebRTC ecosystem is a dynamic space and the WebRTC Ecosystem Report provides a framework that highlights each company's offerings as compared to those of other companies. The report will include a profile of every company that responds with their WebRTC-enabled offerings. The list already includes well over 200 companies. Each profile will include a description of WebRTC offerings along with compelling graphics categorizing these offerings. The report will also include helpful information such as each company's size, revenue, products, corporate structure, and future plans, as far as these are available.

The goal is to give the reader a deep look at each company within an analytical framework. This will save prospective engineers, executives, investors, and developers time while helping avoid confusion as they seek partners or strategic position in the communications domain. To participate in the WebRTC Ecosystem and the The WebRTC Ecosystem report, please visit the WebRTC World site. IT

Phil Edholm is the president and founder of PKE Consulting LLC (www.pkeconsulting.com).

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How WebRTC Can Serve the Enterprise

BY PHIL EDHOLM

The enterprise has numerous uses for WebRTC, including expanding the bring-your-own-device model, allowing for next generation customer interaction through web integration, extending videoconferencing and collaboration systems, and establishing direct communications between employees and the outside world. Because WebRTC creates an experience that comes from the host web server, the experience the enterprise provides can be unique and tailored to deliver advantage.

BYOD

The combination of HTML5 and WebRTC opens the world of BYOD in a powerful new way. With HTML5 and WebRTC, any compliant device can become a highly integrated endpoint without running an application and without local data storage. This is a solution to the huge issue of maintaining privacy and compliance for data. By only sending the data to the device that will actually be displayed and using the built in HTML5 and WebRTC technologies, a new generation of highly secure implementations are possible. With the emerging 4G networking technologies, the performance and feel of these applications will be equivalent or better than current local apps.

WebRTC also can be used to integrate open BYOD devices into a more traditional unified communications architecture. For vendors like Avaya, Cisco, Microsoft, ShoreTel, and Unify (the former Siemens Enterprise Communications), the use of WebRTC is a logical way to integrate another set of devices. If anyone can go to anyone else's system and get essentially the same level of capability as the direct participants, the need to federate between systems may go away. That's because if I need to collaborate with Bob at XYZ Company, I just point my browser at the guest URL on his system and now we are collaborating with all of the tools his system can provide.

However, unless the vendor chooses to enable its SIP operated devices to integrate with WebRTC devices directly, a gateway – probably implemented as a media server – may be required. In this architecture, the WebRTC client is talking to the media server using WebRTC signaling, protocols, and codecs. Similarly, the SIP client is using SIP signaling, protocols, and codecs based on the vendor choices. The media server is providing any required translation of the codec streams as well as providing a port-level interface that will connect to each client.

Customer Interaction

Between 70 and 80 percent of contact center interactions in Western business are proceeded by a website visit, yet many businesses treat the contact center interactions and website visits as if they are unrelated events. WebRTC enables the customer interaction to come directly from the web page and drive how that interaction is handled through the business logic of the website. As a result, the business can define the skills required to meet the customer need and get new information about the success or failure points of the web presence. With an average web interaction costing a small fraction of an agent interaction, this optimization can create huge returns.

For organizations with agents, the use of WebRTC enables a new paradigm where a direct connection is started by clicking on an object on any web page. This can allow for agent selection, and enable the agent to be on any WebRTC device. While this type of system could be integrated using SIP devices on the agent side, using WebRTC enables similar device independence. That makes incorporating home agents much easier as their device type is not important to how they interact with the control system.

The integration between the web side and the contact center side can be accomplished by implementing a completely new system, with the website at the core, or by integrating WebRTC into existing environments.

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Of course, adding a media server into the mix enables functions like call recording, IVR, moderated interactions, speech recognition-based tools, etc. And there can be multiple media servers that can be mixed, both in type (premises or cloud) and in network/geographical location. This can enable new capabilities. For example, when looking to buy something, the website visitor on the review site could trigger a conference with a knowledgeable agent. And when going to another page the agent could change. This concept of context and state related to a specific web page is an interesting capability that WebRTC enables.

This can all be done as an extension to existing contact centers, of course. But with WebRTC this capability will become ubiquitous and the choice for future integration will be based on whether to extend the legacy contact center into the web world or begin a new customer interaction methodology based on and integrated to the company website.

Extending Collaboration

Using WebRTC to extend UC videoconferencing and collaboration systems from inside the enterprise to external users is a capability that will have great value. For example, Vidyo is working with WebRTC to enable a browser-based user to participate in a Vidyo hosted conference without a separate download.

Many users are wary of downloads or find they are blocked by configuration or firewalls. This enables them to participate in the video meeting without a download. Other vendors like Zoom and Lifesize have indicated they will use WebRTC in their cloud video offerings.

Similarly, collaboration applications like WebEx or GoToMeeting can use WebRTC in conjunction with HTML5 to create a browser-based experience that is as good as or better than a downloaded type experience.

Both of these avoid the two major issues for many users, the plethora of downloaded real-time applets (many of us have 10 to 20 of these at any time, and they all try to be resident and take priority and can introduce stability issues in end devices), as well as the experience of joining a meeting only to find that you have to download the latest version of the app, often along with other components, resulting in being 5 minutes late for the meeting. Using WebRTC eliminates all of these issues.

The Enterprise Portal

One potential significant application of WebRTC in the enterprise is an enterprise portal that enables external access to individuals through WebRTC. The concept of an enterprise portal is a website that allows external access using WebRTC.

An example would work like this: On the Contact Us webpage there would be a link called Web Interaction or Browser Communications. That link would connect to a URL/web server that is the enterprise portal. Upon arriving at the enterprise portal, the visitor would be asked to enter the name of the person with whom he or she wants to interact. Alternatively, the company may just decide to publish a directory. After selecting the employee, the visitor is taken to the employee's access page, which could have presence and availability information, potentially tuned to who the visitor is based on cookies or other certificates such as LinkedIn or Facebook.

For most visitors, the page would offer an opportunity to interact by entering the visitor name and a short explanation on why an interaction is needed. This request can then be sent to the employee, enabling him or her to decide if it is important now. If the employee wants to interact, he or she can push the interact button and the visitor is connected through WebRTC. It also can become a form of instant chat. If the employee is in a meeting, he or she might type a response suggesting the visitor come back at a specified time later in the day. The key point of the enterprise portal is that each visit to the web page is a unique experience.

For the enterprise, understanding WebRTC is critical. So it's important both to understand how your current vendors intend to use WebRTC and how WebRTC could change both the enterprise communications landscape and the vendors you use. IT

Phil Edholm is the president and founder of PKE Consulting LLC (www.pkeconsulting.com).

Wireless WebRTC: Everything You Were Afraid to Ask For and Why

BY CARL FORD

WebRTC started as an initiative in Google to take advantage of the assets in GIPS and On2 Technologies. Both of them had great intellectual property in the realm of rethought codec solutions. The overall scheme was to have an alternative to Microsoft's Silverlight and other intellectual property that impacted their video strategy. Overall the strategy was to bring to the web a rich communication solution that was different from the phone service.

Well, somewhere along the way the battlefront went to wireless and pitted H.264 against ViPer. The funny part about this battle is that it has lots of interesting nuances that never really came to light. For example, the carriers really like H.264 because they have paid for it already; however, the place where video is being used, Facetime, is an over-the-top H.264 service that does not involve the carriers. Thus the service that in the carriers' world would be associated (and cross-elastic) with voice minutes is part of the megabits pricing.

Further complicating the strange and wonderful relationship is the early adoption by the session controller companies of WebRTC, making it a gateway protocol with transcoding being a key feature. This tied the web part of WebRTC to the phone number, which was a lot like Gulliver being captured by the Lilliputians. What was a very open and freeing idea became an extension of a 12-button sub intelligent plain old telephone set.

Note: I want to say that there is an opportunity to make the POTS phone rich with WebRTC, but it is probably only for the companies offering primary service. However, POTS is in twilight, so the question has to be: What is the implication of all these forces when it comes to wireless?

I am going to suggest that there are two good strategies when looking at WebRTC with wireless and then suggest that eventually the two camps will have to converge, but not until the battle is lost or won between the over-the-top and carrier/device call control camp.

Your wireless device is the subject of a clash between titans and startups. The web is full of startup successes; let's hope the WebRTC brings communication rich successes to your smartphone in near real time.

I think the first implication is that call control should not be the focus of any app developer. Delivering a solution that in effect is trying to be an over-the-top phone has been done. I am fine with companies like 8x8, Microsoft/Skype, Vonage, and other softphone junkies extending with WebRTC, but that in the end is table stakes and should be grabbed at the app store.

WebRTC opens up the communications experience to web feature interactions. Companies can build an entire scripting tool for a web attendant that would be far more brilliant than the chat services currently offered. Developers can plug into a cloud speech recognition service. They can become more contextually aware than anything the carrier or the device manufacturer can connect to general social networks. In other words, whatever you can think you can do on the web you can expand with WebRTC. Probably the most important aspect of that is to expand the navigation capability of the smartphone's small screen. Enabling voice command taking us beyond Siri's "This is what I found on the web" and reading with the intent of manipulation would be huge.

On the other side of the equation, the carriers and device manufacturers that have direct access to call control can start enabling a different experience for the address book. Just like Apple distinguishes SMS that is from an iPhone from those that are not, a carrier can expand the codec option for video and the ability to socialize a call to the subscriber. This would make for distinct services that go beyond the sad address book experience we have today.

Ultimately, the nature of human interaction is going to force the over-the-top and the call control clans to find interfaces that interconnect, be it via a restful API or a session controller API.

In the meantime, your wireless device is the subject of a clash between titans and startups. The web is full of startup successes; let's hope the WebRTC brings communication rich successes to your smartphone in near real time. IT

Carl Ford is CEO and executive vice president of content development at Crossfire Media (www.xfiremedia.com).

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Voice4Net: WebRTC Powers Unique, Purpose-Built Solutions

BY PAULA BERNIER

Voice4Net sells sophisticated, customized contact center and customer interaction solutions for enterprises, SMBs, utilities, municipalities and other organizations. The company, which works through a network of dealers and integrators across the country, also is in the process of introducing a suite of WebRTC-based solutions. That will allow its partners to develop richly featured, custom contact center environments.

Because these solutions are browser-based and require minimal integration, they can be incorporated into a legacy end-user platform much more quickly and inexpensively than traditional solutions. This is an exciting proposition for dealers, who can now walk into existing customers and offer the versatile, unique benefits of a WebRTC-based solution, including advanced video and chat features, a customizable GUI, and streamlined integration with legacy back-office systems.

INTERNET TELEPHONY recently spoke with Rick McFarland, CEO and president of Voice4Net, to learn more.

What pain points does Voice4Net address for its customers?

We pride ourselves on agent-friendly solutions that adapt to an array of business environments. The solutions are agile enough to address various verticals, individual companies, and even specific organizational processes. The objective is to make the contact center agent's job easier, ensuring better customer engagement. Agents should be able to seamlessly utilize back-end systems, and access data and information about the customer without having to navigate multiple screens or launch complicated third-party applications and plug-ins.

These solutions are intuitive, and require minimal training. We provide a straightforward user experience, where agents can enjoy sophisticated features that are reliable and simple to use. We've learned that if agents have to enroll in a course to learn to use a solution, then it is probably unnecessarily complex. It will not serve the business nearly as well as a well thought out, streamlined solution. We want our customers to deliver superior customer service, create more satisfying customer engagement experiences, build loyalty, and increase business. This is how an effective, user-friendly contact center solution should contribute to the business.

Tell us more about how and why Voice4Net is leveraging WebRTC in its solutions.

With WebRTC, end customers can deploy state-of-the art features that provide a user experience that is purpose-built for each business, without requiring a full overhaul of the customer's legacy solution. A browser-based framework requires far less configuration on the part of the developer, making it less expensive to integrate, while realizing a quicker time to market and more attainable ROI. A browser-based HTML5 solution can be deployed right over an existing infrastructure, preserving the end user's legacy investment.

Voice4Net's Rick McFarland

It's the best of both worlds for the end-customer. It gives the most cutting-edge, tailored contact center features available, without the capital expenditure and down time of a total system replacement.

Why is Voice4Net attending WebRTC^V Conference & Expo? What value does it get from this event?

We're excited to interact with other like-minded WebRTC proponents, all looking to demonstrate how these technologies can best serve the needs of businesses. WebRTC's impact is groundbreaking, to the point that we put aside previous priorities to develop it. We're eager to connect with dealers, integrators, and business owners who understand its urgency and want to be early adopters.

Let's talk implementations. How can Voice4Net customers use the company's WebRTC-based solution and with what results?

The possibilities are staggering when it comes to the simple integration of collaborative platforms within an existing environment. We're working now with a provider of hosted telecommunications services called TeleSpeak, which has developed a suite of branded solutions for a range of verticals. They offer a number of market-specific applications, such as distance learning in education, which generate engaging, high-fidelity interactive remote learning experiences. The platform will also be leveraged for telemedicine purposes, enabling patients and practitioners to interact even though they are physically separated. It is groundbreaking technology, and we are looking to bring it to market quickly.

The suite also includes a contact center application based on Voice4Net's WebRTC Framework architecture, which allows companies to create drop-and-drag widgets to build an interface around their needs. It's simple and enjoyable to use, and most critically, it delivers a solution that is explicit to the customer's needs.

If there's just one thing you'd like people to know about Voice4Net, what is that one thing?

Voice4Net is a nimble, customer-focused provider that will dig in its heels to build a solution that works best for each individual business. We're not about pushing boxes or tallying sales quotas. We are about communicating with the customer, acknowledging their business processes, and developing an effective system around that. IT

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Dialogic Views WebRTC as Key Catalyst for Developers

BY PAULA BERNIER

Dialogic has a large portfolio of telephony infrastructure and developer enabling products that range from softswitches, gateways, SBCs, telephony and fax boards and media servers. These products are sold to service providers, enterprises, contact centers and developers. The company, which has a long history in enabling communications media processing for new development communities, sees WebRTC as a core catalyst for bringing real-time communications to the enormous web development community. WebRTC, the company notes, also is helping traditional telephony developers move into the larger web development world. INTERNET TELEPHONY recently spoke with Chad Hart, senior director of product marketing at Dialogic, to get the details on the company's WebRTC strategy and the direction of the larger industry.

Tell us about Dialogic's WebRTC strategy.

Dialogic has made WebRTC one of the core components of our PowerMedia XMS media server solution. PowerMedia XMS is a fully functional and complaint SIP media server and media resource function that includes WebRTC support. Traditional telephony developers use PowerMedia XMS to extend their media-centric applications with capabilities like interworking WebRTC with SIP (i.e. gatewaying) and transcoding between traditional VoIP and WebRTC codecs. Developers can also take advantage of many real-time media processing features to power their applications. PowerMedia XMS has full WebRTC support across all of its core media server capabilities, including multi-party audio and videoconferencing, audio and video recording, video transrating to minimize bandwidth, and video transizing to adapt to different screen sizes.

Dialogic's Chad Hart

When and why did Dialogic embrace WebRTC?

The team was always very excited about the prospects of combining the best of the web with telephony with WebRTC. Fortunately, customer demand quickly pushed us further down that path. It has always been a core tenant of our PowerMedia XMS program to have early support for new codecs. Dialogic first dipped its toes into the WebRTC waters in early 2013 with support for the VP8 codec. We immediately saw a lot of interest in using our media server for WebRTC video applications. As a result, we accelerated development on WebRTC and quickly introduced more comprehensive WebRTC support throughout the product along with a starter Javascript-based WebRTC API. Since then, WebRTC has continued to be a primary driver for the product. At the June WebRTC Expo we announced we had more than 90 WebRTC engagements across a broad audience of developers, contact centers, and service providers. This is still an early stage market, but the broad interest and rapidly growing demand for the technology continues to propel our investment in WebRTC.

How are some of Dialogic's customers using the company's WebRTC-based solutions?

One of my favorite examples is a dance studio in Bogota, Colombia. The studio was very successful and they wanted to grow, but opening up new physical locations is very expensive and hard to manage. Instead, they turned toward the web with WebRTC for growth. Today they use WebRTC to provide remote lessons, allowing them to virtually expand their footprint and bring in new students they couldn't previously reach.

Tell us about your example involving a "hyper-demanding environment."

One of our customers – a tier 1 service provider in the U.K., sets up and manages high-powered trading turret systems that bridge audio from a dozen or more different live feeds. These turrets are expensive – costing many $1,000s or more. They are also physically tethered, which is becoming very limiting in today's increasingly mobile workplace. To address these challenges, the service provider is piloting a web-based turret. This allows them to lower their capital outlays for infrastructure, giving them a more competitive offer. In addition, the flexibility of the WebRTC turret also allows them to sell into more environments where a large, physical turret would never make sense. They can now sell into remote branches, smaller enterprises, even home offices – dramatically increasing their addressable market for a relatively small software development cost.

What else do people need to know about WebRTC?

Even though much of WebRTC is peer-to-peer in nature, there are many use cases that involve server-side media processing. Some of those use cases as mentioned earlier are because of technical constraints and limitations in mobile device battery-life, processing power, and bandwidth. Others, like recording, may be imposed by legal and compliance requirements. PowerMedia XMS is the media server for these use cases today and will be the WebRTC media server for future use cases as they emerge. IT

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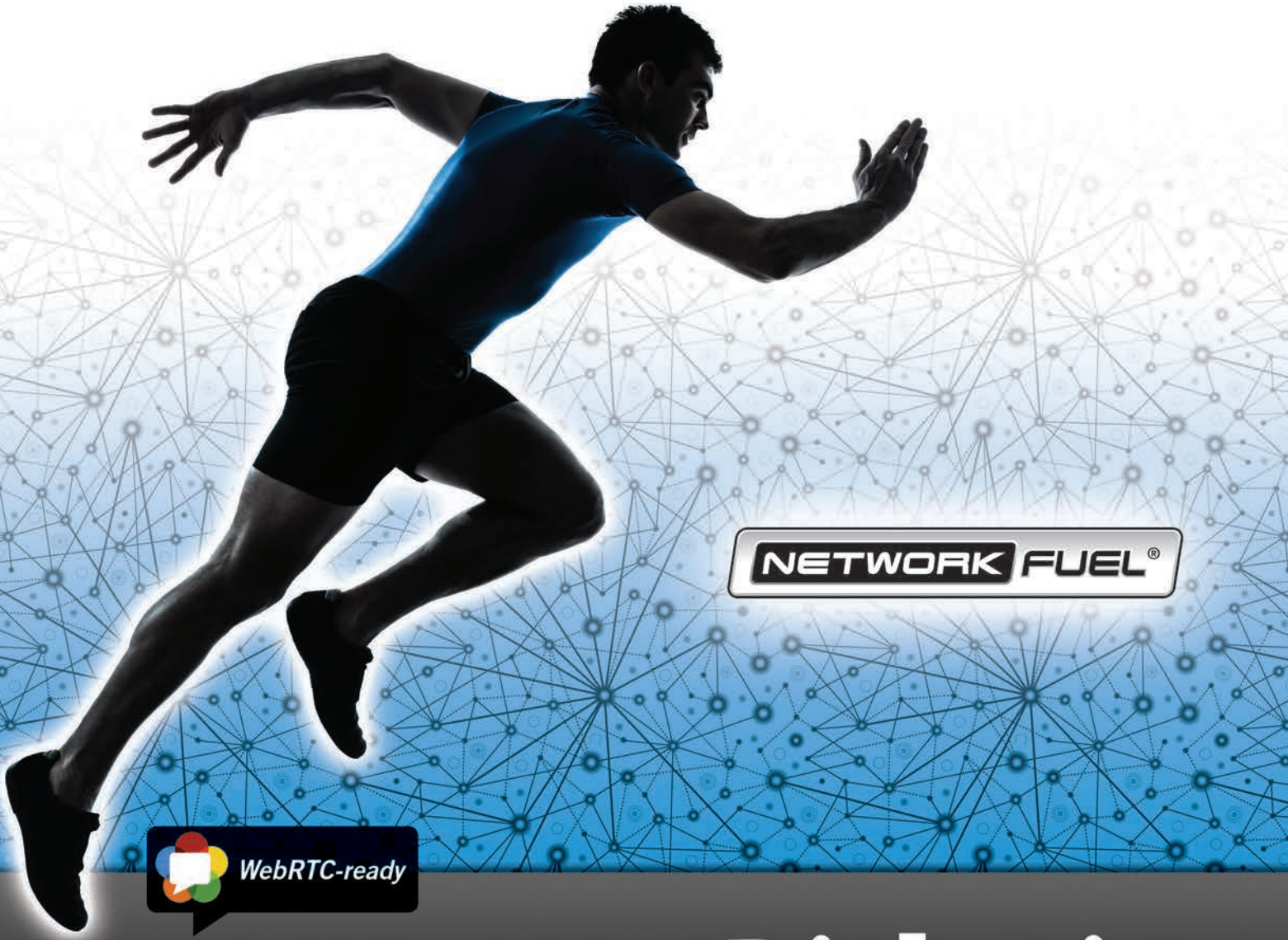

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GENBAND's WebRTC Evangelist Talks about Real-World Implementations

BY PAULA BERNIER

GENBAND is one of the world's leading manufacturers of communications software and real-time communications solutions with more than 700 global communications service provider and enterprise customers. One of the first movers in the web real-time communications space, GENBAND offers premises, cloud, and hybrid communications solutions that range from analog to digital to SIP to web real-time. GENBAND is using its expertise in WebRTC to deliver mobile collaboration to carriers, large enterprises and consumers. INTERNET TELEPHONY recently spoke with GENBAND's WebRTC Evangelist Chris Vitek about the company's strategy and its plans for the WebRTC^{V} Conference & Expo.

How and why is GENBAND leveraging WebRTC in its solutions?

By taking full advantage of WebRTC, GENBAND can provide ubiquitous collaboration in the enterprise and consumer market places. This means that GENBAND's customers can now extend contextual, real-time video, audio, text, and screen sharing interfaces to their customers. This means that GENBAND's customers can improve the support services that they provide to their customers with a lower labor cost as compared to voice-only support systems.

GENBAND's Chris Vitek

Why is GENBAND attending WebRTC^{V} Conference & Expo? What value does it get from this event?

We are attending the WebRTC^{V} Expo to brief conference attendees on our new WebRTC offerings. GENBAND's Kandy Platform-as-a-Service Developers' Portal (www.kandy.io) is now available. All that is needed to set up an account is an e-mail address. With the tools and documentation on the site, a developer or virtually anyone else can set up a WebRTC-based communications system that spans browsers and native Android and iOS apps. The first five users are free. These systems can also be integrated with any SIP-based communications systems to provide seamless communications between legacy systems and web real-time systems.

Let's talk implementations. Tell us about how one of GENBAND's customers is using the company's WebRTC-based solution and with what results.

SAP is using our Kandy PaaS to support communications within its CRM applications. An example of this is within SAP's Cloud for Customer application. Here users can click-to-communicate with customers or colleagues. Text, video, audio and screen sharing are all options that users have for these communications, and they can communicate using any smartphone, tablet, or PC. Additionally, the WebRTC elements are integrated into the workflow in cloud for the customer. For instance, if a customer calls a user, then the screen is populated with the customer's information on a notes screen so that the user can quickly document the conversation.

How is another customer in a different vertical is using GENBAND's WebRTC-based solution to address a different use case?

Toy Genius, a high-end toy retailer, is using the Kandy PaaS to support a more collaborative on-line shopping experience. Users can communicate via text, video, or audio while sharing images and videos of products. In the past these tools were only available to the most exclusive websites. Now these technologies are easily accessed at a very affordable price.

What one thing do people need to know about GENBAND and its WebRTC strategy?

GENBAND is a global company that has a heritage of building some of the finest communications tools that have ever been invented. We are using this experience and our strong financial backing to create advanced, easily accessible communications tools for service providers, enterprises, and consumers. IT

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Plantronics Explains How Wearables Can Elevate the WebRTC Experience

BY PAULA BERNIER

Over the last 53 years Plantronics has consistently delivered premium audio experiences between wearers and their communications endpoints. From old iron PBXs to VoIP, desktop phones to softphones to mobile devices, Plantronics has maintained an agility to bring wearable solutions that seamlessly integrate with users' communication environments. One of the ways that Plantronics is able to evolve with this ever-changing industry is through its partnerships with the leading communications infrastructure providers and device manufacturers. WebRTC has been on its radar for more than four years now, and Cary Bran, vice president of innovation and new ventures at Plantronics, says the company is eager to see industries starting to take shape around this exciting communications-enabling technology.

Plantronics received the WebRTC Visionary award at the past two WebRTC Conference & Expo events. Tell us about the solutions that won Plantronics these accolades.

In 2012 the Innovation Team at Plantronics created the first truly integrated experience between audio headsets and WebRTC. The demonstration took an off-the-shelf Plantronics Voyager Legend and our software SDK to natively integrate the Legend's built-in call control features into a WebRTC call.

In 2013 Plantronics showcased the potential of integrating body-worn sensors into WebRTC-enabled communications. This demonstration highlighted how context such as head orientation can be added via the data channel into WebRTC-enabled communications.

Plantronics' Cary Bran

What can we expect from Plantronics at WebRTC^v Conference and Expo this time around?

Browser vendors such as Mozilla and Google along with the W3C continue to push the boundaries of what the web means and how it can be used to deliver amazing experiences. Of interest to Plantronics is how connected devices (wearables) will be accessible via Bluetooth and Bluetooth Smart directly from the web browser. I would expect that we will be bringing with us to the conference a demo that will showcase how smart sensing devices like our PLT Labs Wearable Concept 1 can be integrated via Bluetooth into a WebRTC experience with just a few lines of JavaScript and zero software installed on the host system.

How is WebRTC impacting contact centers?

Plantronics has been creating leading solutions for customer service use for years, and WebRTC is at the very early stage of being introduced into contact centers. While it is early days, we do foresee amazing new levels of customer care once WebRTC-enabled solutions gain a foothold in the contact center. With WebRTC, customer care calls will change as we know it, the contact center agents will evolve, no longer will they just be the voice of the company, they will also be the face. Customer context will flow through the data channel, making problem diagnosis and remedy much less cumbersome. Overall I think WebRTC-enabled customer service centers will benefit the consumer with highly personalized customer care. Companies will also benefit, using WebRTC-enabled customer service centers as a competitive advantage to drive customer retention and satisfaction.

Is there an application for WebRTC in the online games world?

With real-time voice, video and data capabilities, it seems pragmatic to think that the next generation of HTML5 games will take advantage of WebRTC to deliver the next-generation of online gaming experiences. Having the ability to plug sensing devices into the game through the data channel is an interesting thought. I could foresee being able to subscribe to 3D audio data from an online game to deliver an immersive audio experience. Similarly, it would also be possible to feed into a game contextual player information such as head orientation, and perhaps additional sensors could be included to add player heart rate and breathing patterns to augment the playing experience. For example if the player was getting to excited (fast heart rate, breathing, etc.) gameplay could be adjusted dynamically, and gameplay could be slowed down until the player calmed down. The possibilities with WebRTC and online games are numerous.

What's next for Plantronics and its customers in regard to WebRTC?

For Plantronics, it is all about delivering devices and software that can easily integrate with WebRTC-enabled applications. We are diligently developing desktop and mobile WebRTC device integration solutions for our customers. Developers can download code at developer.plantronics.com.

Plantronics is continuously working with the major browser vendors and standards development organizations to ensure that Plantronics customers have devices that interoperate and integrate with WebRTC-enabled applications. Plantronics looks forward to seeing the 1.0 WebRTC specification solidified in the W3C and implemented ubiquitously across all web browsers. IT

Plantronics Makes WebRTC Better.

Plantronics Voyager Legend®

We've combined our Smart Sensor technology with our software allowing developers to deeply integrate headsets, like the Voyager Legend, into their Web RTC call flow. The Voyager Legend delivers a native integration with Web RTC—using HTML5 and leveraging web-sockets—making it simple for developers to create easy-to-use apps that don't require a high level of manual interaction between the user and the headset.

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developer.plantronics.com

Temasys is Working on Something Big

BY PAULA BERNIER

Temasys provides a complete WebRTC solution, including a full set of WebRTC-based developer APIs, mobile development frameworks, and other client-side tools. Supporting these frameworks it also provides telco-grade, enterprise-ready infrastructure for companies and developers to both create and manage products and services, which embed or support video, audio, chat and the exchange of data.

As an active and working member of both W3C and IETF, Temasys is helping to define the WebRTC standard. Temasys is one of only eight companies creating the very DNA of WebRTC, providing an implementation of the standard used by Chrome, Firefox, Internet Explorer, Opera, and most other browsers.

INTERNET TELEPHONY recently spoke with Chip Wilcox, CEO of Temasys Communications, to learn more.

We spoke in June about WebRTC. How has WebRTC moved forward since then?

Since June, we have gone on to commercially license our plugin for Safari and Internet Explorer, enabling enterprises and developers to use our technology embedded into their products, in a manner consistent with their branding, and providing control of the interface. We have also made it feasible for our customers to add in functionality like screen-sharing and support for alternative codecs, which are not part of the WebRTC standard today.

Temasys' Chip Wilcox

In May 2014, we launched our free plugin. Since then we logged 100,000 unique downloads in under 100 days, resulting in millions of minutes of actual use. With that experience, we can see a genuine demand for the technology. As more developers begin to realize its potential, as well as identify new use cases, we are in a position to support them and do so across all major web browsers.

Temasys has also expanded its team.

Correct. We have brought in several talented people to help us scale up, including Nat Currier, our head of engineering, and Thomas Gorissen, a superstar technologist who is the mind behind the top JavaScript developer conference in Asia, JSConf.Asia.

Tell us about some of the real-life implementations of the Temasys WebRTC solutions.

We use WebRTC to provide real-time communications connectivity for solar-powered, satellite connected emergency medical services. In partnership with Renewable Energy Corporation Solar in Singapore, we donated a 20-kW solar-diesel hybrid container (SolarBox) to the Philippines Red Cross. This was a special project that we assisted with, to help the community of Sungko Barangay, who were affected by Hurricane Haiyan last year. In the past, we have also run live demos showing how we have been able to reach people in areas with poor connectivity, such as in the Arctic Circle, with our platform.

Temasys has also staged some interesting demonstrations.

We have been among the first to demonstrate the use of WebRTC for videoconferencing over satellite, and how to provide feature parity for browser-based, native desktop, and mobile applications. And we completed a proof-of-concept, and are undergoing preparations to launch a commercial product for WebRTC-powered video, audio, and chat solution for a market leading social business solution.

What are you plans for the upcoming WebRTC^{V} Conference & Expo?

Without being specific, I can say we will announce something big, and it's a culmination of the last few months' worth of work.

You believe the data channel is important for WebRTC. Explain.

Along with video, audio and chat, the addition of a data channel provides significant opportunity for disruption of existing transactional business models. We already see use cases in online gaming and transactions, including the under-developed financial transactions market and the rapidly expanding peer-to-peer payments industry. Temasys foresees that the availability of data channels will signify the most disruptive technology within WebRTC, and we are already working with a leading financial services provider in this field.

What are some of the hurdles to WebRTC that the industry needs to address?

We are at the forefront of this emerging technology, and perhaps the biggest challenge lies in adoption and support of WebRTC. Players like Microsoft and Apple still do not have adequate mechanisms to support its potential. We have taken it in our hands to change this, by releasing free-to-use developer tools for IE and Safari. We are also working on getting WebRTC support into WebKit. Through WebKit, there is the potential to have WebRTC in web browsers on iOS.

If there's just one thing you'd like people to know about Temasys and its WebRTC strategy, what is that one thing?

We see ourselves as the Amazon Web Services of WebRTC, and we have a similar business model to AWS. Developers and enterprises, who we see as our long-term audiences, have access to Temasys' client-side toolkits and the underlying infrastructure using a freemium model. We support them for free while they create, test, and deploy applications on our platform. When they go to market, and if they're successful, then we start to share in that success by asking them to pay for the usage of our platform. IT

Talking with TokBox about WebRTC

BY PAULA BERNIER

TokBox was founded in 2007 as a consumer video chat service. In November 2010 it launched OpenTok, a cloud platform for adding live video, voice and messaging to websites and mobile applications and in 2012 became the first company to launch support for WebRTC. The company's scalable, customizable platform gives users the creative freedom to develop any real-time communication interaction, from one-to-one video chats to large-scale broadcasts. We recently interviewed TokBox CEO Scott Lomond to learn more.

What is TokBox's approach to WebRTC?

WebRTC is a fundamental technology shift that is changing the way we communicate online, adding voice and video to the web for the first time, without confusing or cumbersome restrictions. But WebRTC is simply a standard, not a solution by itself. Platforms like OpenTok are required to take the standard and transform it into an enterprise-grade platform upon which innovative companies can build solutions. In real-world implementations, organizations need hosted infrastructure, firewall traversal, mobile compatibility, and more. Our goal is to be the leading provider of platform services to customers of all sizes that want real-time communications for their websites and mobile applications.

How does WebRTC make video better?

In the past, companies interested in real-time communications had to rely on Flash. WebRTC delivers significantly improved video quality with connection times that are up to six times faster than Flash, with additional improvements in quality of service.

TokBox's Scott Lomond

Unlike Flash, WebRTC is a truly concerted effort by the technology industry to enable real-time communication as a first-class citizen within the browser ecosystem. It also goes beyond pure audio/video and provides mechanisms for data sharing. Its various underlying technologies, protocols and codecs have been optimized through algorithms within the media engine to provide the best possible audio/video experience. In addition, TokBox is extending optimization further through capabilities such as network adaptation and more.

How is TokBox's WebRTC platform used by customers today?

Having pioneered real-time communications, even before WebRTC, OpenTok has more than four years experience helping companies bring voice and video to real-world applications. The platform has been used by organizations across a wide range of industries, including companies like Mozilla, with its recently-launched Firefox Hello!, Major League Baseball, Fluke, Esurance, Minerva Project, Bridgestone and Double Robotics.

Fluke is great example of a company leveraging the OpenTok platform to improve business efficiencies and enhance existing workflows. Fluke's wide range of commercial testing equipment – including digital multimeters, thermal imagers, portable oscilloscopes, and air-quality meters – is the go-to choice for technicians in industry and education alike. Because test tool results were previously limited to one device, Fluke faced a challenge in allowing customers to collaborate and share knowledge while on the job. With the Fluke Connect system, users can now transmit measurements directly from tool to smartphone, sharing data instantly and securely with their entire team within the context of their normal workflow.

Fluke used OpenTok's Android and iOS SDKs to add a ShareLive video call feature, keeping teams connected both in the office and out in the field. Technicians can now start a video call from the field, show a colleague in the office the issue they're having, and consult with them in real time, all without leaving the work site. By enabling real-time remote collaboration, Fluke has helped these teams to more confidently diagnose and solve problems on site, increasing efficiency and productivity.

TokBox in October introduced its OpenTok Starter Kits. Tell us about that.

We are always looking for ways to make OpenTok easier to use for developers, so we created OpenTok Starter Kits. These Starter Kits include sample code and best practices for implementing the OpenTok platform's server and client components. Three use case kits are now available for download as open source applications on GitHub, and we are receiving great feedback from developers and partners.

TokBox also offers Media Routing. What is important to know about your Media Routing system, and what's new with this capability since the last WebRTC event?

Our Media Router intelligently routes, scales, and shapes video streams traveling through the OpenTok platform. It is a media distribution framework, providing a major upgrade to WebRTC client capability, including:

- High-quality multi-party video communications
- Cross-browser compatibility for Chrome, Firefox, and Internet Explorer
- Cross-device compatibility for iOS native apps and Chrome on Android
- Reduced upload bandwidth consumption with ability to scale out a single WebRTC stream to many endpoints IT

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Vidyo Shares Its Views of WebRTC-Enabled Video

BY PAULA BERNIER

Vidyo has what it says is the most advanced, best-performing platform for ultra-low delay, ultra high-quality multi-point video, ranging from mobile screens to 4K. By choosing Vidyo, application developers can combine the benefits of WebRTC's open, free, browser-based endpoint architecture with those of a professional, rock-solid back-end that can easily scale to carrier-sized deployments. INTERNET TELEPHONY recently interviewed Alex Eleftheriadis, Vidyo's chief scientist and co-founder, to learn more.

Vidyo plays in the video collaboration space. How does WebRTC fit into that?

WebRTC is a great engine for building video collaboration clients. It fits very well with our existing VidyoWorks platform for developers, and complements our existing VidyoWeb product (consisting of an installable plug-in for all major browsers).

How is WebRTC acting as a change agent for videoconferencing?

WebRTC establishes a widely accepted API for building video communication into web-based applications as well as applications in similar Internet-enabled devices. Instead of having to rely on the monolithic applications offered by a particular videoconferencing vendor, application developers can now incorporate video into their own designs. That is a significant change.

What role does WebRTC play in the video-enabled banking application Vidyo is promoting?

The customer side of banking applications will predominantly be WebRTC, when available. It can be used in situations where customers wish to deploy solutions that do not require any software installation, or where application developers have already built a WebRTC client. Part of the reason that Vidyo is seeing significant traction in this type of application is the flexibility of the VidyoWorks platform. Financial services institutions can define and easily implement their own unique user experience right from a web or mobile application, all while insuring interoperability with existing call center and communication systems.

Vidyo's Alex Eleftheriadis

What does Vidyo bring to the table in terms of telemedicine, and how does WebRTC make that offering richer?

Vidyo delivers a visual communications and collaboration platform that enables seamless workflows for health care professionals and patients, regardless of physical location, using virtually any device and IP network. More than 36 of the top 100 integrated delivery networks in the U.S. have selected Vidyo's platform with HIPAA-compliant encryption to power their telemedicine applications. Via a rich suite of APIs, the VidyoWorks platform has become an integrated component of the health care ecosystem of workflow tools, including patient portals, the largest electronic health records systems, ICU monitoring software, telemetry management software, carts, and direct-to-consumer care providers. With Vidyo, users don't need to think about the technology they are using to connect and communicate. Vidyo protects health care organizations' existing investments in legacy video communications infrastructure through robust interoperability. Vidyo's support for WebRTC offers an additional client option that eliminates the friction of software installation so that patients can experience a simple, real-time video consultation with their physicians or care providers.

What are your plans for the upcoming WebRTC^{V} Conference & Expo?

We'll demonstrate native interoperability of today's VP8 based WebRTC clients with the VidyoWorks platform as well as our VidyoWorks JavaScript library for WebRTC. They allow those with existing WebRTC clients to easily and immediately take advantage of the value of the VidyoWorks platform. We'll also present our ongoing Scalable VP9 work in partnership with Google. Vidyo will be participating in many panels at the WebRTC Conference and will further discuss the benefits of WebRTC during our keynote on Wednesday, Nov. 19 at 12:10 p.m. Please join us!

What are some of the gaps or hurdles to WebRTC that the industry needs to address?

Probably the biggest hurdle is universal browser support; it would be great if all browsers supported the standard. Third parties have already introduced solutions to that, with plug-ins implementing WebRTC APIs for Explorer and Safari. The biggest gap is probably getting the IETF drafts completed – it's getting closer, but it's not done yet. The VidyoWeb upgrades to all major browsers will continue to bridge the gap for VidyoWorks customers until WebRTC browser ubiquity is achieved.

What most excites Vidyo about WebRTC?

The availability of a widely adopted API for real-time video and audio to the developer community is a huge milestone. Vidyo was established to enable mass adoption of real-time communication to any device, any application, and on any network. WebRTC is a significant step forward in realizing this vision in endpoint applications. Vidyo is collaborating with Google to further enhance the next version of WebRTC, using the VP9 codec. By offering its scalability know-how, it will bring unique features of our VidyoWorks selective forwarding architecture to the world of browser-based communication. The resulting improvement in quality and system scalability will be instrumental for the types of deployments that we anticipate with WebRTC. IT

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WebRTC CONFERENCE & EXPO

By Paula Bernier

Hosted/Cloud VoIP and UC

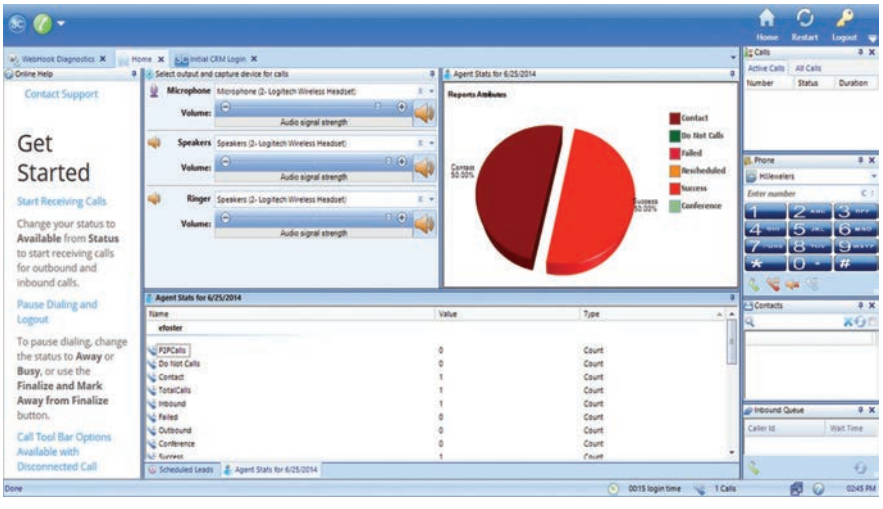
The top hosted VoIP providers in North America are 8x8, West IP Communications, Comcast, and Verizon, according to new data from Infonetics Research. The firm reports that West, which last year occupied the No. 4 spot, is now in second place due to strong demand for its Cisco-based solution. XO is also toward the front of the pack.

"Always near the top of our hosted VoIP scorecard, 8x8 broke through this year to take the No. 1 spot decisively by building on a solid financial position and continued focus on service enhancements and geographic expansion," said Diane Myers, principal analyst for VoIP, UC, and IMS at Infonetics Research. "While 8x8 still serves predominantly small companies, it's finding more and more success with larger businesses."

Other noteworthy developments in the hosted VoIP space include the appearance of Mitel on the scorecard. The company in January merged with Aastra.

Here's a rundown of some of the companies in the hosted and cloud-based VoIP and UC arena.

3CLogic
www.3clogic.com ▼



3CLogic offers a complete suite of inbound, outbound, and blended cloud call center software designed for both SMB and enterprise businesses. Providing a multichannel communications platform (phone, voice, e-mail, and chat), the solution delivers both basic and advanced contact center features including IVR, ACD, predictive and preview dialer, skills-based routing, real-time dashboards, advanced reporting, business intelligence, and dynamic scripting. More importantly, 3CLogic helps facilitate sales, marketing, and customer service initiatives through its advanced third-party integrations with CRM, WFM, ticketing and PBX applications, as it provides customers with a 360-degree view of their entire client base. As a true cloud solution, hosted on Amazon Web Services, 3CLogic provides the latest in edge computing technology while avoiding the common pitfalls and limitations of traditional centralized server architectures. Combining the power of cloud with the added benefits of a distributed architecture, its solutions offer limitless access to on-demand IT resources, while mitigating cost, enhancing reliability, and offering businesses the ability to quickly adapt to changes in customer demands.

8x8
www.8x8.com

8x8 Inc. is the trusted provider of secure and reliable cloud-based unified communications and virtual contact center solutions to more than 39,000 small, midsize and distributed enterprise organizations operating in over 40 countries across six continents. 8x8's out-of-the-box cloud solutions replace traditional on-premises PBX hardware and software-based systems with a flexible and scalable SaaS alternative, encompassing cloud business phone service, contact center solutions, and web conferencing. Gartner has placed 8x8 in the leaders quadrant of its Magic Quadrant for Unified Communications as a Service, multiregional, for the third consecutive year.

Altitude Software
www.altitude.com

Altitude Cloud Contact Center offers a complete contact center solution on the cloud with cost-effective options for every business need. It is suitable for a small or large operation, an outsourcer or in-house contact center, and providing inbound or outbound service. The solution was designed to speed up operations, while simplifying the management complexity, increasing productivity, reducing operational efforts, and, ultimately, raising customer satisfaction levels. This modular solution unifies all touch points throughout the organization, in outbound, inbound, and blending, regardless of the channel used for contact – voice, e-mail, SMS/MMS, fax, messaging or web.

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Apptix provides advanced cloud-based business voice services from hosted VoIP to hosted unified communications. Apptix's Hosted VoIP is a cost-efficient alternative to traditional PBX business phone systems. It encompasses enterprise-class hosted business phone service across multiple sites, online management tools that make administration easy, and scalability to add and delete users instantly. Standard features include a session border controller to prioritize VoIP traffic and guarantee call quality along with an auto attendant or virtual receptionist and mobility services for remote user management. Companies can keep existing phone numbers and select pre-configured desktop or conference business phones for easy installation. Apptix Hosted Unified Communications provides all the communications and collaboration tools business users need in an affordable, easy-to-deploy solution. It integrates Microsoft Exchange e-mail with Mobile Sync, VoIP, Outlook Integrated Voicemail, Microsoft Lync Web Conferencing and Instant Messaging with Presence, and Microsoft SharePoint. Companies can streamline communications and collaboration with connectivity anytime, anywhere at a fraction of the cost of a traditional system.

Aspect
www.aspect.com

Zipwire is a pure cloud, Saas-based contact center solution from Aspect with a feature set offering simplicity in provisioning, support and on-going operations. It is designed to get a contact center up and running in hours. Delivered through Aspect's Voxeo cloud and telco infrastructure, Zipwire can be deployed with the company's cloud network while providing a scalable, hosted solution that's flexible enough to quickly adapt as a business needs change. Aspect Hosted gives customers choices in implementing Aspect's Unified IP contact center solution with both cloud and hybrid deployments options delivered through a managed, secure data center with resilience built in. Customer environments are fully supported through initial implementation and custom configuration, user training, and ongoing monitoring and maintenance. Aspect also offers pre-deployed, managed solutions using Voxeo Prophecy and CXP platforms, that will get IVR and multi-channel self-service applications up and running with little up-front cost, low IT overhead, and the capacity to grow to thousands of lines as demand warrants.

Avaya
www.avaya.com

Avaya is a leading global provider of unified communications and collaboration solutions for businesses of all sizes worldwide. Avaya's cloud services portfolio includes Avaya Private Cloud Services, delivered by HP Enterprises, Avaya's go-to-market partner, Avaya Powered Cloud Services, and Avaya Branded Services. Avaya Private Cloud Services provide large and commercial enterprises, along with large midmarket segments, with customizable dedicated single instances of customer experience management and unified communications solutions that typically include attached managed and professional services. Avaya Powered Cloud Services deliver the same robust offerings of opex-based CEM and UC solutions, however, this portfolio of services is hosted and branded by a cloud service provider or systems integrator. Deployed via private or public clouds, virtualization of these cloud services over Avaya's SIP-based Aura platform provides a pay as you grow utility-based consumption model. Avaya Branded Cloud Services are SaaS offerings, including AvayaLive Connect, AvayaLive Engage, AvayaLive Video, AvayaLive Contact, Avaya Cloud Automated Chat, Avaya Cloud Messaging, and Avaya Cloud Collaboration Environment. These retail cloud services are branded and hosted by Avaya, deployed in public clouds, and can be sold by Avaya's channel partners and CSPs.

BullsEye Telecom
www.bullseyetelecom.com

BullsEye's Hosted PBX solution is the easy business phone system that can save you up to 33 percent on your phone bill. BullsEye makes it simple for a business of any size to upgrade to a new phone system with no out-of-pocket cost and a risk-free guarantee. A complete package includes free Polycom phones and unlimited local and long-distance calling at a flat rate. Our cordless lineup provides greater mobility and easy expansion for retail locations and warehouses. Now you can place a phone anywhere there is an outlet rather than relying on traditional Ethernet jacks. Enjoy greater control with powerful online management tools via your personal online portal. Make real-time account changes, manage service requests, and obtain in-depth business insight with key reports available online anytime. As a single accountable partner, we eliminate the hassle of managing multiple providers across your locations and provide a live U.S.-based

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www.gotoassist.com
Citrix GoToAssist is a cloud-based, integrated support solution that offers contact centers and IT support professionals a combination of easy-to-use service desk management, remote support, and IT monitoring. With access to key support functions from one interface, GoToAssist provides the functionality to maintain uptimes for people and devices. Mobile support is also offered to and from devices at no additional cost. For users on Android devices, GoToAssist now offers its SeeIT live camera streaming feature so customers can quickly show their issue to a support technician. GoToAssist also offers chat, enabling initiation of chat and service requests from different customer contact points including social, web, community, and self-service sites. Live chat sessions can be seamlessly transitioned into full screen-sharing and remote control sessions to resolve more complex problems. For larger contact center operations, GoToAssist offers additional functionality such as advanced administration, reporting and integration features. Purchase and a 30-day free trial is available from the Citrix GoToAssist website.

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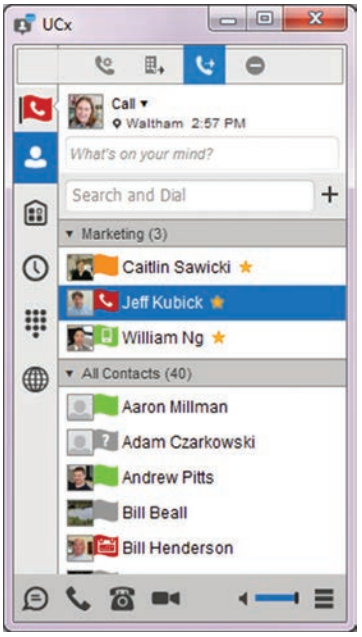

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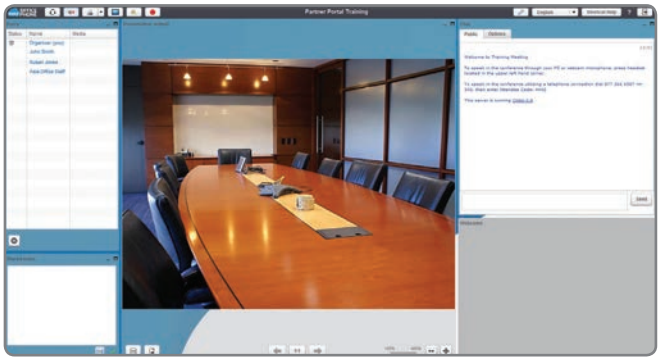
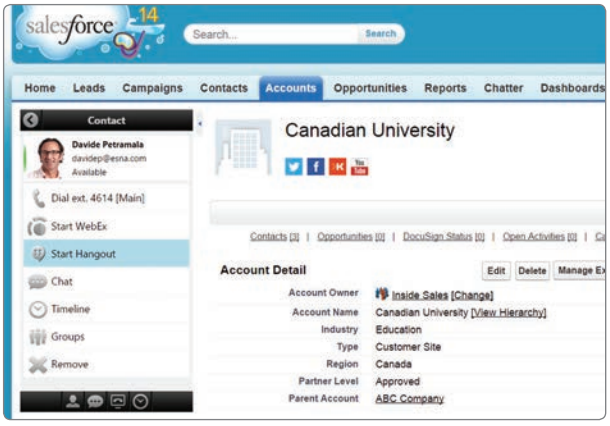


Easy Office Phone provides cloud-based business phone service to companies of all sizes. Consistently ranked among the top providers in North America for customer satisfaction, Easy Office Phone offers cost savings over traditional telecom, a broad hosted PBX feature set, friendly customer support, and a reliable continent-wide network. Customers can control their service from anywhere, at any time, via a user-friendly web interface. For call centers, the service offers powerful call queuing along with extensive tracking and reporting tools. The company's Dealer Program lets technology firms offer enterprise-grade hosted PBX to their own clients, opening up new revenue streams.

Esna Technologies
www.esna.com



Esna is a provider of embedded collaboration solutions. Esna's solutions let people collaborate anytime, anywhere by putting real-time communications inside the productivity, CRM, ERP, social and cloud applications they use every day. Esna Cloudlink 5.0 for Cisco embeds Cisco Collaboration Solutions inside cloud-based applications, workflow, and business processes, enabling people to collaborate faster and more effectively. Esna Cloudlink makes it easy to access real-time communication tools like presence, instant messaging, voice and video communication, click-to-call, call management, geo-location services, and unified messaging inside cloud applications like Google Apps, Salesforce, Jive and IBM SmartCloud. Esna Cloudlink leverages standards-based SIP, Cisco APIs, and Cisco Jabber to connect these cloud applications with Cisco Unity Connection, Cisco Unified Communications Manager, Cisco WebEx, Cisco HCS and Cisco Business Edition 6000. Esna Cloudlink 5.0 is sold as a subscription-based service. The MSRP (per user, per year) begins at $15.

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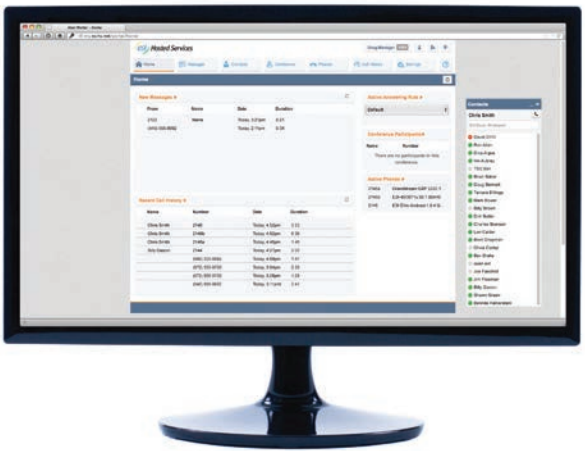

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Five9
www.five9.com

Five9 is the largest, pure cloud contact center software provider, facilitating more than three billion customer interactions annually. Replacing legacy providers, Five9 helps organizations of every size transition from premises-based software to the cloud. Offering inbound, outbound, and blended contact center capabilities, Five9 solutions are designed to support all types of contact center needs, including customer support, telemarketing, financial services and outsourcing. Five9 also provides a multichannel offering that empowers agents to move seamlessly between social media, mobile care, live chat, e-mail, and voice calls. Unlike complex on-premises systems, the Five9 Virtual Contact Center Platform was created with the business user in mind. The Five9 Virtual Contact Center Platform is the hub for all contact center-enabling technologies – automatic call distribution, computer telephony integration, interactive voice response, and predictive, progressive, power, and preview dialers. Five9 pioneered the concept of VoIP-based virtual call center software-as-a-service – and provides all the benefits of a hosted solution: fast setup, on-demand capacity, no capital outlay, and low operating costs. Five9 also provides seamless integrations with leading CRM solutions like Salesforce, Oracle RightNow, NetSuite, Velocify, and Microsoft Dynamics CRM.

Fonality
www.fonality.com ▼

In today's mobile-centric and location-independent business world, Fonality's award-winning Heads Up Display Web is designed to empower employees to work smarter, more efficiently and more collaboratively. HUD Web is an intuitive, web-based application that connects users to all their communication tools including phone, chat, email, voicemail, video collaboration, audio conferencing, file sharing, and more all in one place. Accessible from any location, the tool can be used in a web browser, on Apple and Android mobile devices, or through Fonality's desktop application. The application enables mobile and remote workers to collaborate seamlessly from wherever they are. Once logged in, calls can be transferred to the user, regardless of location and queue participation is available from anywhere. HUD Web improves internal communications company-wide and saves employees up to 2 hours a day in productivity. It also provides business managers the ability to reduce interruptions and streamline collaboration within teams, departments or branches, helping to reduce the day-to-day communications friction that slows business momentum and growth.

GENBAND
www.genband.com ▼

GENBAND NUViAT is a cloud-based solution for unified communication-as-a-service. NUViA offers organizations of any size a more cost-effective way to supplement or eliminate traditional premises-based PBXs and key systems. Connect with traditional desk phones or a variety of full-featured soft clients for smartphones, tablets, Macs and PCs, or use just a web browser. Built on the same GENBAND service provider platforms that support more than 40 million IP lines, NUViA is designed to support hundreds of sites and thousands of users across the globe. Centralized administration tools give an IT team multi-level control of directories, policies, and services. NUViA is standards-based so most SIP devices will seamlessly interoperate and NUViA does not use proprietary devices or special licenses to lock in users. The advanced service offers choices from basic phone packages, robust unified communications (including conferencing and screen share), and sophisticated, omni-channel, contact centers. NUViA is deployed and managed worldwide by GENBAND and resold through authorized resellers.

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VIDEOTION

CUSTOM INTERACTIVE VOICE4NET TELEPHONY SOLUTIONS

Roundup

Genesys
www.genesyslab.com
Genesys Cloud delivers customer interactions to the right channel with intelligent routing, which through easily configurable business rules tunes the customer experience. It allows users to more rapidly create the most effective, high-value customer experience, while reducing infrastructure costs, demands on IT resources, and security concerns. Genesys Cloud utilizes the Genesys Customer Experience Platform to power optimal customer experiences, which are consistent, personalized and journey appropriate across all touchpoints, channels and interactions. This offering includes contact center, workforce optimization, proactive customer communications, self-service, and mobile marketing. Genesys Customer Experience Platform, along with recently integrated capabilities previously offered by Angel and SoundBite, is now fully available in the cloud. This includes intelligent routing capabilities that allow users to tune the experience they deliver, including optimal resource assignment. Open integration with existing systems also protects legacy investments. With Genesys, users can increase operational efficiency with self-service provisioning for iterative improvements, and to enable the high-quality design of applications using best practices.

Intelemedia Communications Inc.
ww.intelemedia.com
For both inbound customer care and inbound sales, Intelemedia's Leaders Choice combines a cloud-based call management platform with call center resources. Clients utilizing multiple outsourced call center partners benefit from a unified platform encompassing performance-based call routing, call recording, web-based order entry/ scripting, centralized and unified reporting, and professional management of the entire process. That includes access to the best available agents across the country's top call centers for each and every customer call, with analytic and reporting tools allowing managing the network a simple task. Delivering client calls in real time to the highest performing agents in the network results in increased sales conversion and order-sizes. A higher percentage of client calls can be handled by the highest performing agents, resulting in a higher percentage of calls being resolved. It offers users improved save and retention rates by routing calls to the highest specific skills among multiple call centers. Dynamic intelligent routing among multiple centers means that calls are answered more quickly which reduces abandonment rates. And actionable intelligence means that management can make faster and more informed decisions.

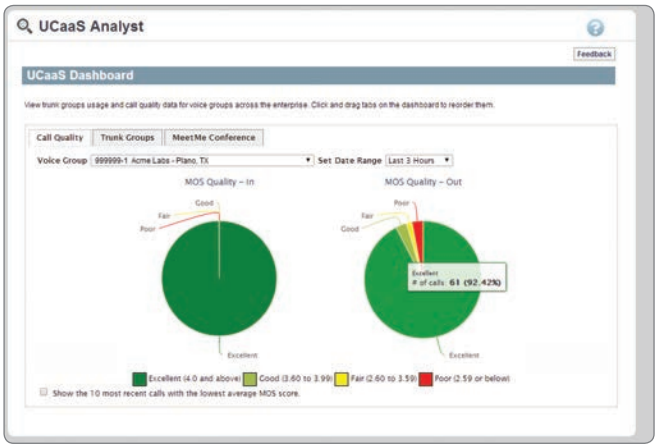
inContact
www.inContact.com
inContact's cloud contact center software and contact center agent optimization tools help organizations around the globe create high quality customer experiences. inContact is 100 percent focused on the cloud and is the only provider to combine cloud software with an enterprise-class telecommunications network for a complete customer interaction solution. Our cloud platform reduces IT maintenance costs, does not require hardware or software investment, and delivers the ability to scale service up or down as you need it. Multi-channel ACD and speech-enabled IVR are the two building blocks of our call center platform. Based on your needs, you can add CRM and CTI Integration, ECHO Customer Feedback, Predictive Dialer, Reporting & Analytics, Workforce Optimization, Quality Monitoring, Workforce Management, Operations Dashboard, Analytics-Driven Quality, Network Connectivity, and Disaster Recovery. Personal ConnectionT is a patented outbound solution that eliminates delays when greeting a caller while increasing productivity as agents make multiple predictive calls. The inContact Agent Console for Salesforce enables intelligent contact routing so the call and caller information are delivered on a single, unified screen on the agent's desktop. inContact's complete, multi-channel solution is designed to enhance personalized service experiences, delivering more 1-to-1 connections with customers while providing game-changing contact center effectiveness.

Interactive Intelligence
www.inin.com
Interactive Intelligence Communications-as-a-Service is a set of cloud-based contact center and unified communications applications for mid-size to large organizations. Interactive Intelligence CaaS offers customers maximum reliability and security through customer data isolation, proactive monitoring, a 24/7 NOC, an option to keep all voice traffic within the customer's network, and a number of certifications, including SOX, ISO 9001, ISO 27001, JITC, SSAE-16 SOC2, and PCI DSS Security Standards compliance. Interactive Intelligence CaaS also offers maximum return on investment with a broad set of applications for business users and agents all delivered by a single vendor. It also offers several cloud deployment choices and the ability to migrate from the cloud to on-premises. For organizations with between 10 and 50 contact center agents, Interactive Intelligence offers CaaS Small Center. This cloud-based contact center solution gives smaller organizations easy to understand service and pricing packages, along with simple deployment, configuration and management. CaaS Small Center minimizes risk through a free product test drive, a guarantee to be up and running within 15 days, a dedicated implementation manager, on-demand training, and no long-term contract commitment.

LiveOps
www.liveops.com

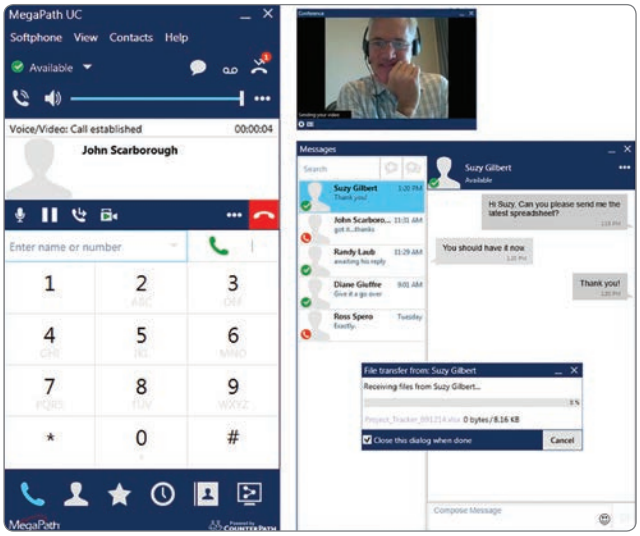
LiveOps Engage is an integrated agent desktop application that unifies interactions across social, mobile and traditional voice/text contact center channels. The single-screen interface of LiveOps Engage provides a complete view of the customer and his or her interaction history across all channels in one place, and enables agents to engage faster and more effectively in whichever channel the customer prefers or requires. LiveOps Management Applications provide visibility into contact center performance and the power to make changes in minutes instead of months – without help from IT. LiveOps Platform As a Service enables seamless operation between LiveOps Cloud Contact Center and leading CRM solutions such as Salesforce, Microsoft Dynamics, and Sugar CRM, providing agents with the data they need to perform successful customer interactions. LiveOps for Salesforce is a native telephony application for Salesforce that leverages Open CTI for seamless CRM integration, providing sales, marketing, and service agents access anywhere, on any device, and from any browser to provide instant contact center deployment and eliminating plug-ins.

Masergy
www.masergy.com ▼



Masergy's UCaaS, with its Global Presence, provides an all-in-one business communications service – connecting information, people, and resources anywhere, anytime. The company offers a global carrier-grade platform for voice, video, mobile, instant messaging, presence, and web collaboration for a wide range of enterprises and multi-location organizations. Masergy also offers comprehensive engineering consultation and best-in-class customer support. Masergy UCaaS customers enjoy the flexibility of leveraging Masergy's integrated managed cloud networking for high performance service guarantees, or can utilize third-party connectivity services. Masergy's hybrid delivery models enable enterprises to migrate to a fully hosted cloud solution on their timeline. Midmarket companies can choose convenient UCaaS bundles – affordable, easy to deploy UC solutions delivered from the cloud. Masergy recently announced the availability of UCaaS Analyst – the industry's first cloud-based analytics solution for enterprise unified communications that enables enhanced business planning and management, available free of charge to all Masergy's UC customers. UCaaS Analyst is delivered from the cloud, so all upgrades and new features are instantly available without the need for new software or hardware upgrades.

MegaPath
www.megapath.com ▼



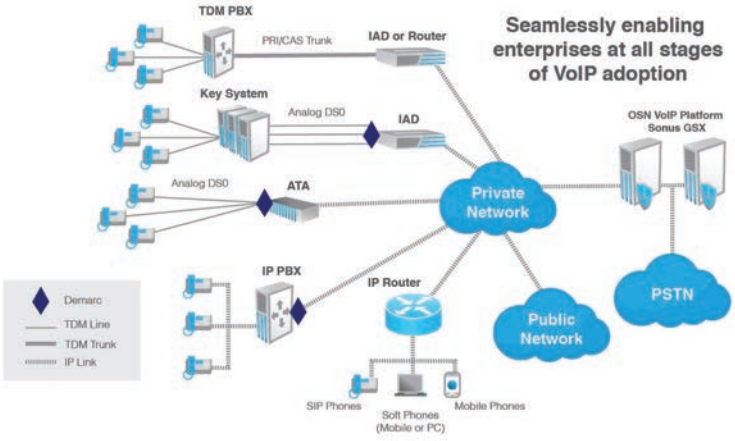
MegaPath's Hosted Voice solution provides organizations with more functionality than traditional phone systems, without the costs of managing and maintaining a PBX. It is a high-performance, no-maintenance solution with more than 50 basic and advanced calling features, including visual voicemail, find me/follow me, and call recording. The company also recently launched its unified communications add-on for hosted voice, integrating its IP voice telephony capabilities with enhanced collaboration features such as presence, instant messaging, SMS text messaging, screen sharing, and video calling. This offering enables employees to easily and instantly connect and collaborate with colleagues, partners, and customers from desktop and mobile devices using their business VoIP numbers. MegaPath has complete control over its network, voice traffic is prioritized from end-to-end, providing the highest QoS to ensure clear call quality.

NTT Communications Corp.
www.ntt.com

One of the largest telecom carriers in the world, NTT Communications provides Arcstar UCaaS, a cloud-based unified communications service package designed to facilitate effective collaboration

among employees in multiple locations. Voice, video, presence management, voice mail, instant messaging, and video/web conferences are integrated in one instance to speed up information sharing and decision making, with Arcstar SIP Trunking Service for On and Off-net call to PSTN. As a value added service, Customer Web-Portal, enhances usability with easy change management and service transparency, in addition to another service, Web directory on the cloud, which enables one-click call from any device. The company's global UCaaS platform, which spans across Japan, the U.K., and the U.S., ensures high-quality service in more than 150 countries/regions. Its vast suite of services provides international enterprises with greater flexibility and scalability, making them easier to deploy across multiple regions. Arcstar Conferencing, NTT Com's Audio/Video/Web conferences services, are now powered by Arkadin, a leading conferencing and collaboration provider that recently joined NTT Com Group. Arkadin and NTT Com's geographic proximity to enterprise client locations will appeal to enterprise clients' prerequisites for high levels of client care and service management.

One Source Networks
www.onesourcenetworks.com ▼



One Source Networks provides global voice and managed network services to large enterprises. The company's SIP trunking service is part of its comprehensive suite of cloud-based communications offerings, which includes other hosted apps such as Cloud PBX, Cloud Call Center, and Cloud Contact Center. SIP trunking enables integration of unified communications services, such as voice, video and chat, over a single connection, delivering cost and infrastructure efficiency. Additionally, enterprises can expand global presence with OSN's SIP-based network that interconnects with more than 200 global suppliers, as well as international telephony services, which include DIDs in 3,700-plus non-U.S. cities and 65-plus countries and over 90 percent of U.S. markets. For enterprises that need to meet business continuity objectives, OSN's SIP trunking includes built-in trunk redundancy, as well as advanced failover options at either the trunk or individual telephone number level. OSN recently expanded SIP trunking with a service option, Secure Trunking, which guarantees encryption of customers' sensitive call signaling and media. Further, OSN's SIP Trunking is Microsoft Lync 2013-certified for customers deploying Lync environments. OSN is currently one of only a handful of companies in the world that has the Microsoft Lync 2013 qualification, with TLS and SRTP security designation.

PanTerra Networks
panterranetworks.com ▼

PanTerra Networks is the leading provider of secure unified cloud services for mid-market enterprises. The company's WorldSmart service provides CloudUC for business voice, UC, collaboration, conferencing, video and web meetings. It also includes SmartBox, for file sharing that communicates, shares and seamlessly integrated with all services. It has mobility, with simplified smartphones and tablet applications and browser-based interfaces for all services. In addition to its cloud-based delivery, WorldSmart leverages a single browser interface for all usage and administration, eliminating any on-premises deployed hardware or software, and also includes applications for smartphones and tablets for complete mobility. WorldSmart can be self-managed or fully managed by

PanTerra Networks through its SentraCloud solution. SentraCloud provides a fully managed solution for larger enterprises interested in obtaining all the benefits of outsourcing their IT services to PanTerra.

Parallels
www.parallels.com
Parallels Automation for Hosted PBX is a platform for cloud providers to deliver hosted BroadWorks PBX services from BroadSoft. Based on Parallels Automation cloud service delivery platform, this solution gives cloud providers of any size the ability to launch hosted PBX services bundled with business e-mail, instant messaging, and other related services, and sold direct or through reseller channels. Because the service is delivered using Parallels Automation, cloud providers completely automate the service delivery experience from order to cash with no drop-out. Parallels has simplified the delivery of these complimentary services so that cloud providers can bundle wholesale services enabled by preferred Parallels partners, or choose to add them in their own data center environment. Either way, cloud providers will shorten their time to market from months to weeks with the experienced team from Parallels.

RiverMeadow Software
www.rivermeadow.com ▼

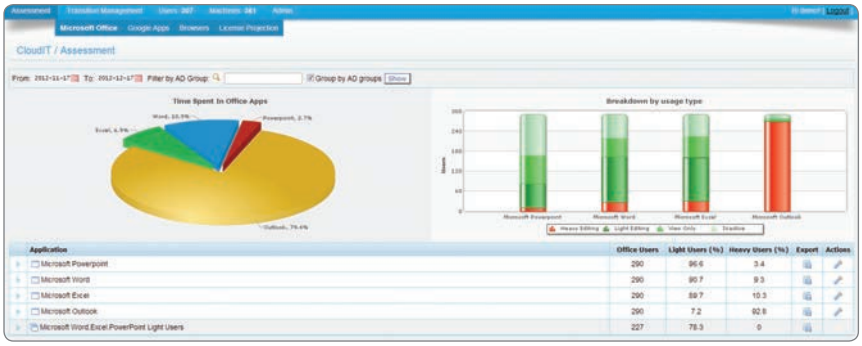
Migrating workloads can be a risky, time consuming and costly process whether you're doing it manually or with solutions that don't offer a fully automated as-is approach. Often workloads need to be migrated one at a time, have to be taken out of production (disrupting business and productivity) and involve highly skilled resources – not to mention compliance and security compromises that can arise from installing software agents or shipping workloads offsite to third parties to replatform and deploy. RiverMeadow SaaS enables fast, secure and automated cloud onboarding from any source to any cloud destination. RiverMeadow SaaS automates the migration process of any physical, virtualized or cloud resident server and securely transits and deposits them into a destination cloud, irrespective of physical, hypervisor or cloud constraints. RiverMeadow executes migrations without installing an agent on the source or target, and without disrupting the source server e.g. shutdown or reboot. Purpose-built for the cloud, RiverMeadow provides on-demand scale-out to facilitate massive amounts of parallel migrations. The automation and scalability features dramatically reduce time and costs associated with migrations, especially large, complex projects.

ShoreTel
www.shoretel.com
ShoreTel Sky Contact Center is fully integrated with the ShoreTel Sky enterprise phone service. Any user profile can have a hosted contact center agent license added to it, allowing any employee to become part of the contact center. Capabilities include out-of-the-box integration with leading CRM applications, including Salesforce.com. Incoming calls automatically open records. Agent functions are embedded directly in the web application, enabling agents to transfer calls and screens to other agents. Built-in call recording includes agent evaluation forms to track performance. Prioritized skill routing assigns priority by queue and by agent – maximizing routing flexibility. Each queue can have separate service levels, hold treatment (music, announcements, estimated wait time, position in queue, or ringing), and routing algorithm for finding available agents (round robin, fewest calls, or most idle). Agent features include whisper announcements, screen pop, and click-to-dial. Supervisors have web access to all administrative functions, including live dashboards, reports, and configuration. Real-time dashboards include current ACD activity (connected, queued, abandoned, and available agent counts) as well as current status by agent. Web reports are configurable by queue and date range. Call detail can be searched by queue, agent, direction, caller ID, recorded flag, duration, and date/time range.

SkyCreek Corp.
www.skycreek.com
SkyCreek, a multi-channel cloud contact provider specializing in front-line customer interactions, offers an array of capabilities including appointment reminders, preemptive service notifications, post transaction surveys and sentiment analysis of employee-customer interactions. At the heart of its custom IVR, SMS and e-mail contact management solutions is the cloud contact application, Interact. Interact is a full-stack contact management platform that is fully redundant, operating out of two geographically dispersed calling centers in Chicago and Reston, Va., and is fully SSAE-16 compliant, with a record of 99.9999 percent uptime. SkyCreek assigns a dedicated account manager to every client contact program it supports, each averaging more than 15 years of contact management experience. It says that allows SkyCreek to offer quality customer service; highly responsive change management; and to ensure that customer contact programs are optimized for performance, cost efficiency and overall quality. It also offers pay-per-result pricing and service level agreements on contracts.

Roundup

SoftWatch
www.softwatch.com



SoftWatch provides a SaaS-based solution that helps enterprises manage and optimize their transition to a cloud-based environment. Unlike other software metering tools, which detect whether an application is running, its patent-pending technology detects to what extent employees are actually interacting with the application. Based on the actual usage, the service provides user segmentation to light and heavy users for both on-premises and web-based apps. This unique capability serves multiple IT needs such as transitioning from on-premises applications such as MS Office to cloud-based applications like Google Apps and Office 365, reducing software license costs, optimizing license purchasing, and ensuring compliance. In addition, the analytics provided by SoftWatch give CIOs the data they need to transform their end user computing environments with a flexible and cost-effective hybrid cloud architecture accommodating different needs of different users at optimal cost. A SoftWatch study of more than 150,000 enterprise users showed that on average an employee only spends 48 minutes a day on MS Office applications, indicating that with the right information, enterprises can save substantially on licenses by transitioning to cloud-based solutions.

Spanlink Communications Inc.
www.spanlink.com

Spanlink's portfolio of Cisco-powered cloud services span the entire Cisco Collaboration portfolio. With Spanlink Cloud Services, organizations gain affordable access to the latest business voice, HD video, contact center technologies and managed services – all in a predictable monthly subscription. Spanlink's Cloud Services Portfolio includes unified communications as a service, including voice over IP, voice messaging, instant messaging, presence, and desktop and mobile telepresence. The Spanlink Contact Center as a Service allows organizations to provide better, secure, and flexible customer service. It empowers customers to interact with businesses through the communication channel of their choice. It allows businesses to expand or tailor contact center feature capabilities as needed, such as speech analytics, reporting, intelligent call routing and quality monitoring tools. And it allows for the ramp-up and scale down of agent capacity as needed. TelePresence as a Service, meanwhile, allows access to HD business video capabilities from SIP- and H.323-compliant video endpoints. And it has multipoint functionality that allows three or more parties to dial into secure rendezvous rooms. Spanlink's OnGuard as a Service is a 24x7 managed services platform that offers monitoring, management and maintenance support of Cisco UC and Contact Center solutions.

Telax Hosted Call Center
www.telax.com

Telax Hosted Call Center provides the capabilities for its clients to create exceptional customer experiences by combining the software and services its clients require into one firm-fixed monthly fee. By leveraging a native cloud computing architecture, Telax delivers an advanced contact center solution with more functionality than traditional hardware at a fraction of the cost. Telax clients get a customizable, easy-to-use solution that delivers responsive, full-service technical and operational support and includes best practice consulting and no long-term contracts. By simplifying the number of vendors its clients require in the customer care supply chain, Telax Hosted Call Center enables clients to provide the best service to their customers, valuable business intelligence to their executives, and a user friendly solution for their agents.

Telesphere
www.telesphere.com

Telesphere has built its own private MPLS IP network, one of the largest of its kind in the nation with 16 POPs, to deliver Telesphere's hosted VoIP and other UCaaS services. In addition to voice services, hosted PBX with private SIP trunking, Telesphere offers a full portfolio of advanced communication services, including advanced contact center, web collaboration and mobile integration. All services are delivered on Telesphere's IP MPLS backbone ensuring the highest quality of service and security. The company's flagship UC products include Hosted PBX, Mobile Connect, Hosted Contact Center, Cloud Storage, Hosted Call Recording, VideoConnect, WebConnect, Speak2Dial, and VisualVoicemail. Related products include FaxMail, MPLS WAN, Internet Access, and CRM Integration. Telesphere's MobileConnect is a softphone that works on PC and Mac devices, tablets and smartphones. It includes presence management, MS Outlook calendar integration, IM, voice/video calling, file sharing, and collaboration features such as group chat and desktop sharing. Telesphere's contact center solution offers call queuing, call routing and IVR, and supports multimedia queuing, voice, video, chat, and screen recording. Advanced Contact Center supports social channel integration and monitoring, multichannel/skills-based routing and customer support, all as an integrated bundle or ala carte.

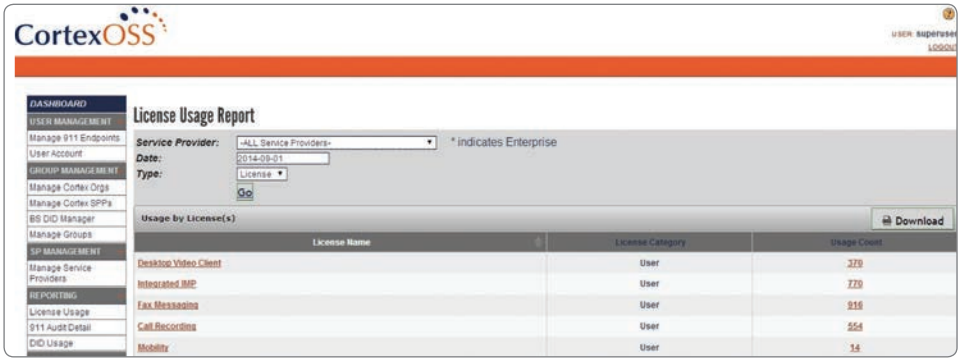
Toshiba Telecommunication Systems Division
www.Telecom.Toshiba.com

Toshiba's VIPedge cloud-based business telephone solution gives users the advantages of Toshiba's IPedge business telephone system in the cloud. Users pay a monthly service fee – scalable to meet system size and usage needs – as an alternative to the capital purchase of an on-premises telephone system. Competitively priced, VIPedge accommodates up to 500 users in single or multi-site deployments. VIPedge can network with Toshiba's on-premises solutions, IPedge and Strata CIX, for a hybrid cloud and on-premises networked solution. Toshiba's UCedge client brings unified communications to Android and Apple iOS-based smartphones and tablets and Windows and Mac OS X computers. UCedge works on Toshiba's VIPedge and IPedge business phone solutions as well as Strata CIX systems with an IPedge Application Server. With client software that is easily downloaded from the Internet, users gain new levels of convenience, productivity, mobility and cost savings, regardless of how they access their Toshiba phone systems. UCedge puts your desktop business phone in your pocket by turning your Android or Apple iOS smartphones or tablets into multimedia office productivity tools.

Verizon
www.verizonenterprise.com

Verizon's UC&C solutions provide a cost-effective way to connect employees to co-workers, customers, and company information. VoIP integrates voice and data traffic; audio and videoconferencing can enhance teamwork and improve response times; and cloud-based applications make access easy so no special equipment is required and customers can quickly scale to meet changing needs.

VoIP Logic
www.voiplogic.com ▼



VoIP Logic provides hosted PBX technology platform as a service exclusively to service providers. By unbundling all elements including carrier services, the company allows service providers to retain full flexibility in how they package their services to their targeted enterprise customers and to control their cost basis of all packaged services. For operators that want to engage fully in tier 1 enterprise support, want to bundle telephony with other cloud services, and want to exercise full ownership over their customer base, our version of PaaS accomplishes this while providing the most robust platform elements by recognized leading manufacturers like BroadSoft, Oracle Communications (Acme Packet), GENBAND, and Cisco.VoIP Logic welcomes third-party technology as platform add-ons and maintains an active ecosystem of partners that provide integration, OSS and billing. In addition, it provides a proprietary utility system called Cortex OSS that allows bulk provisioning, user management, group management, license reconciliation and access to CDR and logs.

Vonage Business Solutions
www.vonagebusiness.com

As companies move to business VoIP phone solutions in record numbers – and away from limited copper-wire solutions – Vonage Business Solutions has quickly become the fastest-growing provider of hosted VoIP communications for business. With more than 40 calling features built in, and a suite of mission-critical add-on features, the VBS solution empowers small- to mid-sized businesses to sell more and better serve customers. The system is fully mobile, with mobile apps for iOS and Android, and aligns with many of the business tools employees already use. Supporting the system is a full team of customer and technical service representatives working onsite at VBS headquarters in Atlanta. Vonage Business Solutions utilizes its own technology, including a proprietary cloud platform that is stable, secure, and proven. The system maintains 99.999 percent uptime reliability, and its patent-pending Call Continuity feature allows continuous service even through events such as loss of power or Internet. VBS customers regularly save at least 30 percent over traditional providers with no annual contracts required. Vonage Business Solutions was founded in 2006 as Vocalocity Inc. and acquired by Vonage in 2013.

Voxox
www.voxox.com

Voxox is an award-winning unified communications provider. The company's hosted PBX offering empowers SMBs with scalable communication features at a very competitive price. With Voxox's Hosted PBX, only the phones are located on premises. The costs and responsibility of maintaining and supporting the phone system are handled remotely by Voxox. Voxox's Hosted PBX saves companies money thanks to its pricing model: Voxox simply charges a nominal fee per extension and then adds as many metered or unlimited channels (lines) as the business needs. Most competitors require the customer to get a line for every extension. Another hosted offering from Voxox is its virtual PBX service, Cloud Phone. While the Hosted PBX solution caters to businesses with physical locations, Cloud Phone offers extra mobility to small businesses on the go. The web-based service provides a dedicated business telephone number (toll free or local) that can be routed to any existing mobile or landline phone. The caller is greeted by an auto-attendant and can be routed to other employees worldwide via a three-digit extension. Other features include voicemail transcription, web callback, and more. Cloud Phone can be easily transitioned into an advanced VoIP system that supports hundreds of phones and multiple office locations.

Roundup

West IP Communications
www.westipc.com
West offers a broad range of communication and network infrastructure solutions that help manage or support essential communications. West's services include conferencing and collaboration, public safety services, IP communications, interactive services such as automated notifications, large-scale agent services, and telecom services. West appears in the leaders quadrant of Gartner's Magic Quadrant for Unified Communications as a Service, multiregional, this year, making it now three years in a row.

XO Communications
www.xo.com
XO Contact Center on Demand is a cloud-based, virtual contact center solution that allows organizations to provide a more consistent, seamless and comprehensive customer experience that enriches satisfaction and builds loyalty while minimizing capital expense and reducing operational costs. With this solution, companies can reduce infrastructure costs, gain more flexibility and control over customer service operations, and better engage and interact with customers. XO Communications backs this up with its experience in hosted voice solutions and its own high-capacity nationwide network. With Contact Center on Demand, organizations eliminate the need to make any further investments in contact center equipment to support each agent and location. Instead, users enjoy simple, pay-as-you-go pricing per user. Without having to buy new equipment and systems, users can quickly add resources where and when they need them to support spikes in business operations or to help meet special project demands. They pay only for the resources they need, when they need them. XO Contact Center on Demand is designed to complement other XO VoIP services including XO IP Flex, XO IP Flex with VPN, Enterprise SIP, Interactive Voice Response and Hosted PBX.

Yorktel
www.yorktel.com
In business for more than 29 years, Yorktel has built its name as an AV integrator. As its expertise grew along with the trends in the video communications marketplace, Yorktel has evolved to meet the demand for video managed services, cloud services, and unified communications and collaboration. As a cloud, UCC and video managed services provider, Yorktel offers a single source solution for unified and visual communications. Its services include professional consulting, through assessment, design and implementation. This complements its post implementation offerings: Managed Services (maintenance, trouble-shooting, scheduling/launching, and on site staffing) and VideoCloud VaaS (public, private and hybrid options; self-service or managed). It recently expanded into verticalized applications, including the Yorktel VideoKiosk, mobile TeleHealth carts, and iRobot's Ava500.

Zeacom/Enghouse
www.enghouseinteractive.com
Enghouse Interactive's Contact Center: Enterprise (formerly Syntellect CIM) is an adaptable, multi-channel platform. It provides flexible deployment options, on-premises, distributed across multiple sites or on a public cloud infrastructure. That includes private cloud, an on-premises deployment with the flexibility to centralize or distribute components across multiple sites; virtual private cloud, leverages a cloud infrastructure-as-a-service (i.e. Amazon Elastic Compute Cloud) environment to create an isolated and private section of the cloud; and hybrid cloud, which connects on-premises and public cloud Contact Center: Enterprise components, and other applications. Meanwhile, Zeacom Communications Center 7.0 features TouchPoint, a redesigned user interface for agents and supervisors, new campaign tools for Microsoft Lync users, and enhanced redundancy options. TouchPoint features a minimalist interface to encourage collaboration both inside and outside the contact center, and improve first-contact resolution. TouchPoint provides real-time information and context-aware functionality. Its lean, compact nature prevents desktop clutter for users who also work in CRM, other business applications. Also new is Outdial for Lync, which allows outbound campaigns, such as collections, outbound sales campaigns, appointment reminders; and ZCC Survey, which enables managers to capture customer feedback on email & web chat-based agent interactions, and voice automation.

Zultys
www.zultys.com
Zultys Inc. presents MXvirtual, a fully integrated cloud-based unified communication solution. It integrates voice, video, data and mobility to optimize collaboration and communications for businesses of all sizes, and includes all the advanced features of the Zultys premises-based system including the Zultys Integrated Contact Center solution. Zultys' Integrated Contact Center software intelligently processes incoming calls to groups of agents based on administrator-defined rules and real-time conditions. When there are more callers than available agents, the system will either re-route callers or queue callers with customized in-queue messages and music that may be unique for each call group. Agents can be located anywhere in the world, allowing for flexibility and around the clock coverage, without the need to relocate key talent. Built-in SuperView software allows contact center supervisors to monitor real-time call statistics for multiple call groups, as well as easily manage agents and calls with the ability to barge-in, silent monitor, or whisper-thru to an agent on call. And for the supervisor's convenience all these functions can be accessed from a single SuperView window. IT

By Peter Radizeski

The Expert-Specialist Dilemma

The cloud arena is an interesting place. Many of the providers in the pure play space have a wide catalog of services. It's nice to have technical skills. No one can deliver a vast array of services well. For an example, look at some CLECs challenged to even deliver T1s today. Any company can duct tape together something that looks like what the customer wants, but will the customer actually be happy with the delivered service?

I just saw an ad for a cloud service provider that is a specialist in broadband, security, cloud computing, UC, cloud communications, and disaster recovery. How?

AT&T and Verizon have a large catalog, deployed by white-label partners and more than 170,000 employees. And, as we all know, even they can't deliver on all of it well.

Here's the problem with being a specialist in everything: You become a specialist in nothing – to the marketplace. There is just too much noise out there, especially in the cloud space, where prospects need a lot of education. It would be a challenge to brand the company as an expert in five categories. In each category, there are different competitors to position against.

When I see a company list all of its varying expertise, I wonder about a couple of things: its longevity and its ability to deliver a quality customer experience. On the longevity, it costs money to deliver cloud services – both in terms of hardware and talent (payroll). It isn't unusual for a company tight on cash to start spreading out services to capture any and all possible revenue. So a wide breadth of services is a warning light to me.

As I spoke of earlier, delivering a quality customer experience is a challenge when delivering just one service (like hosted PBX). When you add other services to the mix like security and DR, the customer on-boarding is going to be different.

I'm not saying don't have a catalog of services. I am just saying pick one or two service categories where you can position the company as an expert and deliver an exceptional customer experience. That would be all the marketing you would need. IT

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

Channel Briefs

ANPI Forges Multiple New Partnerships

Hosted UC company ANPI in September added a variety of new partners to its ranks. That includes consulting firm and master agent Converged Network Services Group, which has offices in Georgia, New York/New Jersey, North Carolina, Texas, and Washington, DC. CNSG is one of the largest master agencies. Distributor Intelisys is also now a ANPI Premier Partner Program member. Master agent Sandler Partners has also come together with ANPI, whose UC solution offers mobile access, content sharing and conferencing, along with system features such as call recording, fax, video, chat and web meetings.

AT&T API Addresses Reseller Needs

AT&T has introduced an API platform it says speaks to AT&T Partner Exchange resellers that want to customize the quoting and ordering experience for their sales teams and business customers. AT&T will also be making the platform available for third parties to connect and create applications and value-added services to support AT&T's expanding roster of solution providers in the program. The platform is also being made available to AT&T's other indirect channels.

MegaPath Offers New SPIFF

Managed voice, data, security and cloud services provider MegaPath says its channel partners can now earn double SPIFFs when selling the company's hosted voice service and its new UC services, on top of recurring commission payouts. In addition, MegaPath is rewarding partners for selling its UC service with a new Gold Rush contest. In addition to the partner's monthly commission, for each qualifying contract with a one, two-, or three-year term, MegaPath will pay a one-time SPIFF of 200 percent of the monthly recurring charges of the hosted voice and/or UC services ordered. The contest rewards partners with up to three gold bars, currently valued at approximately $1,300 each, for selling voice seats with UC. The top three performers will receive prizes, with the grand prize a California Gold Country trip.

Telarus Adds Engineering Resources

Distributor Telarus Inc. has tapped Tyler Smith as vice president of engineering. In this role he will head up the company's newly created engineering department, which will provide carrier-neutral engineering services to its 2,000 independent sales partners. The Engineering program is part of the new Telarus Partner Benefits program, which grants free engineering hours to partners who achieve the highest levels of aggregate sales volume. New partners, or partners with lower levels of aggregate sales volume, can pay for engineering hours a-la-carte. IT

Industry Leaders Make TODO List

A new open source initiative called TODO – for talk openly, develop openly – is gaining steam. The group includes such tech industry leaders as box, Dropbox, Facebook, Google, Square, and Twitter, among others. And it will work to address challenges related to consuming and running open source programs. In a brief September blog post, Facebook's James Pearce wrote "our overall goal in this collaboration is to make open source easier for everyone. We want to run better, more impactful open source programs in our own companies; we want to make it easier for people to consume the technologies we open source; and we want to help create a roadmap for companies that want to create their open source programs but aren't sure how to proceed."

API Economy Changes Business Models

The number of open APIs is projected to reach 30,000 by 2016, says IBM Fellow Jerry Cuomo. The proliferation of APIs, as TMCnet's Doug Mohney reports, has the potential to level the playing field and allow organizations of all sizes to compete in new ways. APIs provide a way for any company or organization to offer access to data and services through the cloud in a controlled fashion. Mobile and the cloud have been the twin drivers for APIs, providing a structured framework and infrastructure for businesses to offer access to systems and services. Any organization can use APIs to automatic workflow tasks and weave multiple services together in an affordable fashion, while doing so without having to break the bank. This model is resonating with businesses, as Salesforce.com generates more than half its revenues through its APIs, says a piece in Forbes.

Codio Enables Free Browser-based Code Execution

New from Application Craft UK is Codio, a web-based coding platform that allows software developers to write and execute code for free using just a browser. It automatically and instantly creates a dedicated virtual server for each individual coding project. This allows developers of any skill level to build both front-end and back-end applications in almost any programming language. Each Codio project is pre-installed with NodeJS, Ruby, Python, Java and C compilers as well as Git and Mercurial and other developer tools.

Digium, TCG Join Forces

Asterisk inventor Digium has signed on master agent Telecom Consulting Group to the Digium Cloud Agent Program. That means TCG agents will be able to sell Digium's Switchvox Cloud Unified Communications phone system.

GENBAND Takes the Wraps off Kandy

Adding real-time communications to an application has traditionally required specialized skills, but GENBAND on Sept. 16 officially took the wraps off a solution called KANDY, which simplifies and expedites the creation and delivery of real-time communications applications. The idea behind KANDY is to package all the pieces entailed in real-time communications enablement together so business software providers, long-tail developers, network service providers, and systems integrators can quickly and easily expand existing offerings or introduce new ones. Paul Pluschkell, GENBAND's executive vice president of strategy and cloud services, emphasized that KANDY isn't a static platform, but rather a dynamic "creative storefront" to enable innovation.

Another Satellite from Red Hat

Red Hat Satellite 6 is now generally available. It provides complete lifecycle management of Red Hat systems with provisioning software distribution, patch and configuration management, and subscription management across physical, virtual and cloud environments. It aims to simplify things by reducing the number of tools needed to address these requirements, and allow for scaling of both physical and virtual, and private and public cloud environments.

Asterisk and FreePBX: It Takes a Community

At the recent ITEXPO in Las Vegas, Schmooze Com.com Inc. sponsored a lunch session featuring Philippe Lindheimer, vice president of Schmooze Com Inc.; Mark Spencer, founder and CTO of Digium and father of Asterisk; and Allison Smith, CEO of The IVR Voice. Spencer discussed the maturity of open source communications as having evolved from a time in which people wanted to be part of a tech movement to one in which community members are looking to solve real business problems. Lindheimer added the great thing about FreePBX is that, "It is no longer just appliances doing what they are doing as dictated by [a] manufacturer. The community thrives on hearing and listening to what the community needs." FreePBX takes the Asterisk telephony engine, adds PBX capabilities, dialplan logic, and extra features that turn it into a fully featured UC system, all managed from a web browser-based GUI. IT

By Amir Khan

Virtual Teller Accelerates Service to Bank Customers

If you need to do business in person at your bank, you've no doubt experienced long lines and interminable waits to reach a teller cage. But what choice has there been, short of timing your visit to avoid the bank's rush hours? For a bank, it poses the risk of losing a customer to a competitor across the street.

Well, the long waits may be coming to an end just as soon as enterprise IT departments adopt new software-defined WAN technology. That technology has recently been field-tested and is currently being validated by the toughest of critics: Fortune 100 global organizations with much at stake in every corner of their network operations.

Virtual tellers are tellers from one bank branch who are essentially on call to serve another branch – not in person but over an HD video connection. Either branch can dedicate one or more virtual tellers to the other branch when waiting times would otherwise be unacceptably long, solving the problem just as quickly as it takes to establish a connection. Another option is to have a pool of tellers at centralized facilities.

Was such a service possible in the past? Possible? Yes. Practical or cost effective? No.

Until 2013, the basic architecture of the WAN had changed only in small increments. The choices in front of you were expensive multipoint connectivity over MPLS, or traditional hub-and-spoke architectures over broadband. Improvements in communications protocols led the way, speeding data rates, improving fault tolerance, and increasing security – all essential improvements that, still, could not overcome the shortcomings of the WAN's prevailing hub-and-spoke architecture. That's because that architecture makes it virtually impossible (in terms of both technology and economics) to establish a direct connection between any two branches or offices of a bank, or, for that matter, of any business with numbers of regional offices.

Furthermore, with the traditional WAN model, performance penalties can be stiff, depending on the speed of each network hop, router latencies, or delays in accessing datacenter server resources. As much as five years before 2013, innovators began to envision a better WAN architecture, one that would employ the best tenets of software-defined networking to overcome the massive costs and months-long waits to implement what users would think should be routine changes and improvements.

Fast-forward to 2014, and let's look at the before and after. Until recently, connecting two branches over a hub-and-spoke WAN architecture required two separate communication links; one link between a branch and the bank's central data center, and a second link from the data center to a second branch.

There were alternatives. One was to deploy a virtual-teller network over broadband with IPsec security. However, that approach brings complications, with manual configuration needed at every branch, complex policy at every device, the need to maintain security credentials, and the complications and costs of managing a separate network.

Today, with SD-WAN architecture that provides tight integration of routing, security and policy, it's a routine operation to bypass a WAN's native hub-and-spoke architecture and direct link two bank branches over highly secure network connections.

Today, with SD-WAN architecture that provides tight integration of routing, security and policy, it's a routine operation to bypass a WAN's native hub-and-spoke architecture and direct link two bank branches over highly secure network connections that are typical in enterprise deployments. This not only relieves the bandwidth bottleneck by augmenting traditional MPLS circuits with broadband connections, but it also can be integrated seamlessly with existing infrastructures. In addition, the architecture enables arbitrary topologies: hub-and-spoke where needed, and spoke-to-spoke where needed. A virtual teller application built on such a model, while being deployable in a matter of hours, benefits from enabling high-end bandwidth connections that integrate into existing systems, by providing the flexibility to scale, and by eliminating rigidity in the configuration of tellers' terminals.

In short, new SD-WAN architectures defy the limitations of existing WAN architecture by providing freedom to make multipoint-to-multipoint connections easily – which IT accomplishes by changing configuration parameters on the network rather than changing the network architecture itself.

The many operational improvements made possible by SD-WAN architecture are just now coming to light, as enterprises test the technology departmentally and often for specific applications. But one thing is clear now: A new approach that benefits IT departments and WAN users across all industries has become a key to massively accelerating the rollout of new WAN applications and the substantial ROI that each can deliver. IT

Amir Khan is co-founder and CEO at Viptela (www.viptela.com).

By Christian Twardawa

Network Management

Finding the Perfect Monitoring Solution for Your IT Infrastructure

In today's technology environment, the IT landscapes of small and midsized organizations tend to be just as complex as those of their larger counterparts, but on a smaller scale. A sound IT infrastructure, including the company network, is just as important to small and midsized companies as it is to larger businesses, but smaller companies often have small IT teams or even a single administrator. That's why auxiliary tools, like network monitoring solutions, are becoming even more important for smaller businesses.

Bottlenecks or failures during data exchange can interrupt critical processes, resulting in loss of opportunities and a hit to the brand's reputation. Continuous server and network monitoring is critical since it identifies and fixes problems before serious damage occurs. Network monitoring helps companies avoid performance bottlenecks and improve service quality. But how does a business choose the right network monitoring solution?

When looking for the perfect monitoring solution, small and midsized companies must first identify which areas of the network environment should be monitored. In addition to the usual monitoring of firewalls, switches and servers, modern monitoring solutions offer a variety of options for keeping an eye on the entire IT network.

To define the necessary range of function of a prospective monitoring solution, IT professionals should first conduct an in-depth analysis of all critical components. It's important that any upcoming expansions are taken into consideration as well: Is virtualization of specific areas planned? Should VoIP or IPV6 be implemented, or should additional branches be included in the foreseeable future? Switching to a new solution or implementing additional tools is usually more expensive and requires more effort than implementing a comprehensive monitoring software from the start.

Accurately Evaluating Services and Costs

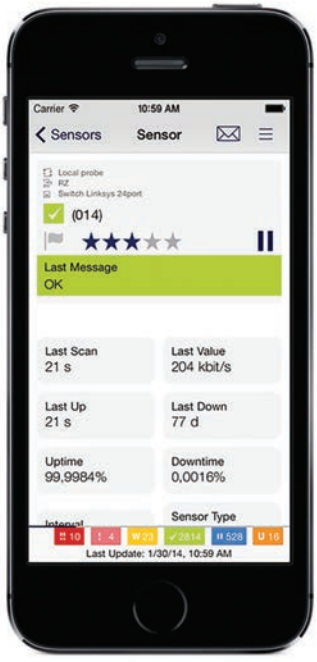
Modern network monitoring solutions prove that multiple expensive, customized solutions are not necessary. Affordable solutions that deliver data on nearly all processes in the network do exist on the market. They not only monitor and trigger alarms if errors occur, but are also able to actively support the IT team in dealing with emerging problems by restarting services or executing .exe files, for example.

Contemporary network monitoring solutions offer corresponding apps for mobile devices that enable users to confirm alarms or call up information using graphs and maps while on the go. (See example.) Specialized full-screen dashboard views for tablets and smart TVs are also convenient and available on the market today.

Price is also an important factor when selecting and installing modern network monitoring software. It is critical for companies to know about cost traps since many providers offer nontransparent licensing models with hidden costs.

The cost of the basic installation alone is not an accurate measure, as it does not necessarily reflect the total cost of the solution. Systems that seem inexpensive at first might not have scaling options. Integrating new locations, devices, etc., often requires expensive add-ons and modules.

Programming requirements and time needed for implementation should also be kept within reasonable limits. Solutions that are easy to configure and offer clear operating menus simplify installation and later usage enormously.



Network monitoring has the potential to deliver incalculable value to midsized companies, which is why the majority now use a network monitoring solution. There are comprehensive solutions available that can monitor the entire IT landscape, are easy to use, and affordable to purchase and implement. But before selecting a solution, IT personnel and administrators must carefully define their unique monitoring requirements. IT

Christian Twardawa is COO of Paessler AG (www.paessler.com).

ADT, IFTTT Enable Exciting Home Automation Possibilities

Security services company ADT and IFTTT plan to test a beta version of an ADT Pulse Channel on IFTTT. The effort involves connecting a customer's ADT Pulse-enabled home with more than 100 existing channel partners to enable IFTTT-powered if-this-then-that capabilities. ADT has developed various proof of concepts on this front. Here are a few examples: if a wearable changes from sleep to awake status, the security system is disarmed; if a phone alarm goes off at 6:45 a.m., then the ADT Pulse-connected coffee machine is turned on; if the doorbell rings, the subscriber receives an ADT Pulse real-time video clip of the front door. "ADT has more than 850,000 Pulse customers who enjoy the benefits of secure, smart home technology, and we continue to pioneer efforts that advance the market and provide the best home automation experience to our customers," said ADT Chief Innovation Officer Arthur Orduña. "Together, ADT and IFTTT can provide homeowners an integrated smart home experience with a single app: ADT Pulse. Through this relationship, we're able to unlock all of the exciting possibilities of home automation by creating a bridge between a customer's home and some of the world's most popular content, services, and devices."

Big Blue Adds to Its Security Arsenal

IBM recently announced the acquisition of cloud security services provider Lighthouse Security Group LLC. In response to the challenging environments the BYOD trends creates for IT staff, Lighthouse Security Group's Gateway platform protects identity and data. IBM also on this front has purchased security software outfit CrossIdeas. By integrating the businesses of Lighthouse Security Group and CrossIdeas with IBM's identity and access management offering, Big Blue says, it will be able to offer a full suite of security software and services that protect and manage a user's identity. "Business models are rapidly evolving as employees conduct more of their work offsite. Protecting this data and who has access to it has become a challenge, costing our clients time and money," says Kris Lovejoy, general manager of IBM Security Services. "With this acquisition, IBM provides a unique identity and access management offering that combines proven software and analytics technology with expert managed services that make it easy for businesses to tackle the complexities of security in this new digital world."

Home Depot Fixes to Address Security in Light of Breach

The Home Depot recently joined the ranks of Michael's, Target, and TJ Maxx in having experienced a security breach. The home improvement retailer says the breach was to its payment data systems, which could impact customers using payment cards at its U.S. and Canadian stores. The breach was still under investigation at press time, but the company in mid September said it was looking at activities since April and already had "taken aggressive steps to address the malware and protect customer data." The company began offering free identity protection services, including credit monitoring, to any customer who used a payment card at a Home Depot store in or after April 2014.

Study: BYOD Believed to be a Major Risk Factor

A new study by TEKsystems indicates 72 percent of IT professionals believe sensitive company data is at risk due to employees accessing information from personal devices. That's a 1 percent drop for the firm's study last year. Despite this risk, however, 64 percent of those IT folks say their company either lacks a BYOD policy or has not communicated that policy. This has increased by 21 percent from 2013, when 43 percent identified the same lack of guidelines and best practices.

New Solution Targets Security Related to Health Care

MedLok has introduced a multi-factor authentication and data storage solution for the health care industry. The cloud-based solution encrypts user data, then fragments and disperses it across 12 locations around the world. It safeguards sensitive data and records by requiring medical staff to use a self-service physical PassKey or mobile token to gain network access, rather than providing a username and password. "MedLok has completely changed the way user information is protected and stored, ensuring medical institutions and their patients never have to worry about hackers getting their hands on private files and information," Steven Grant, vice president of operations for MedLok, said. IT

Nextel Founders Buy Sprint Licenses

Sprint has sold its 900mHz licenses, which represent about 6mHz nationwide, to Pacific DataVision Inc., which recently raised more than $218 million in equity funding in a private placement with institutional investors. PDV, which sells mobile workforce management solutions, says that makes it the only nationwide licensee of spectrum focused on launching a state-of-the-art two-way radio network dedicated to serving businesses. The service will target dispatch-oriented small and medium-sized businesses in the major metropolitan markets of the United States and will be offered primarily through Motorola Solutions Inc.'s Authorized Dealer Network. PDV leaders founded Nextel, which Sprint purchased in 2005.

Small Cells Recapture the Spotlight

Three of the largest players on the cellular network infrastructure scene recently unveiled new small cell offerings. Ericsson unveiled what it calls the fastest, most flexible picocell on the market. The tablet-sized Ericsson RBS 6402 was designed to address the mobile broadband needs of small buildings such as suburban hotels and strip malls under 50,000 square feet. The LTE, WCDMA and Wi-Fi solution is unique, according to Petter Blomberg, strategic product manager of small cells at the infrastructure supplier, in that it supports 10 frequency bands in one box, which is helpful as service providers transition from 2G, to 3G, to LTE; allows for remote software activation, which can reduce a carrier's operational expenses; and enables LTE speeds of up to 300mbps, which he said is more than double the capacity of competing products now on the market. Alcatel-Lucent, meanwhile, announced the 9962 Multi-Standard Enterprise Cell. This is also slated for general availability at the beginning of 2015. This product, which Alcatel-Lucent developed in collaboration with Qualcomm Technologies Inc., also allows service providers to extend 3G, 4G LTE and Wi-Fi connectivity into buildings for better coverage. Alcatel-Lucent calls this product the first small cell of its type to support both 3G and 4G LTE connectivity using a single chipset that also enables carrier aggregation. As for Nokia Networks, it unveiled a small cell base station called Flexi Zone G2 Pico, and an indoor planning service that leverages 3-D geolocation. Flexi Zone G2 Pico base station is a 3.5 GHz TD-LTE Advanced Carrier Aggregation Pico with 4x4 MIMO for LTE and also integrates Wi-Fi 802.11ac.

Companies Merge for Double-Barrel Strategy

NetMotion Wireless and Lumension Security have combined to create a new company called SecureWave Software. The firm plays in the converging enterprise mobility and IT security markets, which it notes as forecast to reach $340 billion and $95 billion by 2017, respectively.

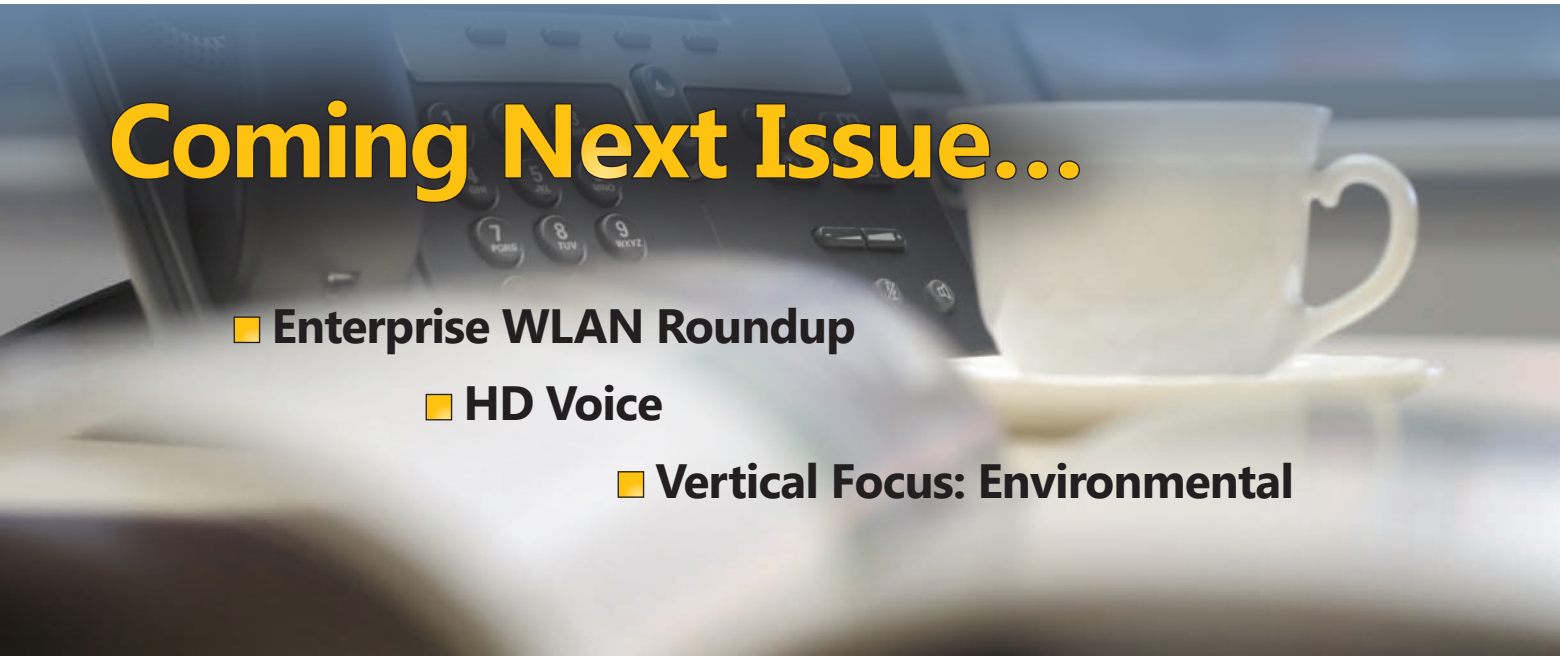
Lower-Level LTE is Coming to Address IoT

Many Internet of Things endpoints don't and won't require the high speeds that today's LTE networks deliver. However, some of the largest cellular service providers are sunsetting their older, 2G networks. To fill the gap, says Eran Eshed, co-founder, vice president of marketing and business development at chip company Altair, we're going to see LTE-based solutions that deliver the long range and reliability of LTE, while offering less bandwidth and more affordability than the LTE most of us know today. As soon as next year, Altair will disrupt the M2M space with the introduction of new, lower-level LTE-only chipsets that address the cost and power issues that to date have made LTE less than an ideal match for most IoT applications, he says. 3GPP already has some of the pieces in place to move Altair and the M2M ecosystem along this path, he indicates, pointing to the group's work on Category 0, which delivers bandwidth at 1mbps and below and for which we should have standards within a year or a year and a half, he says. Not only will Category 0 LTE solutions deliver more appropriate bandwidth levels for M2M applications, says Eshed, they will outfit service providers – which are seeing strong pressure coming from proprietary, unlicensed spectrum technologies like Sigfox – with a better solution. LTE is a better choice, he explains, because it's more reliable and has longer range than some of these other options.

ORBCOMM Launches Service on OG2 Satellites

Satellite company ORBCOMM Inc. has launched commercial service on its first six OG2 satellites, which will support M2M messaging and automatic identification system service for its global customers. ORBCOMM anticipates launching the remaining eleven OG2 satellites and enhanced OG2 services in the fourth quarter of 2014. The new infrastructure promises to increase network capacity, and enable faster message delivery, larger message sizes, and better coverage at higher latitudes. IT

Advertising Index



By Peter Bernstein

Top 10 Technology Trends for 2015

Gartner recently came out with its list of the top 10 technology trends that will be strategic for most organizations in 2015. They cover three themes: the merging of the real and virtual worlds, the advent of intelligence everywhere, and the technology impact of the digital business shift.

Computing Everywhere

As mobile devices continue to proliferate, Gartner predicts an increased emphasis on serving the needs of the mobile user in diverse contexts and environments, as opposed to focusing on devices alone.

"Phones and wearable devices are now part of an expanded computing environment that includes such things as consumer electronics and connected screens in the workplace and public space," said David Cearley, vice president and Gartner Fellow. "Increasingly, it's the overall environment that will need to adapt to the requirements of the mobile user."

The Internet of Things

The combination of data streams and services created by digitizing everything creates four basic usage models – manage, monetize, operate, and extend. These four basic models can be applied to any of the four "Internets." Enterprises should not limit themselves to thinking that only the Internet of Things (assets and machines) has the potential to leverage these four models. For example, the pay-per-use model can be applied to assets (such as industrial equipment), services (such as pay-as-you-drive insurance), people (such as movers), places (such as parking spots), and systems (such as cloud services). Enterprises from all industries can leverage these four models.

3D Printing

Worldwide shipments of 3D printers are expected to grow 98 percent in 2015, followed by a doubling of unit shipments in 2016. 3D printing will reach a tipping point over the next three years as the market for relatively low-cost 3D printing devices continues to grow rapidly and industrial use expands significantly. New industrial, biomedical and consumer applications will continue to demonstrate that 3D printing is a real, viable and cost-effective means to reduce costs through improved designs, streamlined prototyping and short-run manufacturing.

Advanced, Pervasive and Invisible Analytics

Analytics will take center stage as the volume of data generated by embedded systems increases and vast pools of structured and unstructured data inside and outside the enterprise are analyzed. Cearley said "analytics will become deeply, but invisibly embedded everywhere."

Context-Rich Systems

Ubiquitous embedded intelligence combined with pervasive analytics will drive the development of systems that are alert to their surroundings and able to respond appropriately. Context-aware security is an early application of this new capability, but others will emerge. By understanding the context of a user request, applications can not only adjust their security response but also adjust how information is delivered to the user, greatly simplifying an increasingly complex computing world.

Smart Machines

Deep analytics applied to an understanding of context provide the preconditions for a world of smart machines. This foundation combines with advanced algorithms that allow systems to understand their environment, learn for themselves, and act autonomously.

Cloud/Client Computing

The convergence of cloud and mobile computing will continue to promote the growth of centrally coordinated applications that can be delivered to any device.

In the near term, the focus for cloud/client will be on synchronizing content and application state across multiple devices and addressing application portability across devices. Over time, applications will evolve to support simultaneous use of multiple devices.

Software-Defined Applications and Infrastructure

Agile programming of everything from applications to basic infrastructure is essential to enable organizations to deliver the flexibility required to make the digital business work.

To deal with the rapidly changing demands of digital business and scale systems up — or down — rapidly, computing has to move away from static to dynamic models. Rules, models and code that can dynamically assemble and configure all of the elements needed from the network through the application are needed.

Web-Scale IT

Web-scale IT is a pattern of global-class computing that delivers the capabilities of large cloud service providers within an enterprise IT setting. The first step toward the Web-scale IT future for many organizations should be DevOps — bringing development and operations together in a coordinated way to drive rapid, continuous incremental development of applications and services.

Risk-Based Security and Self-Protection

Security-aware application design, dynamic and static application security testing, and runtime application self-protection combined with active context-aware and adaptive access controls are all needed in today's dangerous digital world. This will lead to new models of building security directly into applications. IT

Peter Bernstein is senior editor with TMCnet, the online entity of INTERNET TELEPHONY parent company TMC.

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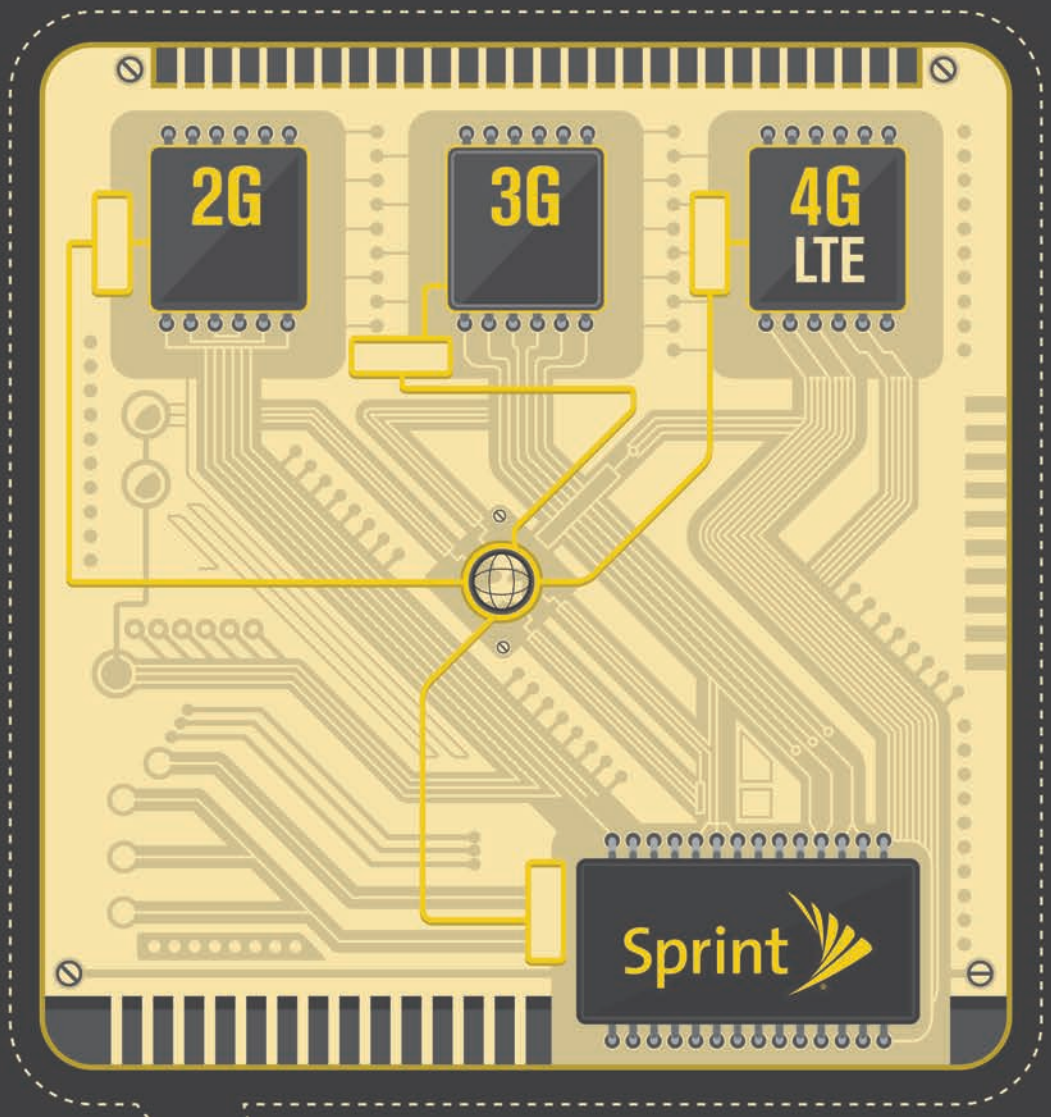

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