



# INTERNET TELEPHONY®

The IP Communications Authority Since 1998™

**Inside:**  
The Future of  
Networking is Now  
Alcatel-Lucent  
Can Show You How

**Votacall**  
Brings Its

# Unique Flavor

to Cloud-Based  
Communications

Making the Social  
Enterprise Reality

FreePBX World  
Supplement

What's New in  
the Satellite Orbit

POSTNET STD  
9 AND  
US POSTAGE  
LEBANON, KY  
PERMIT # 797

800 Connecticut Ave., Norwalk CT, 06854  
ELECTRONIC SERVICE REQUESTED



# The Global **TOP 3** SIP Phone Provider



## Ultra-elegant Gigabit IP Smart Phone SIP-T48G

We hope to meet you in Yealink booth !

Exhibitions	Time	Place	Yealink Booth
ITEXPO West	Aug.11-14, 2014	The Rio Las Vegas	320
Could Partners	Sep.08-10, 2014	Moial Convention Center, New Orleans	311
BroadSoft Connections	Oct.12-15, 2014	The Westin Kierland Resort & Spa Scottsdale, Arizona	TBD

Group Publisher and Editor-In-Chief,  
**Rich Tehrani**, (rtehrani@tmcnet.com)

#### EDITORIAL

Group Editorial Director, **Erik Linask** (elinask@tmcnet.com)

Executive Editor, IP Communications Group,  
**Paula Bernier** (pbernier@tmcnet.com)

#### TMC LABS

CEO, **Rich Tehrani**  
(rtehrani@tmcnet.com)

#### ART/DESIGN

Associate Vice President of Creative, **Alan Urkawich**  
Graphic Designer, **Mary Beth Weiss**  
Production Manager, **Stephanie Thompson**

#### EXECUTIVE OFFICERS

**Nadji Tehrani**, Chairman and Founder  
**Rich Tehrani**, CEO  
**Dave Rodriguez**, President  
**Michael Genaro**, EVP of Operations

#### ADVERTISING SALES

Sales Office Phone: 203-852-6800

##### VP Business Development

**Anthony Graffeo**, 203-295-0234 (agraffeo@tmcnet.com)

##### VP Events

**Joe Fabiano** (jfabiano@tmcnet.com)

##### AVP of Client Services

**Jaime Hernaez**, ext. 217 (jhernaez@tmcnet.com)

#### SUBSCRIPTIONS

Circulation Director, **Steph Thompson**, ext. 157  
(sthompson@tmcnet.com)

**INTERNET TELEPHONY**® magazine is published monthly except February and August. Annual digital subscriptions are free to qualifying U.S., Canada and Foreign subscribers. Annual print subscriptions are free to U.S. qualifying readers; \$69.00 U.S. non-qualifying, \$99.00 Canada, \$119.00 foreign qualifying and non-qualifying. All orders are payable in advance in U.S. Dollars drawn against a U.S. Bank. Connecticut residents add applicable sales tax. For more information, contact our Web site at [www.itmag.com](http://www.itmag.com) or call 203-852-6800.

POSTMASTER: Send address changes to: **INTERNET TELEPHONY**®, Technology Marketing Corporation, 800 Connecticut Ave, 1st Floor East, Norwalk, CT. 06854-1628 USA. Canada Post: Publications Mail Agreement # 40612608, Canada Returns to be sent to: Pitney Bowes International, PO Box 25542, London, ON N6C 6B2, CANADA

#### EXHIBIT SALES

Sales Office Phone: 203-852-6800

VP of Events, **Joe Fabiano** (jfabiano@tmcnet.com)

Companies whose names begin with A-L or #s:

Sr. Global Events Director, **Maureen Gambino**  
(mgambino@tmcnet.com)

Conference Sales Director,

**Frank Coppola** (fcoppola@tmcnet.com)

#### About **INTERNET TELEPHONY**®

Internet telephony is revolutionizing telecommunications through the convergence of voice, video, fax, and data, creating unprecedented opportunities for resellers, developers, and service providers alike. **INTERNET TELEPHONY**® focuses on providing readers with the information necessary to learn about and purchase the equipment, software, and services necessary to take advantage of this technology. **INTERNET TELEPHONY**® readers include resellers, developers, MIS/networking departments, telecom departments, datacom departments, telcos/LECs, wireless/PCS providers, ISPs, and cable companies.



## The New Software Telco

If telcos were animals they'd be tortoises. And if the new breed of service providers – the over-the-top types – were, they'd be hares.

The moral of the tortoise and the hare tale is that slow and steady wins the race.

Steady seems OK, but slow doesn't work so great when you're competing in a fast-moving world in which new market entrants are eating your lunch, time-to-market is key, and consumers are more informed and demanding than ever.

So the telcos are starting to look at how to change the way they run things.

That includes both rethinking their approach to the market, and altering their networks to support this new direction.

That involves adapting to current market realities by adopting software-centric platforms and virtualization in an effort to become more efficient, faster, and more flexible. That, the thinking goes, will enable the telcos to

introduce and alter new services and applications more quickly, and to hold down their network overhead in the process.

To help telcos and their partners get a better handle on what's possible on this front, **INTERNET TELEPHONY** magazine's parent company, TMC, hosts an event called Software Telco Congress, during which telcos of all sizes, resellers, and developers come together to learn and network about these issues.

The next Software Telco Congress is being held Aug. 12 through 14 at The Rio in Las Vegas. We hope to see you there.

For more information on the event, visit this link: <http://www.softwaretelco.com/conference/>

The time for telecom transformation is now. One fact illustrating the urgency of this matter is that OTT players have captured 30 percent of voice traffic in seven years, and now service provider voice growth is around 3 percent per year.

The good news is that rather than continue to pull their heads inside their shells, many telcos recently have set out on the path to transform themselves to better compete. That includes both individual telco efforts and industry-wide initiatives such as the ETSI Network Functions Virtualization Industry Specification Group, and the OpenDaylight Project.

As Rich Tehrani, TMC CEO and Software Telco Congress conference chairman, says: "The most powerful trend in computing in the last decade has been a movement to the cloud which has been amplified by the ability to virtualize servers, software and networks making computing more efficient and flexible.

The simple concept of cloud bursting has allowed IT directors to scale software

**Software Telco Congress is  
being held Aug. 12 through 14  
at The Rio in Las Vegas.**

**[www.softwaretelco.com/conference](http://www.softwaretelco.com/conference)**

easily, handling computing peaks without having to purchase the maximal amount of computing resources up-front.

"You can't burst a legacy Class 4 or 5 switch," continues Tehrani. "You can't burst telco equipment which is based on proprietary hardware. The communications service providers of the world have been looking at their IT departments and wondering why they can't achieve the same cost-effective scale and efficiency in their network operations."

Meanwhile, he notes, the threat from OTT – which do take advantage of the efficiencies described above – has never been greater.

"You simply cannot compete with the new breed of telco competitors if you don't move as much of your legacy hardware to software as possible," concludes Tehrani. "It won't happen all at once, but then again the move to VoIP didn't happen overnight, but the carriers who timed it right leapt ahead of the laggards." **IT**

## Will Vobi Make Enterprise Social a Reality?

One of the biggest disappointments in the world of tech predictions has to be the enterprise social space. For years, the common wisdom in the market was that this segment would be booming.

Millennials were supposed to infiltrate the workforce and with them bring a golden age of collaboration, replacing e-mail and many other pieces of software in their wake.

Huge bets were made in the area. Microsoft bought Yammer, and Cisco spent a fortune to launch Quad.

Now, a new company called Vobi is out to change the collaboration/enterprise social market with a service that seems to blend the best of social and e-mail and presentations. Vobi acknowledges past industry failures, but thinks that with more powerful devices on the market and BYOD a fixture in the enterprise, the time is right for the company to become the enterprise collaboration vehicle.

Good point. Companies are using SharePoint, LinkedIn WebSphere, WebEx, Skype, iMessage, and e-mail – and, to be honest, it is a mess. Try to find your communications from six months ago, and you may not remember where to even start looking. Vobi replaces all of the above with a platform that allows for multiparty video, chat, supports mobile apps (Android and iPhone with an iPad-specific app on the way), allows the sharing of YouTube and other videos, lets users scroll through or download presentations as they are being given, and more. Right now, this browser-based solution relies on a plugin, but it will soon allow you to leverage WebRTC. This is a good thing because some antivirus companies like those from AVG are aggressively protecting against the company's web downloads.

I like the name Vobi and the look of its interface. The ease by which you can configure a session and start a chat using Vobi reminds me of any social network you might currently use. And just like these networks, the service will alert you on your mobile device when you receive a message.

Basically, the conversation becomes the driver of the communication, not the

application. The system allows archiving of everything that was presented and shared – meaning there is always a record of what went on. That's noteworthy considering that a typical web presentation is generally forgotten about, and the notes and conversations that went with it are generally inaccessible in the future.

Murali Sitaram of Cisco patiently explained to me years back how knowledge preservation will be essential in corporations as baby boomers retire. His knowledge on the matter is 100 percent accurate. Vobi, like Quad, retains this knowledge in the corporation. (By the way, Quad is no longer sold by Cisco, and it will be serviced only for two more years.)

That brings us back to Vobi. Wes Cole, the company's CEO, thinks the opportunity for Vobi and its customers is immense. He points to special features that differentiate the company from most other solutions. That includes local rendering of vector graphics so they look their best on your particular device. In addition, the service includes screen or application sharing so you can instantly take collaboration to a more personalized level.

Going forward we can expect Vobi to seamlessly work with phones, so when you receive a call from another Vobi user you will be able to instantly add video and screen sharing, etc., to the call. The company also expects to add connections to cloud storage companies, meaning easier sharing of resources within the application and eventually integration with consumer social networks you know and love. E-mail integration will eventually be available and calls will be recorded – they will also be seamlessly transferred as needed from phone to office to cloud.

Vobi makes companies more productive. If you can get workgroups to use the service, they will be more effective than they would be using a range of non-coordinated solutions. The company at press time was offering free trials, after which the cost for Vobi service is \$5 per user per month. There will be free guest connectivity, but guests will need to pay to get more features such as mobile connectivity or the ability to initiate calls. **IT**



TMCnet ([www.tmcnet.com](http://www.tmcnet.com))

### TMCnet EDITORIAL

Group Editorial Director, Erik Linask  
Senior Editors, Paula Bernier, Peter Bernstein  
Assignment Editor, Stefania Viscusi  
Contributing Editorial, Gary Kim, Tara Seals  
Ed Silverstein, Oliver VanDervoort

### TMCnet PRODUCTION

Webmaster, Robert Hashemian  
Associate Vice President of Creative, Alan Urkawich  
Senior Designer & Director of TMCnet Communities and Channels, Maxine Sandler  
Senior Web Designer, Director of Strategic Web Initiatives, Chhityz Thapa  
Operations Manager, Tim Goins ([tgoins@tmcnet.com](mailto:tgoins@tmcnet.com))

### MARKETING

EVP of Operations, Michael Genaro  
Creative Director, Alan Urkawich

### FINANCE

VP Finance, Allen Frydrych  
Senior Accountant, Betsy Estes  
Accounts Coordinator, Charles Hendricks

### READER INPUT

**INTERNET TELEPHONY®** encourages readers to contact us with their questions, comments, and suggestions. Send e-mail (addresses above), or send ordinary mail. We reserve the right to edit letters for clarity and brevity. All submissions will be considered eligible for publication unless otherwise specified by the author.

**INTERNET TELEPHONY®** is a registered trademark of Technology Marketing Corporation. Copyright © 2014 Technology Marketing Corporation. All rights reserved. Reproduction in whole or part without permission of the publisher is prohibited.

### REPRINTS AND LIST RENTALS

For authorized reprints of articles appearing in **INTERNET TELEPHONY®**, please contact:  
The YGS Group Reprint Division  
3650 West Market Street, York, PA 17404  
717-505-9701 or 800-501-9571 x105 • [tmcnet@theYGSgroup.com](mailto:tmcnet@theYGSgroup.com)



### FOR LIST RENTALS

please contact Jill Olsen at [jolsen@listincorporated.com](mailto:jolsen@listincorporated.com) or call 914-765-0700 ext. 105.



A Technology Marketing Publication,  
River Park, 800 Connecticut Ave. 1st Fl.  
Norwalk, CT 06854-1628 U.S.A.  
Phone: 203-852-6800 Fax: 203 295-3773 or 203 295-3717

Subscribe FREE online at [www.itmag.com](http://www.itmag.com)



# You are the Service Provider. You set the menu.

**VoIP Logic** gives you the best platform using the leading technologies to run your Hosted PBX business.



## **Control:**

VoIP Logic allows you all of the control associated with facility ownership. This allows you to **adapt** your offer, **differentiate** from your competition, **evolve** with the market, **retain** ownership of your customer data, **add** new services, features and devices, **choose** network and **prioritize** your technical objectives.

## **Flexibility:**

VoIP Logic provides you the flexibility to determine your cost basis and the options which give your business a distinct advantage. This flexibility puts the key decisions about choosing your **network carriers**, **bandwidth access**, **devices**, **services**, **features**, **platform add-ons** and **external integrations** in your hands.



Let us be your sous chef.

It's your kitchen.

[www.voiplogic.com](http://www.voiplogic.com)

## COVER STORY

## Votacall Brings Its Unique Flavor to Cloud-Based Communications

24



Subscribe **FREE**  
Today!



## Contents

## COLUMNS

- 1 **Top of Mind**  
The New Software Telco
- 2 **Publisher's Outlook**  
Will Vobi Make Enterprise Social a Reality?
- 6 **Guest Room (with Clarizen's Jason Schwartz)**  
Why Social Collaboration Technologies are Failing in the Enterprise
- 8 **Ask the SIP Trunk Expert**  
Demand for SIP Trunking is at an All-Time High
- 8 **Disaster Preparedness**  
Time to Change How We Think
- 10 **Enterprise Mobility**  
HD Voice – Still Coming Soon
- 11 **Infrastructure Peering**  
Freedom Isn't Free, and Neither is the Internet
- 12 **Regulation Watch**  
Revisiting the FCC's CVAA Disability Access Requirements
- 12 **Tech Score**  
The Future of ATCA
- 14 **Rethinking Communications**  
Are You Communicating or Collaborating?
- 16 **UC Unplugged**  
Customer Service Bracing for the Social Cyborgs
- 18 **WebRTC to WebComm**  
WebRTC Deliveries Really Start
- 20 **What's Next**  
LTE and the Rise of Wi-Fi Roaming
- 22 **Wireless Wonk**  
FCC Delivers Regulatory Certainty for Sub-700mHz Cloud-Directed Agile Radios

## Departments

## Strategic Solutions Series

- 29 The Future of Networking is Now:  
Alcatel-Lucent Can Show You How  
*Brought to you by Alcatel-Lucent*

FreePBX World Supplement:  
An Event Addressing the IP  
Phone Solutions

- 34 A Little Background on FreePBX
- 35 FreePBX: An Event Addressing  
the IP Phone Solutions
- 36 The Billion Dollar Game Changer:  
Keynoter to Tell the Story of the  
Open Source Telephony Revolution
- 37 What You Need to Know about  
Schmooze Com Inc.
- 38 A Q&A with Schmooze Com's CEO
- 40 Talking with Schmooze Com's  
VP of Sales & Marketing

## Roundup

- 42 Billing Solutions

## The Channel

- 48 On Rad's Radar: Is It an Overcrowded  
Market?
- 48 Channel Briefs

## Cloud &amp; Data Center

- 49 Fiber Mountain Q&A
- 50 Saving on Reverse Proxy Server Runtime

## Network Infrastructure

- 54 Network Infrastructure Briefs

## Security

- 56 Five Ways to Help Enterprises Secure  
Applications and Customer Data
- 57 Security Briefs

## Unified Communications

- 58 Is Your Company's Software Underused?
- 60 Unified Communications Briefs

## Wireless

- 62 An IoT Booster: Why This Signal Tech-  
nology is Coming Out of the Shadows
- 64 BYOD: An Ongoing Challenge
- 66 What's New in the Satellite Orbit
- 70 Wireless Briefs

## Special Focus

- 72 TMC Labs Innovation Awards

## Ad Index

- 79 Ad Index







# YAMAHA



## Presenting the **YVC-1000**

Yamaha Voice Communication

- Premium Sound Quality
- Versatile Connectivity
- Superior Scalability

**fōntel**  
inc.

As the importer of the Yamaha Projectphone and YVC Series product lines, Fontel is in the process of building a network of authorized resellers. These high quality products, with strong brand recognition, are positioned to support the ever growing web conferencing (audio/video) markets.

**800-238-0787 • [www.fontel.com](http://www.fontel.com)**



## Why Social Collaboration Technologies are Failing in the Enterprise

My mother recently opened a Facebook account, and I wasn't even shocked. That's how normal social media has become in our personal lives. Why can't we collaborate and share in our workplaces the way we do in our private lives? Despite their best efforts, most workplaces see their social business software tossed aside by users. Only when leaders realize that enterprise social operates on a different formula, one that requires delivery and execution as well as collaboration, will social finally take off in the enterprise.

### Missed Expectations

The idea of enterprise social caught fire because it did, in short order, revolutionize some aspects of business. Kickstarter, OurCrowd, and other crowdsourcing platforms let young startups crowdsource their first round of funding, rather than fill out bank loan applications or pitch VCs. Customer support teams mainline Twitter for feedback and support issues. Marketers instantly reach millions of users through Facebook pages and develop and execute marketing campaigns specifically to increase the number of "Likes." Recruiters nail down new talent through LinkedIn.

Business leaders expect enterprise social software to yield similarly promising results for collaboration inside and outside of the organization. But it hasn't been the magic bullet everyone was hoping for. Despite rapid adoption, products haven't met expectations. According to an article in CMSWire ("Gartner MQ for Workplace Social Software: IBM, Jive, Microsoft, Salesforce Lead Volatile Market," 9/16/13), Gartner found that the market for enterprise social software is growing at a compound annual growth rate of 13.4 percent and estimates that it will grow to \$1.4 billion in 2016.

Even so, buyers find it "increasingly difficult to distinguish one vendor's products from the products of other vendors," as noted in the piece. CIOs are taking longer to evaluate the different tools and solutions. This may have led to the disappointing results (decreased year-over-year bookings growth, fewer customer adds) reported by some social business software companies.

Executives are starting to realize that you can't outsource the personal social media model to the business. The goal of enterprise software networks is not merely to share birthday announcements, or comment on the lunch menu

in the cafeteria – but to enable teams to collaborate around work. While Facebook-like tools make it more convenient to broadcast information to diverse teams, they do not help employees and customers to engage in executing on tasks, projects, or deliverables.

### Doing Business is More Than Simply Sharing

In the enterprise, the role of social collaboration is to help get work done faster, better, on time, and on budget. CIOs and other executives who are evaluating their enterprise social software strategy should note the clear difference between broadcast and communication tools and those that enable collaboration to drive results.

The ultimate solution is one that allows team members – whether internal or external – to brainstorm and communicate to dream up new ideas and innovations, and then to use the same tool to drive the idea to execution and delivery.

A good enterprise tool will start with social, then fold in execution and delivery. Users should be able to set up groups around specific initiatives and projects. As needed, groups should have the option to transform their conversations into action items or tasks that need to be completed. Some of those tasks will develop into a project – which requires resources, has milestones, interdependencies, budget and deliverables, and may result in a cost or revenue-generating event. This three-step process is how social communications alchemize into business results.

Decision-makers can use those three steps as tools for evaluating enterprise social media products. There are many social products currently that allow users to share ideas, collaborate with each other, and engage in rich discussion groups. There are also several task management products, which allow groups to manage shared to-do lists. And there are powerful products that help professional project managers balance projects, budgets, resource allocations, portfolios, and schedules and generate the reports their upper management requires. The magic happens when decision-makers can find most or all of these features in one product. The more siloes a platform eliminates, the more "social" – and executable – collaboration becomes. ■

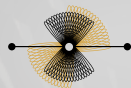
Jason Schwartz is CFO at Clarizen ([www.clarizen.com](http://www.clarizen.com)).

The more siloes a platform eliminates, the more "social" – and executable – collaboration becomes.



# SOME OF THE **BIGGEST** **BRIGHTEST** AND **BEST** COMPANIES IN THE **WORLD...**

...RELY ON US FOR THEIR BUSINESS COMMUNICATIONS NEEDS. Among our more than 5,000 customers are some of the most well respected companies in the world. Stars in their respective industries. They work every day to deliver the best possible service to their customers. And they've learned how to use technology to their advantage. To find out how these outstanding companies are using innovation to deliver great customer experiences, visit [www.inin.com/TheIntelligent](http://www.inin.com/TheIntelligent).



## INTERACTIVE INTELLIGENCE®



By Steven Johnson



# Demand for SIP Trunking is at an All-Time High

SIP trunking has crossed the chasm, becoming a mainstream application that's now in high demand. We're seeing this at Ingate where inquiries about SIP trunking translate to sales, quickly, and existing customers are reordering SIP trunking solutions in higher volume. The opportunity for cost reduction is far too compelling to ignore.

Since SIP trunking hit the scene a few years ago, deployments have evolved to meet the needs of a changing telecommunications industry. Larger deployments with higher numbers of sessions are on the rise. Today, typical deployments handle between 50 and 1,000 concurrent sessions or calls, addressing the needs of medium- to large-sized business looking to adopt secure VoIP over SIP trunks.

Recently even these numbers have started to increase dramatically, especially among call centers adopting SIP trunking to lower costs and to easily provide for remote call agents. The cost differential between

traditional telephony and VoIP is astounding – for call centers making hundreds or thousands of calls a day, the cost savings is tremendous.

With SIP trunking, call centers can also provide customers with enterprise-class real-time services such as click-to-talk and instant messaging. This is a significant competitive advantage.

Cloud deployments are also on the rise. One Ingate customer, a data center, is deploying cloud-based SIP trunking first in Europe, then rolling it out globally. Cloud-based services are beneficial for customers that want the flexibility of serving a wide geographical market from a central location. For their clients, hosted SIP trunking is an opportunity to leverage this technology with lower startup costs, and minimized maintenance costs. It's a win-win for everyone.

The cable industry players also are providing SIP trunks to business customers. For

them, SIP trunking is an expedient way to service a large market with low-cost, high-margin telephony solutions.

The fact that SIP trunking has evolved to become truly enterprise-class has fueled these kinds of deployments. Today, cable operators are installing in multi-site companies supporting thousands of SIP sessions.

Dovetailing with the surge in SIP trunking deployments is interest in WebRTC. Many industry experts agree that WebRTC and SIP trunking will go hand in hand. We look forward to this next evolution in telecom.

Learn how it's all coming together at the SIP Trunking, UC and WebRTC Seminars at ITEXPO this August at the Rio in Las Vegas. See you there. **IT**

*Steven Johnson is president of Ingate Systems ([www.ingate.com](http://www.ingate.com)).*

## Disaster Preparedness

By Rich Tehrani & Max Schroeder

# Time to Change How We Think

Albert Einstein once said: "The world as we have created it is a process of our thinking. It cannot be changed without changing our thinking." And a man name David Shenk commented: "Information, once rare and cherished like caviar, is now plentiful and taken for granted like potatoes."

Einstein's observation above illustrates how we seldom consider exchanging or recalibrating our thinking tool, as it were, for different jobs. The human species surpassed its ability to process new information about the time the first atomic test was conducted at the end of WWII. Unfortunately, we continue to generate information at an ever increasing rate notwithstanding author Shenk's warnings in his book "Data Smog" that the sheer amount of data may actually impair performance rather than improve it.

Confusing information with knowledge compounds the dilemma. A lot of the

information being circulated is of limited value outside of specific industries or specialists. It can only be reclassified as knowledge once it is in their hands. The data smog conundrum presents challenges for IT teams trying to secure company data and operations. Granting company access to workers via a plethora of devices exacerbates the situation by continuing the information proliferation.

The authors are not implying that information should not be made available to workers via IT-approved devices. In fact, from a BC/DR perspective, this is very desirable, but it must be carefully managed (protect the caviar, not the potatoes). Company confidential or customer data is usually secured well, but policies outside these areas can be too tolerant. In critical situations, this adds complexity the job of the IT staff and introduces unnecessary security risks. Consistent with industry standard BC/DR

policies, not all employees require remote access during an emergency. Therefore, bring-your-own-device policies need to be carefully managed (refer to TMC's Enterprise Mobile Solutions channel article March 13, by Laura Stotler). In the event a business emergency or interruption occurs, key management players and the IT staff will require secure access without being blocked or compromised by non-critical workers and their devices.

For additional information and the opportunity to discuss your organization's specific BC/DR needs, we strongly recommend attending ITEXPO Las Vegas 2014, Aug. 11 – 14 at The Rio in Las Vegas. **IT**

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





# Contact Center Solutions

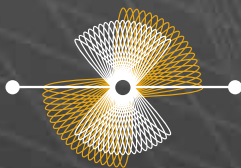


*A global online community*

***Log On Today!***

<http://callcenterinfo.tmcnet.com/>

Sponsored by:



INTERACTIVE INTELLIGENCE®  
Deliberately Innovative



Powered by:





## HD Voice – Still Coming Soon

HD Voice (aka wideband audio) on cellular networks has been coming soon for several years, but on May 15 AT&T finally announced its rollout. So it is almost a year behind T-Mobile and Sprint on this, though ahead of Verizon.

Like Sprint and T-Mobile, the codec AT&T is using is AMR-WB, which isn't particu-

larly modern, but as long as they can all agree on one, it will eventually be better than what we have now. But users won't

hear much difference in their calls for the foreseeable future. First, AT&T is only deploying it in four markets for now. Second it's only going to be available on some phones. Third, I doubt it's going to be gatewayed between carriers without transcoding down to G.711 or worse, G.729A, which

will wash out all its benefits. Fourth, much of the lousy audio quality you are getting on your calls isn't because of

the codec, it's from poor coverage or crowded cells.

It doesn't have to be this way. Because they run over both Wi-Fi and the cellular data network, apps like Apple FaceTime and Google Hangouts are less prone to coverage issues. Their audio codecs are vastly superior to AMR-WB both in terms of frequency response and robustness to poor network conditions, and they offer video as well as voice. So why don't the carriers just go with a similar solution? **IT**

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

---

**Users won't hear much difference in their calls for the foreseeable future.**

---

**TMCnet™ Webinars**

[www.tmcnet.com](http://www.tmcnet.com)

# Fill Your Sales Pipeline with Targeted Leads!

Partner with TMC and make your next Webinar a lead generation machine. Use the power of TMC's media outlets to drive attendance.

**Webinar Benefits:**

- Completely interactive — moderators ask and answer questions and fully engage the attendees
- Take advantage of TMC & TMCnet's Marketing Power
- TMC Webinars are complete turnkey events
- Up to one-hour long and you can determine the topic

Let TMC help you execute your next Webinar. Contact Client Services for details about how you can use the power of TMC publications and TMCnet to draw a large number of qualified attendees. 203-852-6800 or [inquiry@tmcnet.com](mailto:inquiry@tmcnet.com)





## Freedom Isn't Free, and Neither is the Internet

Freedom to live and choose as one wishes is a part of the American Dream. For freedom to exist, there must be laws, and those laws must be enforceable and enforced.

Also, the physical land within which freedom exists must be defended from enemies – foreign and domestic. If the land cannot be defended, it can be attacked and taken over by another ruling body that has a different set of standards and values that most likely will limit, or eliminate freedom. Otherwise, why would the land and/or the law of the land be attacked?

Protection and enforcement of laws to maintain freedom are not free services. They cost time, money, and resources and must be paid for. The police departments, court systems, and military are all compensated for their efforts. U.S. citizens want a superior military protecting our country and way of life, so we are in favor of spending tax dollars on research and development for new weapons, expanding intelligence gathering and surveillance on the enemy, and employing our amazing military personnel – many of whom pay the ultimate price for which no dollar value can really be attributed.

This is how it works in America, right? So, how is the open and free Internet any different? This is the argument for the case that is being built by those that control access to the Internet and those behind them that want access to every bit of information possible.

Think of those access provider entities as landowners. They essentially own paths that lead to an open marketplace within a town square where buyers and sellers meet, but also where individuals congregate and communicate openly with others without the fear that they are being followed, watched, and listened to. The owners of the paths charge a fee for access to the town square for them to generate revenue that goes toward maintaining and repairing the path. The users are getting value and someone needs to operate the path. That seems fair, right? The key is that the path owners never ask the merchant's the volume of what they were selling as a measure of what they would charge.

It is critical to know that the path is a physical place just as the open marketplace is a physical place, but they are not the same as they are each owned by different landlords. So the town square and access to the town square are two totally different things. At one point the town square and the paths to and from it all had the same set of laws governing them that established fairness, trust, and equality for all those that entered, exited, transacted and communicated though, over and within.

Since these laws were established, well-known, and presumably enforceable, there was a significant investment made by the people and merchants that established the town square and marketplace and the location where they would meet and transact. Over time it became so popular that it reached critical mass and became invaluable and a complete necessity.

Now, imagine after all of the investment was made the owners of the paths decided to change the rules.

On May 15 U.S. regulators advanced a net neutrality proposal that would ban Internet providers from blocking or slowing down access to websites but may let them charge content companies for faster and more reliable delivery of their traffic to users, as reported by Reuters.

Simply stated, the Internet access providers will be allowed to perform deep packet inspection to determine which traffic is coming from companies that pay a premium rate, and the rest will get routed to the basic Internet access, which will be provided on a path that has one lane and is not well maintained. There is no need to block, or intentionally slow down, any access to the Internet as every company that does not pay a premium will be stuck in traffic. The routing on to the low-class Internet access path is effectively discrimination, and the congestion caused by all of the other basic, low-budget, garbage traffic is effectively blocking, so a ban functionally would serve no purpose as it would be a part of the legal construct of the new Internet access (net-neutrality) rules. **IT**

*Hunter Newby is CEO of Allied Fiber ([www.alliedfiber.com](http://www.alliedfiber.com)).*

The town square and access to the town square are two totally different things.

By William B. Wilhelm & Jeffrey R. Strenkowski



# Revisiting the FCC's CVAA Disability Access Requirements

In 2011, the FCC released an order implementing provisions of the Twenty-First Century Communications and Video Accessibility Act of 2010 to ensure that people with disabilities have access to advanced communications services and equipment used to provide such services. The CVAA defines ACS to mean interconnected VoIP service; non-interconnected VoIP service (i.e., one-way VoIP services); electronic messaging service; and interoperable videoconferencing service. This definition arguably covers a wide range of equipment providers and service providers, including hosted service providers, offering ACS equipment or services.

Under the FCC's rules, covered ACS service providers and manufacturers

are obligated to make their products and services accessible to people with disabilities as long as it is "achievable" to do so. First, the order sets a wide range of requirements concerning what covered entities must do to ensure accessibility in equipment and services, including accessibility evaluation during product development, product testing through certain standards and protocols (and performance objectives), and product documentation requirements. Second, covered entities must maintain records about efforts to consult with individuals with disabilities, descriptions of accessibility features, and compatibility with peripheral devices. Finally, they must annually certify with the FCC that records are being kept in accordance with the recordkeeping requirements,

as well as provide the FCC with contact information for the handling of consumer complaints related to disability access issues.

Covered manufacturers and providers of ACS (including both two-way and one-way VoIP) that fail to meet the FCC's CVAA requirements may be subject to investigations and fines. The FCC has recently issued public notices reminding VoIP and other covered providers of their obligations under the CVAA and the FCC's regulations, demonstrating the commission's focus on this issue. **IT**

*William B. Wilhelm is a partner and Jeffrey R. Strenkowski is counsel at the global law firm of Bingham McCutchen ([www.bingham.com](http://www.bingham.com)).*

## Tech Score

# The Future of ATCA

The Advanced Telecom Computing Architecture specifications, denoted PICMG 3.X, include a series of specifications originally developed to set requirements for the next generation of carrier-grade communications equipment. These specifications, which were developed over a decade ago, incorporate the latest trends in high-speed interconnect technologies, next-generation processors, and improved reliability, manageability and serviceability. More than 100 companies participate in the AdvancedTCA effort, bringing with them a wide range of industry knowledge covering everything from telecommunications equipment to power supplies. But after huge projections of adoption and more than a decade later, where does ATCA stand as a viable technology for the future?

UNICOM Engineering recently conducted a survey of more than 50 technology com-

panies currently shipping their solutions on ATCA designs to answer this question first hand. What we found is that roughly one-third of those surveyed said they are unsure or do not plan to use ATCA in the next 5 years. Conversely, two-thirds of those surveyed plan to continue with the standard for future products.

Those who are opting out are either moving to standard off-the-shelf rack-mount servers or may still leverage some portions of the standard to create a market-focused vertical solution. The top reasons that companies plan to stay with ATCA are reliability, payload options, and upgrade serviceability. The full redundancy and centralized management features of ATCA along with low mean-time-to-failure continue to make it a solid choice for mission-critical applications. Companies using ATCA have also been able to leverage DSP, SBC, and packet processing

blades that are not viable in other form factors. And after 10-plus years of deployment, many of these companies have been able to upgrade end customers into higher performing platforms using new hardware blades and software without requiring a forklift upgrade of the rack or chassis.

### So what's the final score?

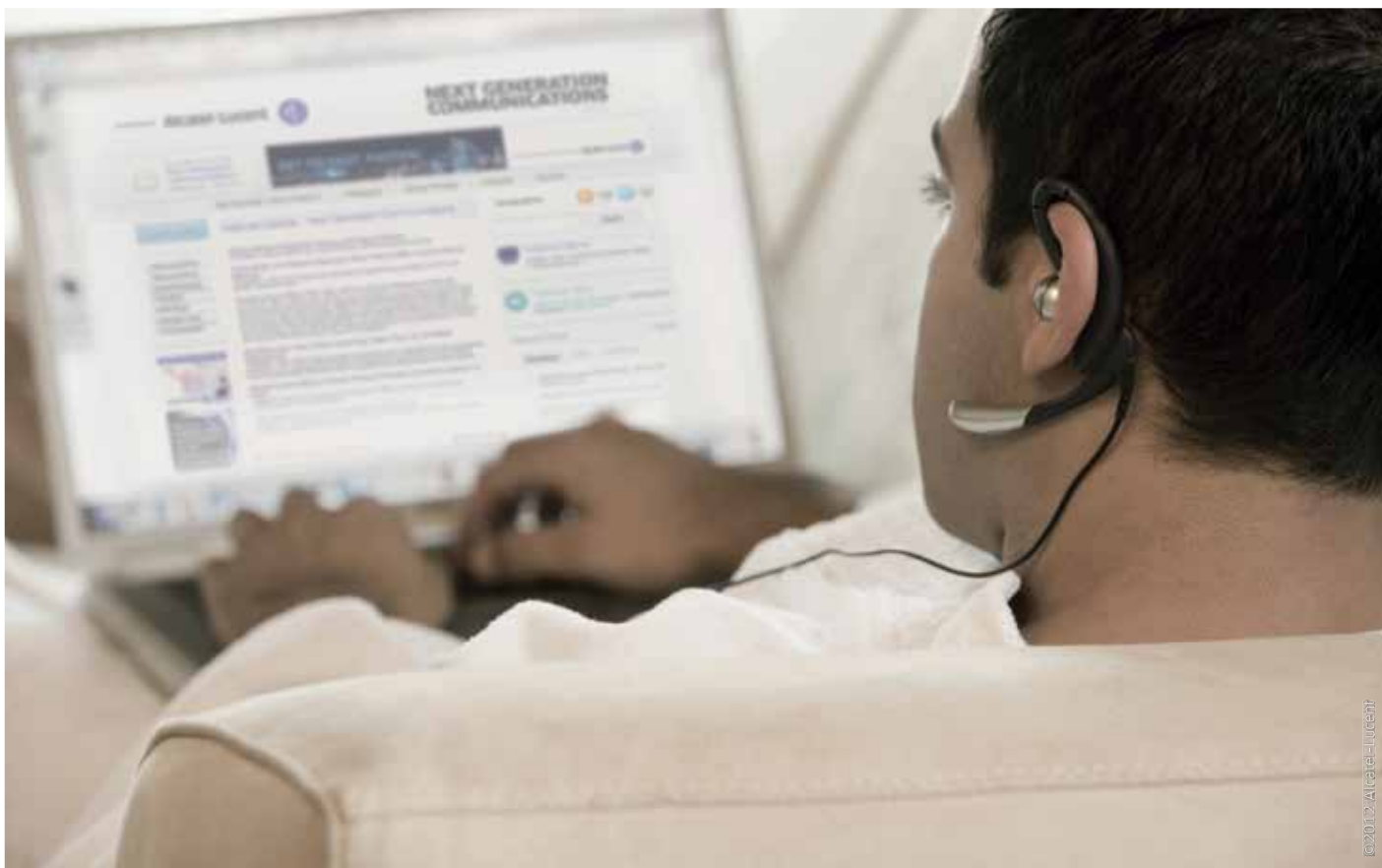
Certainly ATCA has not lived up to the huge projections from its early years, but the companies that are leveraging the standard have reaped a competitive advantage. They have seen higher throughput (up to 100GE egress), lower cost upgrades, and improved field up-time performance. It's clear why these companies plan to stay with ATCA for the foreseeable future. **IT**

*Jeff Hudgins is vice president of marketing at Unicom Engineering ([www.unicomengineering.com](http://www.unicomengineering.com)).*



By Jeff Hudgins





## KEEP UP TO DATE WITH THE LATEST COMMUNICATIONS TRENDS AND BREAKING INDUSTRY NEWS

Visit our Next Generation Communications Global Online Community. As a trusted partner of service providers, enterprises and industries around the world, we deliver the innovation you need to stay ahead.

Explore new thinking on:

- How to generate revenue while reducing OPEX
- New business models and strategies
- How to leverage a high value network and Web 2.0 capabilities
- New ways to deliver a superior customer experience

Join us at <http://next-generation-communications.tmcnet.com> and follow us at <http://twitter.com/NextGenCom>



## Are You Communicating or Collaborating?

When it comes to the theme of my column – Rethinking Communications – this is a pretty central question, and one that keeps recurring in my ongoing research, both when talking to vendors and over the course of industry conferences I've been attending lately.

I come across a wide range of perspectives in my research, and it's clear to me that these terms are not given proper consideration when thinking about technology investments. Large enterprises tend to make more serious distinctions than SMBs, but they're too often used interchangeably and/or mashed together.

You may find such semantics moot, but both vendors and businesses are guilty of these loose associations, and if you're trying to figure out the value of unified communications, this isn't clarifying anything. While both outcomes are desirable, you need to think more critically about the value of each, especially if you're trying to tie business outcomes to your investments in technology.

When UC first came on the market, there was no need to have this discussion, as it was sufficient to talk about the basic idea of unifying all communications on to a common platform. This capability was new, and offered value to IT by virtue of giving them a window to manage all these modes. Previously, everyone did their own thing, with some applications running off-net, effectively locking IT out of these workflows.

### Who really benefits from UC?

Somewhere along the line, collaboration entered the conversation, shifting the focus in a fundamental way. Initially, UC was about giving IT back some control and making their jobs a bit easier. Of course, end users benefited by having more effective communications tools, but I would argue that IT really stood more to gain.

After all, they had a clear problem on their hands. With the rise of web-based communications applications, network control was slipping away to end users who were placing new demands on network services that IT wasn't equipped to manage. On top of that, IT is the prime sales target for UC vendors, and they essentially own it inside the organization, along with all the responsibilities that come with it.

All told, then, restoring some order to IT's domain may well be a valid driver for UC, but it wasn't moving the adoption needle along fast enough. Vendors have a lot invested in UC, especially those who need a roadmap for the post-PBX world. This is the point at which the focus shifted from communication to collaboration.

### What's the difference and why does this matter?

While IT has a major role to play to enable communications, the onus falls squarely on employees when it comes to collaborating. All IT can do is keep the UC platform running smoothly, then step back and let employees go about their business.

When employees collaborate effectively, decisions happen faster, problems are solved more easily, and new ideas translate into success stories more often. In short, communication is about processes, and collaboration is about outcomes.

Management understands these differences, and will respond more favorably to this kind of value proposition. Communicating is table stakes, and while UC will certainly improve the underlying processes, this alone doesn't have a lot of business value. As mentioned above, IT gets some control back this way, but this may not resonate strongly with management. They have bigger issues around sales growth, customer acquisition/retention, cost reduction, profitability, etc. This is where collaboration can have a big impact, especially when management sees this as a core competence to make the business more competitive.

You could say this means vendors are doing a bit of an end-run around IT to spur UC adoption, and it seems to be working. By all accounts, UC growth is trending nicely now, and I would contend this new focus on collaboration is one of the reasons.

This is the reason the UCC moniker has largely replaced the UC moniker among vendors. IT may be the economic buyer, but employees are the end users, or consumers of UC. All employees must communicate – including IT, but it is the UC end user who does all the collaborating. The only way IT can influence those outcomes is by supporting the processes that enable collaboration. ■

*Jon Arnold is the principal at J Arnold & Associates (www.jarnoldassociates.com).*

Vendors are doing  
a bit of an end-run  
around IT to spur UC  
adoption, and it seems  
to be working.





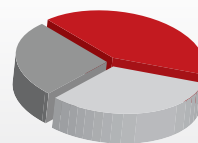
# The Channel – Magnified.

Since 2001, iAgentNetwork has provided tens of thousands of channel partners the latest information on products, services, promos, conferences, training events, roadshows, magazines, newsletters, webinars, press releases, career opportunities and much more via our industry leading e-blast service.

We have the most comprehensive email database of Agents, VARs, VADs, System Integrators, Carriers, Resellers & CLECs in the telecom industry. We have established long-standing relationships with key publications, conferences and associations within the telecom channel. What does that mean to you? We've done all the legwork to identify the potential partners to help you resell your telecom product or service!

iAgentNetwork offers design services for our clients. Our designers are uniquely talented, highly specialized and have years of design experience within the telecom industry. E-mail advertising remains a highly effective form of marketing. iAgentNetwork designers not only have the talent to make your e-blast ads look great, they employ best practices of email marketing to ensure the highest deliverability of your e-blast ad to iAgentNetwork's database.

## iAgentNetwork Database



**9,000**

Master Agents, Agents, International Agents

**7,000**

VARs, VADs, Interconnects & System Integrators

**6,000**

Carriers, Resellers & CLECs

## E-Blast Examples



**Database + Design + Deliverability = RESULTS**



Contact us today to reach the channel tomorrow!  
**(877) 867-2553** or **[sales@iagentnetwork.com](mailto:sales@iagentnetwork.com)**



## Customer Service Bracing for the Social Cyborgs

A new wave of complainers-for-hire could force brands to make radical changes in how they manage social customer service. The speed and spread of new online services that help amplify the lack of – or at least the lag in – customer service response is happening at a rapid pace. And while it's premature to panic, organizations that have a socially-active customer base should put these new complaint-assist services on their radar.

It's no surprise to any B2C organization that a mishandled promotion or a complaint gone viral can be problematic in today's social media environment. Just look at J.P. Morgan and its backfired #AskJPM campaign, or Amy's Baking Company's overly aggressive social media response to ira appearance on a restaurant reality show. Once it's out there, you can't stop it, you can only hope to contain it.

Information, and the ease of consumer access to it, has shifted the scales of power from company to consumer. Empowered by the wealth of information delivered to and managed through their smartphones, consumers have decided to fight back. And a few enterprising companies are helping them. A new wave of applications and services, almost Terminator-like, are coming into the customer service scene designed to do a disgruntled customer's bidding for them. Here are just a few.

### GripeO – A better way to complain

Let's start with the appropriately named GripeO. GripeO aims to increase the visibility of a consumer complaint while motivating a customer service response from the company being complained about. Complaints submitted to GripeO are taken right to the business to be addressed. Some of those companies are GripeO partners, while others will be contacted by GripeO on the consumer's behalf. Look at them as contract complainers who will ratchet up the volume and visibility of the issue you have with a company until it gets resolved to your satisfaction, within reason of course. If this service takes off, it won't be long before griping takes on a life of its own.

### CXPro – The Customer Experience Professionals

CXPro bills itself as a customer experience consulting company specializing in both business-to-business as well as business-to-consumer experience consulting. Its scope of work spans from in-store experience to mobile experience, as well online.

CXPro also has @CXalert, a dedicated Twitter feed that encourages people to tweet good or bad customer experiences so they can retweet and "create accountability for both great and poor service." Unlike GripeO, CXPro's intent is to create a shamestorm of sorts when bad customer service happens, which gives the company an opportunity to illustrate the need for its services to the company affected. But for the consumers, it provides additional volume to their issues and greater leverage to get a more favorable resolution.

A new wave of complainers-for-hire could force brands to make radical changes in how they manage social customer service.

### GoodorBadExperience.com – Air your Views

GoodorBadExperience.com is sort of like a Reddit for customer service. Through a dashboard broken into several different industries, people can submit, view, and vote on customer experiences other people have had with companies. But GoodorBadExperience.com notes that the site is not a platform for slander. The company bills the site as a clever, economical, and cost-effective way for companies (who have subscribed), to monitor their business and customers. Those companies then have the opportunity to engage and respond to those customers on

the site. In other words, if you are not a corporate subscriber, you won't be able to respond to the screamer, angry that your company's service technician never showed up to fix his or her cable.

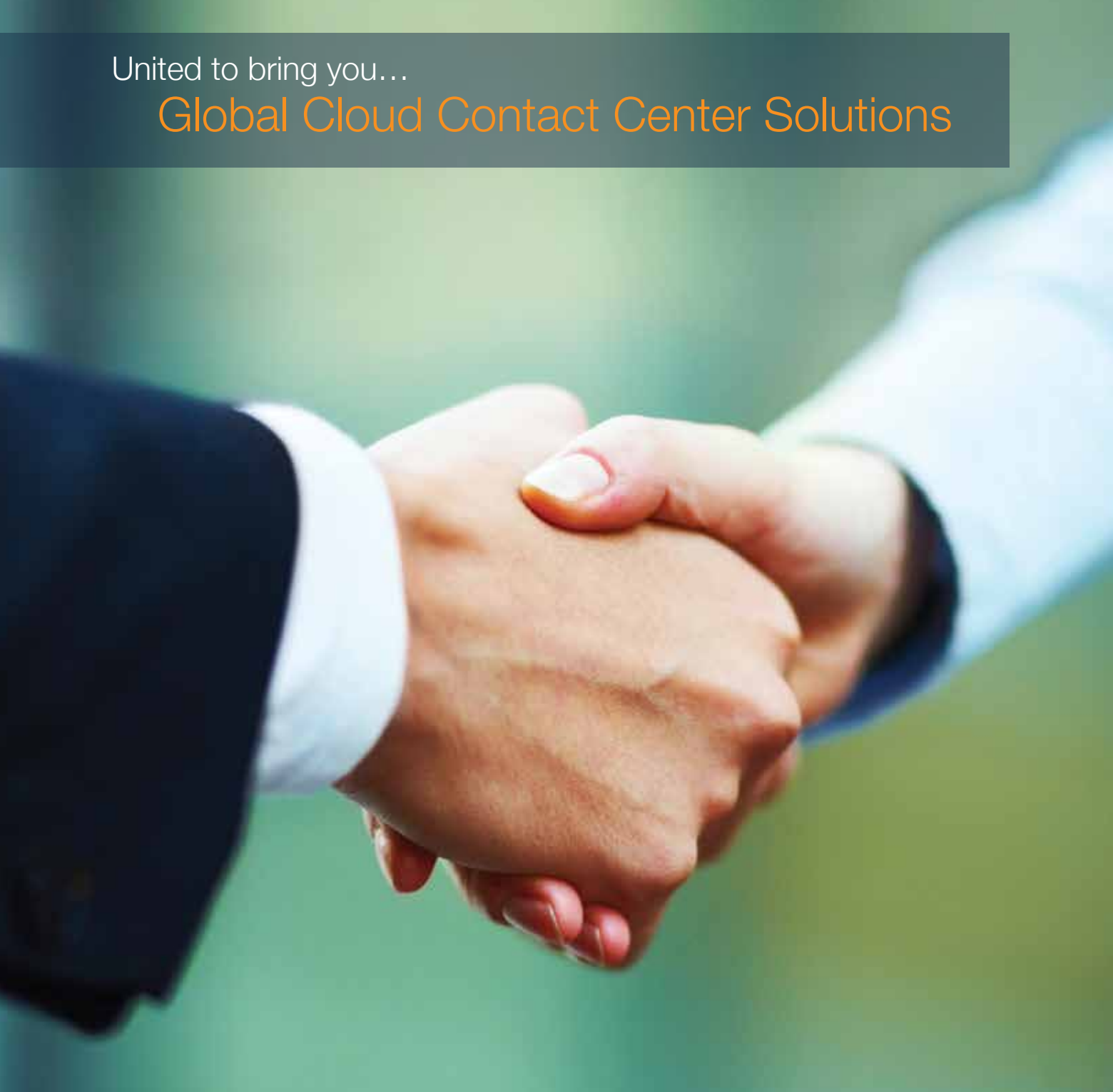
So while these resolution robots haven't turned customer service on its head just yet, you only need to look at current model disrupters like Uber and Square to realize that consumers can turn a startup sleeper into an overnight player nearly overnight. The question is: How does a contact center prepare? Reactionary service delivered purely to pull an angry customer off a public platform will only encourage more of them to do the same. This is why GripeO, GoodorBadExperience.com, and others are coming on to the scene. If organizations create a service response that lets customers engage on their terms, and lets them resolve issues over the channels they choose while creating an omni-channel experience where engagement can start on one channel and pick up exactly where they left off on another, services like these won't have a robotic leg to stand on. **IT**

*Tim Dreyer is director of public and analyst relations at Aspect ([www.aspect.com](http://www.aspect.com)).*



United to bring you...

## Global Cloud Contact Center Solutions



The Genesys | Angel Saas Platform gives your business:

- ▶ Fast and flexible IVR and contact center solutions to meet your unique needs.
- ▶ An open, configurable and scalable cloud-based platform.
- ▶ On-demand business intelligence and caller analytics.
- ▶ True multi-channel communications including SMS, mobile, chat, and more!

Discover More about the robust Genesys | Angel SaaS offering:

[angel.com](http://angel.com) | 1.888.MyAngel





## WebRTC Deliveries Really Start

I thought it would be good to talk about a couple of real WebRTC solution deliveries this time. Often I hear a question like, "If WebRTC is so great, show me who is using it in real products?" So, here are three examples of companies using WebRTC today in their products.

First, UberConference is using WebRTC as one of the options to use its audio conferencing service. When you join a conference from the website, it asks if you want to dial in or use your computer. If you click to use your computer, it uses the WebRTC capability of your browser to join the meeting.

Craig Walker, UberConference CEO, told me that this already represents more than 10 percent of the company's minutes,

Having added WebRTC to its infrastructure, a company now can just have an icon with a URL link to the Voxbone network and now an end user on a WebRTC browser can participate in any Voxbone-connected audio sessions. The great thing about this offer is it has all of the WebRTC advantages without the customer actually doing any code. The WebRTC sessions come in over the same SIP trunk as the local dial session, and the Voxbone network gets the IP traffic in a local PoP and carries it back to maximize quality. This could become a very interesting quick contact center integration.

Finally, as part of a major company re-positioning and new offers, LifeSize has made WebRTC a key component of its new cloud video offer. In this offer, for \$25 per month, a user gets up to 25 ports of MCU-based conferencing (25 minimum users for an account – \$7,500 per year). In addition to supporting existing SIP and other video endpoints, the solution comes with WebRTC as one of the endpoints supported.

---

Often I hear a question like,  
 "If WebRTC is so great, show me  
 who is using it in real products?"  
 So, here are three examples  
 of companies using WebRTC  
 today in their products.

---

and it's growing. Of course, the fact that WebRTC users get wideband audio that makes the experience better than a phone helps ease the transition.

Another company that recently announced a WebRTC offer is Voxbone. This company has enabled WebRTC on its global number inbound dialing system.

Voxbone delivers local number dialing in more than 50 countries around the world (of course, that means there are another 140 or so they are not in). With the Voxbone system, a customer can have a single SIP trunk and have all the calls from all of the supported countries delivered together and only pay for them by a single minute cost. This is why the company is huge in the audio conferencing and cloud contact center markets as local number access and SIP backhaul. And it has its own IP infrastructure for quality.

by enabling easy video with outside customers and clients. Come to think of it, that is just about anybody in business.

These are just three examples of the explosion that is starting in WebRTC. There are many more examples, but these are recent and each unique. If you have not been looking at WebRTC, perhaps now is the time, and one of these is something to use. Or maybe you were invited to a video call and did not know it was WebRTC. A quick clue, if you did not download anything, if it started easily, and if your browser asked you to allow the connection, it was probably WebRTC. ■

*Phil Edholm is the president and founder of PKE Consulting LLC ([www.pkeconsulting.com](http://www.pkeconsulting.com)) and works with INTERNET TELEPHONY parent company, TMC, to stage the WebRTC Conference & Expo.*

# THE INGATE ADVANTAGE



**Enterprise Session Border Controllers**

**Lower Costs  
Easy Installation  
Enhanced Security**

*Learn more about the benefits of an Ingate E-SBC.  
Contact [info@ingate.com](mailto:info@ingate.com) today.*

*Try Ingate free for 30 days at [www.ingate.com](http://www.ingate.com)*







## LTE and the Rise of Wi-Fi Roaming

We're spoiled. Soon, LTE won't be good enough for most of us. Yes, it's great, but it's not accessible everywhere. And even higher speed and higher capacity LTE networks are bound to get clogged soon enough.

The solution may lie in Wi-Fi. The explosion of mobile data traffic is driving the viability of Wi-Fi networks as offload mechanisms for improving capacity and coverage for mobile carriers. This is opening new opportunities for not only pure-play Wi-Fi providers, but also for mobile network operators that are implementing complementary Wi-Fi networks as a means to expand coverage, decrease the cost per delivered bit, and ease congestion on strained spectrum and backhaul resources.

Mobile carrier operators want to provide a seamless user experience for their customers, not only as the data user roams across his or her cellular network, but also across a broader range of home and visited hotspots. Operators also want to better monetize their network investments through roaming agreements with other wireless operators and MNOs. These agreements are creating opportunities for Wi-Fi roaming hub operators that want to provide value to the ecosystem by enabling multilateral connectivity between multiple Wi-Fi network operators.

But how, exactly, does Wi-Fi roaming work? Roaming in mobile and wireless networks is the process by which customers can use the network of a visited operator to access services in their home networks. Roaming onto Wi-Fi is an important component of mobile data offload strategy in that it can help operators cost effectively increase their coverage footprints and provide users with a consistent and improved quality of experience. As standards and technologies evolve, operators are employing various approaches to improve roaming and provide their customers with the best possible experience as they move between mobile networks and Wi-Fi hotspots.

The Wireless Broadband Alliance has established roaming guidelines to provide its member operators a reference for facilitating roaming. These guidelines make roaming easier, which benefits Wi-Fi operators because it brings better

potential to monetize network investments through increased traffic and improved user experience.

While there are many ways to actually implement networks to support roaming, there are a couple of broad architectural options that Wi-Fi operators have when it comes to interconnecting with other networks to allow customers to roam. One is for Wi-Fi operators to connect directly with other operators and establish bilateral agreements to enable roaming services. Alternatively, operators can use the services of a third-party hubbing provider, like an IPX, that has established a Wireless Roaming Intermediary eXchange, a framework that was created by the WBA to facilitate roaming across different Wi-Fi technology implementations. Another initiative, the WiFi Alliance-led Hotspot 2.0, is focusing on ways to help devices improve their capabilities for detection and selection of Wi-Fi networks, thereby reducing the traffic impact on core facilities.

When it comes to cellular networks, the 3rd Generation Partnership Project has developed specifications for Global System for Mobile Communications operators about how Wi-Fi networks can integrate with 3G and 4G mobile networks. The GSMA and WBA are working together to harmonize Wi-Fi roaming efforts and to make the integration of 3GPP mobile and Wi-Fi seamless and transparent to the end user.

It makes sense, then, that mobile operators are turning to Wi-Fi as a means to improve coverage and capacity to meet consumer demand for mobile data services. Organizations such as the WBA, WiFi Alliance, GSMA and 3GPP are working to set the standards for improving the overall user experience for customers to move seamlessly between 3G, 4G and Wi-Fi networks, which will be invaluable as network congestion continues. By applying technology that includes interworking of RADIUS, Diameter and SS7/MAP interfaces, today's Wi-Fi operators can accelerate connectivity between different types of networks, better leverage existing investments in infrastructure, and upgrade to new technology and architectures in a more controlled manner. **IT**

*Jim Machi is vice president of product management at Dialogic ([www.dialogic.com](http://www.dialogic.com)).*

By applying technology that includes interworking of RADIUS, Diameter and SS7/MAP interfaces, today's Wi-Fi operators can accelerate connectivity between different types of networks, better leverage existing investments in infrastructure, and upgrade to new technology and architectures in a more controlled manner.

# Start **ACHIEVING** Content Marketing Results

**IMPROVE**  
organic  
search engine  
rankings



**BROADEN**  
company brand  
awareness and  
audience reach



**ESTABLISH**  
your company as  
an industry  
leader



**INCREASE**  
traffic and  
engagement on  
your site



## Content Boost is here to help!

Our mission is to become your trusted content strategy vendor and to execute all your content and marketing needs. Using custom content, you will amplify your sales, reinforce your brand, drive online traffic and maximize your marketing and operational budgets.



P: (203)295-0195 | [www.ContentBoost.com](http://www.ContentBoost.com)

**Content  
Boost**  
Amplify Your Sales



## FCC Delivers Regulatory Certainty for Sub-700MHz Cloud-Directed Agile Radios

On May 14, 2014, the FCC finally provided some surety for the nascent cloud-directed, agile radio spectrum sharing industry (aka TV white spaces or TVWS) by committing new urban spectrum for unlicensed spectrum sharing use and giving assurance that rural sub-700MHz spectrum would be available into the future.

In 2010, the FCC issued the final database spectrum sharing order, authorizing the use of sub-700MHz (54MHz-698MHz) of spectrum for new agile, flexible radios links controlled by a cloud database. The spectrum was used by TV stations, wireless microphones, public safety two-way radios, and for astronomy. The spectrum was perfect for propagation delivering broadband in urban canyons and base-ments just like police two-way radios.

In 2012, Congress ordered, in the Jobs Act, that the commission auction TV station spectrum for mobile use. After the 2012 Jobs Act, the FCC failed to issue definitive rules regarding what would happen with the new 2010 unlicensed spectrum, putting a cloud over spectrum sharing investors and chip makers. The failure to make a decision slowed investment into the industry, putting a drag on U.S. innovation, slowing equipment completion dates, and keeping equipment cost high and out of the reach of consumers. Now, the FCC has acted and provided the needed clarity.

In a recently released summary, the FCC stated it would designate a nationwide of guard band of 14 to 28MHz of spectrum. This spectrum would be the unused spectrum gap between a 35MHz uplink and 35MHz downlink band to be auctioned for mobile use, a guard band between mobile use and the first TV station in each economic area, and Channel 37 – 6MHz – which is used in various locations for astronomy links to satellites with a 3MHz guard band. The total nationwide spectrum sharing available will be 20-34MHz.

Prior to the FCC order, there was little to no available spectrum in Los Angeles, New York City, Washington, D.C., and other large urban areas because of the number of TV stations in these areas. After the auction, this urban spectrum will be available for spectrum sharing broadband use. Breaking the nationwide spectrum down: the duplex gap is 11MHz between 652-663MHz (Channels 44 and 45). The TV guard band, depending on the total spectrum in the particular economic area that is

auctioned and TV stations moved, will vary between 7-11MHz (located around Channels 31-35). Channel 37 and a 3MHz guard band next to it will also be available.

In the near future, 24MHz of spectrum will deliver 100mbps of broadband throughput. Currently, 6MHz delivers 12-18mbps of throughput for a broadband link and 22-25mbps in the future. Using four channels, these radios will be able to deliver 100mbps through urban canyons, buildings, basements, and in rural areas deep into the woods. Cell phone carriers could use the Sub-700MHz radios for delivering 100mbps of backhaul to small cells into urban canyons. The new nationwide spectrum allocation will open up urban areas for new broadband.

In rural areas there will continue to be considerable spectrum available for cloud-directed spectrum sharing outside the spectrum auctioned for mobile use and not occupied by TV stations. The FCC also set up more database sharing between broadband radios and wireless microphones and with RAS incumbent use. Google, Microsoft, White Space Alliance, and others received most of the minimum spectrum amounts they requested. The group asked for use of guard bands with at least 10MHz, the use of

a 11MHz duplex gap, and one or two channels (6-12MHz) per market for sharing between wireless microphones and broadband operations.

Cloud-driven spectrum sharing gives the FCC the opportunity to open new available spectrum for use just by feeding the information to approved databases maintained by Google, iConectiv, Microsoft, and Spectrum Bridge. In the old days, such a spectrum change would require manually changing radios and could take years instead of one day to make good use of the new spectrum. After the auction is completed, TV stations will have 3 years to clear the air and move. It will take many more years for the mobile industry to build out the spectrum it is licensing.

As long as the spectrum is not used, a situation described by the term fallow spectrum, the FCC should continue to update the spectrum databases showing the spectrum as available for spectrum sharing broadband use. **IT**

*Barlow Keener is the principal with Keener Law Group ([www.keenerlawgroup.com](http://www.keenerlawgroup.com)) out of Boston.*

---

Cloud-driven spectrum sharing  
gives the FCC the opportunity to  
open new available spectrum for  
use just by feeding the information  
to approved databases maintained  
by Google, iConectiv, Microsoft,  
and Spectrum Bridge.

---



# Examine the Best Ways to engage

Using Customer-Facing Tools  
and Technologies.



# CUSTOMER™

Target. Engage. Deliver.



Formerly



**CUSTOMER INTER@CTION**  
*Solutions*

Subscribe Today!  
[customerzone360.com](http://customerzone360.com)

To Advertise, Contact Client Services at:  
203-852-6800 or [inquiry@tmcnet.com](mailto:inquiry@tmcnet.com).



Technology Marketing Corporation  
800 Connecticut Ave., 1st Floor East  
Norwalk, CT 06854

2014 Technology Marketing Corporation. All Rights Reserved.



# Votacall Brings Its Unique Flavor to Cloud-Based Communications

**V**otacall is a communications solution provider with a full suite of business VoIP and cloud-based managed voice solutions in a crowded but fast-growing market. The company says it separates itself from the pack by delivering a better and more customized user experience. We took their cloud-based communications product, the Votacall VBX Hosted VoIP solution, for a test drive and the following is what we found out about their product and their approach.

The company's definition of user experience corresponds, in part, to phone call quality, lack of dropped packets, and other quality of service parameters. Unlike many other cloud providers, Votacall notes that it comes from a telecom background, which provides a different level of expertise and experience in the design, deployment and support of their business-class Hosted PBX solution.

On the customization front, Votacall takes a consultative approach to working with customers, and tailors solutions to meet their individual needs. Votacall also offers unique solutions, it says, by layering on software add-ons or as Votacall describes them, "Cloud Layers" and enabling integration with other systems and features – so it's not just another plain vanilla offering in the marketplace. In fact, in our testing, we explored features on

top of features, mostly powered by BroadSoft Broadworks. In some cases, the company has developed custom add-ons to the platform to address business-critical needs with the flexibility to offer advanced functionality tailored to the user with the end result being an elevated customer experience. In other words, it is continually building what it thinks is a best-in-breed cloud phone system.

## Phones

Votacall has named the complete Polycom desktop product line as the preferred phone for the best experience, and these devices each come with instructional videos customized by the Votacall Project Management Team to walk you through the functions needed to get the most out of the system. We viewed a few of the videos for the Polycom VVX400/410, VVX500/600, as well as the VVX300/310, and they all were easy to follow. Passcode changing, greeting recording, and voicemail access are just some of the areas of focus. Perhaps the most important part of the videos offered information on how to initiate a conference call – something that can present challenges for some phone system users.



## Testing

To test the system, we had an introductory training conference call with the company – something a typical customer would go through as part of the managed solution. Depending on the customer and the features selected, this call can last up to many hours. To get the most out of the system, it makes sense to spend the time early to learn about all the things you can do with your new phone system in the cloud. We tested the Platinum package, which had all the bells and whistles. We didn't, however, delve into the mobile portion of the solution.

To get going, we provided a dedicated IP address and connected a supplied Edgewater Network 4550 series managed router to an HP 2530-8 PoE Ethernet switch, which had three phones connected to it. Each phone had a DID as well as a direct extension, and in our testing the HD voice sound was heavenly. As a reminder, this feature only works if your phones are

Votacall offers unique solutions by layering on software add-ons and enabling integration with other systems and features – so it's not just another plain vanilla offering in the marketplace.

on the same system, meaning unless the person you are speaking with is a Votacall customer as well you will most likely default to traditional POTS quality.

The GUI of the solution is fairly straightforward, and we had a chance to test a number of solutions from the company. First off was the Assistant Enterprise Toolbar, which sits at the top of your Outlook, Firefox or Internet Explorer browsers, allowing you to perform a host of features and functions. For example, you can configure an LDAP server; set up anonymous call rejection; and deal with call forwarding options of every variety, including simultaneous ring, handle call waiting, dial from your speed-dial list, and lots more with the simple click of a button.

Remote Office can be turned on if you are working from another location but want to appear as if you are in the office. By sup-





plying a phone number and specifying you are out, your home or other phone will ring when you place a call and the called party will also have his or her phone ring at the same time.

Incidentally, while out of the office in the call forwarding scenarios above, you can specify that you need to press a button before an incoming call is sent to your personal device. This could be useful if you aren't in a situation allowing you to receive a work-related call when you answer the phone.

## Speech recognition testing

Votacall's speech recognition system (Votacall v-IVR) is quite good as well. We had v-IVR set up as our auto attendant during testing and we did our best to trip it up with muffled voices, but when we mentioned a name in the directory, it worked every time. When we threw strange words at it, the system for the most part just apologized and said it didn't understand.

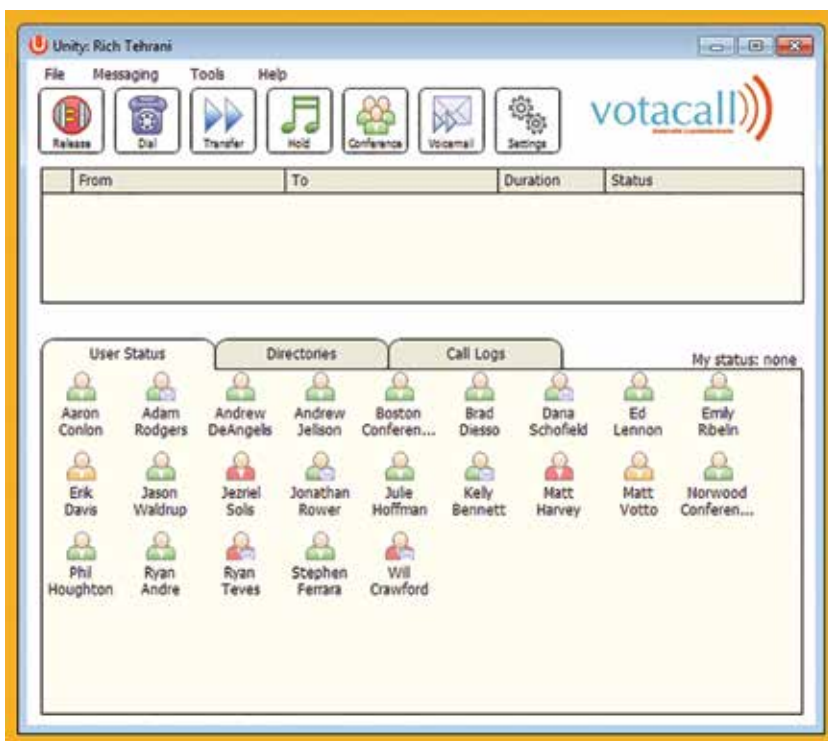
Antidisestablishmentarianism, for example, was not recognized, but congress was thought to be conference. This test was conducted using an open-source PBX over a high bandwidth connection, but the call went over POTS, meaning it was not HD. It would be a typical call a customer might get. We realize

a cell phone call from a noisy environment may be tougher to recognize so to test another real-world scenario, we decided to blast the song "September" from Earth Wind & Fire at a volume level, which could be considered annoying to the people in the next few offices. We then tried the voice recognition engine over a Verizon Wireless connection using an iPhone 5s. If we raised our voice when we spoke, the system worked amazingly well – not one error. Of course, voice is not the only way to interact, you can set the auto-attendant to use digits as well.

The toolbar, which worked great, is also available for Microsoft Outlook. We tested both, and they are very similar. People who live in these two worlds almost exclusively won't need to install the standalone app called Unity Client, which could be described as a power-user's best friend. The app provides easy access to directories, call logs, and has an impressively clean and simple look. In addition, it allows for chat functionality, which can be disabled if needed, as well as the presence information of up to 30 people. For the power-user, Votacall's Unity Client is great value at \$2.95 per month. Unity also has supervisor and agent functionality. There is also a receptionist app and portal if needed.

Votacall set us up with their Cloud Call Accounting solution, Votacall Reporter. The reporting system has more than 50 reports, which are accessible from anywhere and from any Internet-connected device. For example, you can check out the interoffice extension call details, which could be useful for compliance reasons or for the tracking of employee productivity. You can see unanswered call details, the longest phone calls, frequent phone numbers called, and more.

The admin portal is extremely powerful as well. We were impressed with the variety of options present. For example, we were able to set up held calls to be automatically retrieved, and we could set up call forwarding to be selectively applied based on time of day or day of week. We were also able to set up selective rejection of phone calls based on criteria such as time of day, day of week, and phone number. There is also a scheduling option allowing you to set up corporate holidays – company closing time, etc. Finally, we could also set up calls to be sent to a different phone number when an initial number was unreachable. There are myriad more options available, such



As you use your phone the Unity app provides you with a live view of your actions

# The Customer Experience is the only Metric.



**Experience a different communications experience.**



**24x7 Managed Solution**



**Hosted  
VoIP**



**Unified  
Communications**



**Cloud  
Contact Center**



**Business  
Continuity**



**Votacall is a Cloud Solution Provider, not just a Service Provider....**

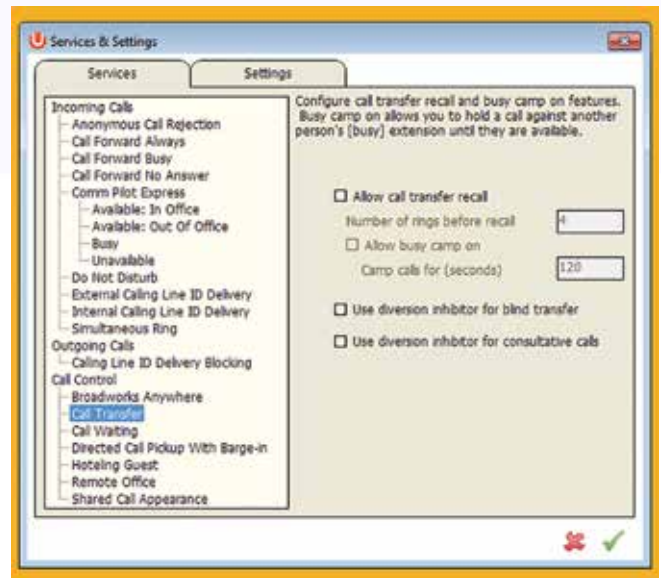
....there is a big difference. Our main objective is to have customers consider our Hosted PBX solution and their relationship with the Votacall team to be a game-changer. We design, deploy and support user friendly Cloud-based PBX solutions, layered and updated with the most advanced functionality in the industry. We are unified under the Votacall Value; the customer experience is the only metric. Experience a different communications experience. See why Votacall will be the last telecom decision you will ever have to make, give us a look at [votacall.com/why-votacall/overview/](http://votacall.com/why-votacall/overview/)

as the ability to set up or modify hunt groups, setting up and viewing group directories and so forth. We were given access to Votacall's internal database of employees in our tests, allowing us to get a real-world feel for how the system operates.

The company is looking to expand its reseller channel, so if you are a VAR, feel free to reach out. The company also performs an analysis of a company's needs before suggesting a system, usually saving new customers money in the process. Every customer also gets handholding when configuring its system including best practice suggestions when setting up the messaging/auto-attendant functions.

### Customer support

As luck would have it, our initial install had a minor configuration issue, and we had a chance to experience firsthand as the customer the benefits of their managed solution, specifically their ability to deliver support in a timely manner. Votacall was extremely responsive and helped troubleshoot the problem in under 30 minutes. It was a configuration issue related to the fact we were using a test/demo account.

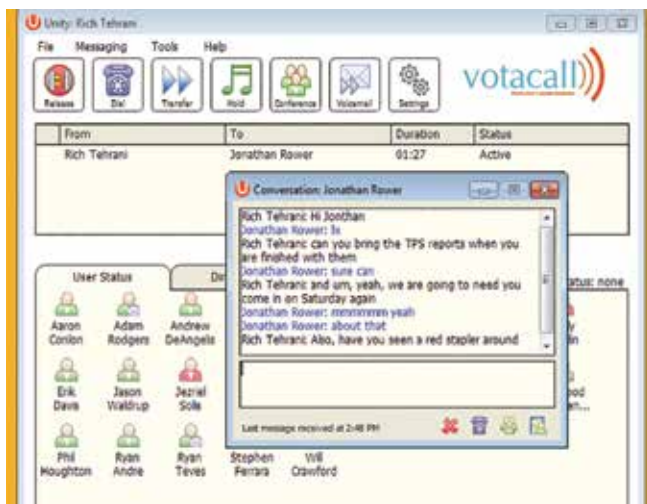


A glimpse at the system's call transfer configuration screen

### Conclusion

In short, we like the solution. It is extremely well-designed in terms of features and functions. If there were room for improvement it would be to add scripting to the system to walk through all the common features and functions you would want to set up for a typical installation. For example, that includes a step-by-step program that queries you for various greetings as well as your office hours and other preferences. Currently, the company designs the solution during the project management phase, but more automation and simplicity means less room for error. Other than that, the entry-level phone, the VVX310, had a Polycom scripting error message that popped up from time to time which did not affect the phone's functionality and was more cosmetic than anything else. It could be eliminated quickly and has since been rectified. I am sure a configuration change would solve this issue permanently.

Other than that, we were impressed with Votacall's approach; their infrastructure, which is anchored by the BroadSoft Platform; and their ability to augment the solutions with other software if needed. We recommend Votacall's business-class Hosted VoIP phone system. **IT**



The Votacall Unity app does everything the toolbar does but also allows chat and the ability to track the status of 30 other people



The Votacall toolbar integrates with IE, Firefox & Outlook and gives you tremendous calling functionality



# Strategic Solutions series

## The Future of Networking is Now Alcatel-Lucent Can Show You How

SPONSORED BY:



Alcatel•Lucent



## The Future of Networking is Now Alcatel-Lucent Can Show You How

BY PAULA BERNIER

**T**he telecom industry is famous for generating acronyms and corresponding technologies. Gartner refers to the flurry of excitement that often surrounds this exercise as the hype cycle.

But the recognition that our industry is susceptible to hype can be counter productive, causing the more cautious types among us to take a wait-and-see attitude when new opportunities present themselves.

It certainly makes sense to look before you leap, but those that never leap will be left behind. And, in the fast-moving world of tech, standing still can make it near impossible to catch up. That's why it's important for service providers to get their feet wet in the network functions virtualization and software-defined networking pool.

Make no mistake about it, NFV and SDN are here to stay, and communications service providers that want to benefit from the operational efficiencies and flexibility they can deliver should get on the path to learn about and adopt these solutions as soon as possible. Alcatel-Lucent, an undisputed leader in communications networking, can help guide them on that journey.

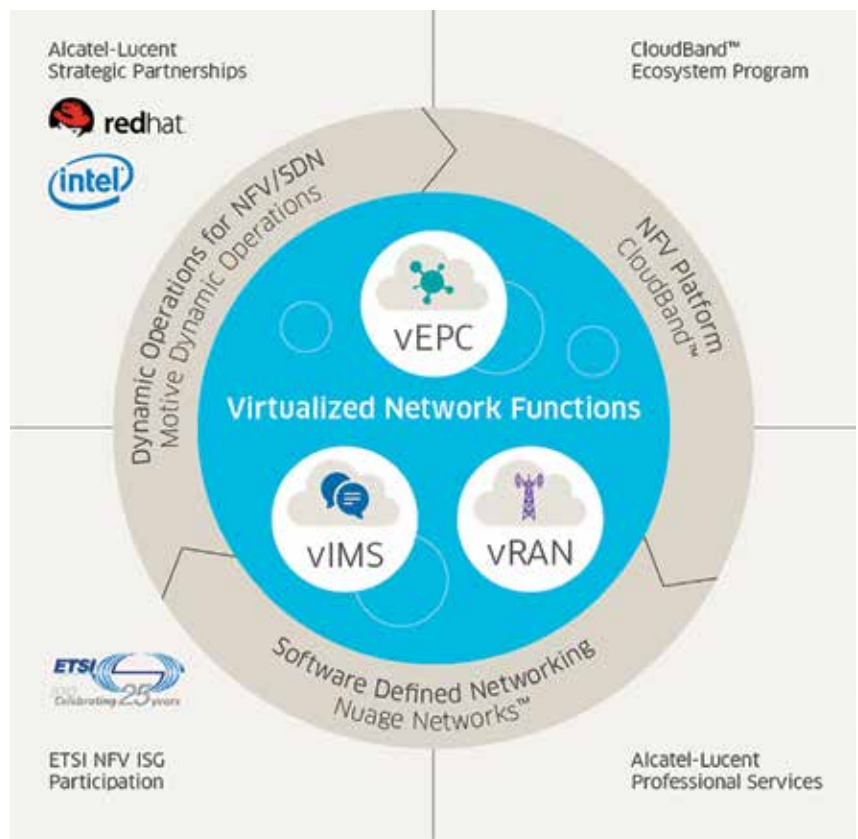
"NFV is here and now, it's not a fad," says Phil Tilley, marketing director of cloud

strategy and solutions with Alcatel-Lucent. "It's going to evolve. The key is to start looking at it now, start planning, start the discussions."

### Move to Cloud: It's a Journey

Alcatel-Lucent offers a variety of NFV and SDN components to help service providers better position themselves for success.

"The move to NFV and SDN will be a journey, but a rewarding one, and Alcatel-Lucent can help take you





# Alcatel-Lucent: Your Trusted Partner for the Journey to NFV

## Virtualize the Network and Leverage the Cloud

Take your network to the cloud with Network Functions Virtualization (NFV). Alcatel-Lucent offers solutions for network operators across all key elements of the NFV ecosystem. We can help you evolve to a virtualized network that leverages a more agile, more efficient cloud-based infrastructure.

We are pushing the boundaries of innovation to bring telecom applications to the cloud.

Find out more about our innovative NFV solutions at [alcatel-lucent.com/solutions/nfv](http://alcatel-lucent.com/solutions/nfv) and follow us at [twitter.com/ALU\\_Cloud](https://twitter.com/ALU_Cloud)





there,” says Tilley. “We have a lot of experience and knowledge to share. And for service providers that set out on this journey, the rewards will be there.”

Such leading service providers as China Mobile, NTT DOCOMO, and Telefonica are now doing proof-of-concept testing with Alcatel-Lucent and its ecosystem members. A year ago Alcatel-Lucent established the CloudBand Ecosystem Program, an open community through which various service providers and vendors come together to share experiences, develop use cases and test products for interoperability. Today, this ecosystem has expanded to 30+ partners working on NFV workloads and use cases.

Speaking of partners, Alcatel-Lucent has close NFV and SDN alliances with leading chip company Intel and open source pioneer Red Hat. The company is working with Intel on how to maximize performance and scale in cloud platforms, radio access network, and routing deployments. It's collaborating with Red Hat on the development of OpenStack, the open source code that will enable the integration of various software components in SDN and NFV scenarios.

Alcatel-Lucent also supports network operators via its Cloud Transformation Services, a portfolio of professional services to help service providers work through the business case, engineering, implementation, new service delivery, return on investment, and system integration aspects of their transformation into software telcos.

### **Portfolio: What's Needed for the Journey**

The Alcatel-Lucent portfolio includes:

- CloudBand NFV Platform: provides compute, storage, and a cloud orchestration and management system that manages cloud servers and server configurations.
- Nuage Networks Virtualized Services Platform: integrates with CloudBand to deliver an automated, robust, and programmable SDN network infrastructure that extends through the data center and across the WAN. Abstracting the underlying network layer and automating the network allows the distribution of

network functions according to geographic demand.

- Motive Dynamic Operations: provides a path for meeting today's operational challenges of all-IP networks and tomorrow's promise of virtualized, software networks, designed to help bring new services to market quickly, keep pace with innovation, and capture the full potential of SDN and NFV.

---

Alcatel-Lucent offers a variety of NFV and SDN components to help service providers better position themselves for success.

---

- Virtualized Evolved Packet Core (vEPC) and IP Multimedia Systems (vIMS) solutions: these are virtualized versions of the company's existing and proven EPC and IMS offerings. Multiple trials are under way for the solutions, which deliver high reliability, scalability, and APIs support – which service providers can use to fast track innovation and bridge the gap with web developers to create differentiated applications.
- All of these solutions can be used together, or individually, as they were designed as open platforms to work with Alcatel-Lucent and third-party solutions.

Service providers, Tilley explains, can use NFV and cloud-based technologies to improve the efficiency and flexibility of their networks. For example, in mobile operators' new IP-based LTE networks, some of the IMS and EPC functions can be run in a cloud environment, allowing for greater resource flexibility and resource utilization, as well as reliability due to resource distribution.

Whatever the deployment model, Alcatel-Lucent can help guide service providers in their network transformation journey.

# FreePBX WORLD

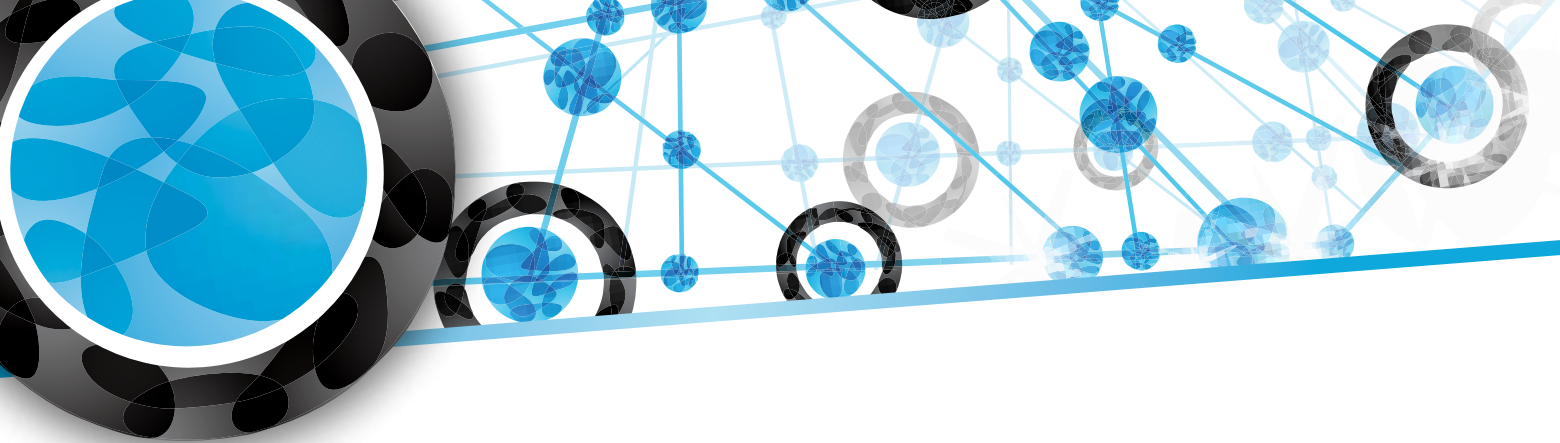


**Open Source Telephony Revolution,  
the Billion Dollar Game Changer.**

**Schmooze™**  
*Schmooze Com Inc.*

  
**FreePBX®**  
let freedom ring™





# A Little Background on FreePBX

**F**reePBX, the world's most popular open source PBX platform, like many technology powerhouses, had humble beginnings a decade ago as a hobbyist PBX platform. FreePBX has continued to grow into a fully evolved ecosystem and is now in use in millions of production systems in more than 210 countries and territories across the world. Today there is no other OSS PBX platform that even approaches its adoption. With this success an entire industry was reborn, as FreePBX now contributes to billions of dollars in hardware, software, and services sales globally.

FreePBX takes the Asterisk telephony engine, adds PBX capabilities, dialplan logic, and extra features that turn it into a fully featured unified communications system, all managed from a web browser-based GUI. FreePBX can be installed on premises-based hardware, virtualized, distributed across multiple locations, or implemented in the cloud. FreePBX can also be utilized across multiple endpoints, ranging from hardware-based phones, software clients, mobile devices, and even fully supported WebRTC endpoints. Telephony connectivity options are just as versatile as the rest of the system, allowing you to utilize standards-compliant VoIP connections, fully supported legacy PSTN connections, or to enable integration with wireless networks.

FreePBX deployments range in size from small home office users to multi-location large enterprise customers, and even world-class contact centers. The included feature set allows system administrators to manage unlimited extensions, voice applications, endpoints, conferencing, instant messaging, integrated faxing, automated call distribution, interactive



**FreePBX®**  
let freedom ring™

voice response, paging, time-based call management, ring groups, call accounting, call recording, music on hold, company directories and call queues, and more, plus all the standard features expected from a phone system – all from one location.

The open source development model drives the production of quality software with more relevant features. This is achieved through open collaboration with a huge base of community users. FreePBX gives its users the freedom to leverage and customize business communications systems to best fit their specific

FreePBX GUI also has a modular design that allows you to add additional functionality as needed, when you need it.

The FreePBX ecosystem provides an all-encompassing solution that includes certified hardware and software solutions, as well as commercial add-ons that add enhanced functionality to the already feature-rich platform. Items like a commercially supported End Point Manager provide auto-provisioning and management of more than 200 different endpoints from more than 20 supported manufacturers such as Aastra, Algo, Advanced Network Devices, AudioCodes, Cisco, Cortelco, CyberData, Digium, Grandstream, Mitel, Mocet, Obihai, Panasonic, Phoenix Audio, Polycom, Sangoma, snom, Uniden, VTech, Xorcom and Yealink.

To learn more about the FreePBX ecosystem, visit [FreePBX.org](http://FreePBX.org), or make plans to attend this year's FreePBX World Aug. 11-14, 2014, at The Rio in Las Vegas. FreePBX World will be a three-day event, co-located with ITEXPO, where attendees

.....  
To learn more about the FreePBX ecosystem, visit  
**FreePBX.org**, or make plans to attend this year's FreePBX  
World Aug. 11-14, 2014, at The Rio in Las Vegas.  
.....

needs by choosing their own applications, solutions and suppliers, all while minimizing vendor lock-in.

New users to FreePBX can get started quickly by installing the FreePBX Distro. The Distro installs everything you need to build a phone system, and provides consistent upgrade paths to keep your entire system up-to-date with the latest features and software versions. The

will learn about open source business communications solutions, technology trends, and FreePBX customer experiences. The agenda will be filled with an exciting array of guest speakers, FreePBX ecosystem leaders, and interactive demonstrations that will help you discover, connect and collaborate with FreePBX solutions.

*FreePBX is a registered trademark of Schmooze Com Inc.*





# FreePBX World | An Event Addressing the IP Phone Solutions

**S**chmooze Com Inc. will bring FreePBX World to ITEXPO Las Vegas, the leading business technology event, which will take place Aug. 11-14, 2014, at The Rio in Las Vegas. FreePBX World is an event for all parties interested in selling, installing, or using VoIP phone systems. Whether on premises or in the cloud, FreePBX has a solution to cater to the needs of SMBs, large enterprises, service providers, and others looking to leverage advanced IP communications. Schmooze Com is also a Diamond Sponsor of ITEXPO, with all event attendees having complete access to FreePBX World programming and events.

At FreePBX World you will get more than just the practical, hands-on knowledge of the FreePBX ecosystem to advance into the billion dollar open source telephony market. You will also receive compelling insight into the ideas, concepts, and emerging trends that are setting the stage for a more connected and collaborative open source future. The agenda is filled with an exciting array of guest speakers, FreePBX ecosystem leaders, and interactive demonstrations that will help you discover, connect, and collaborate with FreePBX solutions.

This year's FreePBX World is a three-day event, where attendees will learn more about open source business communication solutions, technology trends, FreePBX customers' experiences, and keynote special guest.

FreePBX World provides the comprehensive analysis and in-depth sessions you need, covering FreePBX, mobility, SIP trunking, cloud, video, collaboration, WebRTC and more.

FreePBX World's expert-led conference program will discuss the latest systems, software, services, and applications for SMB and enterprise communications and collaboration including:

## WHO SHOULD ATTEND

- All users of FreePBX systems
- Anyone looking to sell and install VoIP phone systems and hosted VoIP services
- Developers, as the FreePBX ecosystem is currently powering millions of PBXs across the world, making it a lucrative market for developers looking to build FreePBX Certified custom telephony applications
- OEM/hardware manufacturers looking to expand their PBX offerings into the lucrative FreePBX marketplace
- Anyone looking to learn more about FreePBX, the ecosystem of products around it, and the FreePBX Channel Partner Program

- FreePBX Yesterday, Today and Tomorrow
- The 15 Commandments of IVR
- Popular Add-ons to Enhance FreePBX and Your Bottom Line
- Open Source Telephony Revolution, The Billion Dollar Game Changer
- FreePBX High Availability
- FreePBX – Channel Partner Programs and Products Overview
- What's New in FreePBX 12
- Using the FreePBX End Point Manager
- FreePBX Softphone Integration for SMB and Enterprise
- FreePBX Localization and Translation for a Global Audience
- FreePBX Security, a Holistic Approach
- FreePBX Hosting and Pitfalls Virtualization Providers Should Keep In Mind
- Putting Your Brand on FreePBX with Custom OEM Programs
- New Communications Innovation with WebRTC
- FreePBX – Hardware/Software Certification Program
- SIPStation, Eliminate Traditional Phone Service
- FreePBX Phone Apps Presentation

Schmooze Com Inc. manages FreePBX, which offers a rich, reliable and well-supported ecosystem that gives software application vendors, device manufacturers, and service providers the freedom, power and choice to build and deliver revolutionary communications solutions. Schmooze supports the FreePBX Revolution by providing certified appliances, SIPStation SIP trunks, FreePBX Pro Modules, professional support, educational and training programs, as well as providing hardware and software certifications and consulting.

"Schmooze is excited to be a Diamond Sponsor of ITEXPO," said Tony Lewis, CEO of Schmooze Com Inc. "ITEXPO presents a great venue to continue to expose key decision makers to the freedom and powerful solutions provided by the FreePBX ecosystem. For the second year in a row we will be co-locating our FreePBX World Conference at ITEXPO Las Vegas. Last year we had so many people attend our sessions we had people standing in the halls just to listen and join in, which is why this year we are very excited to add an extra day of educational presentations."

"As an active developer of the FreePBX Project, Schmooze has successfully cultivated an ecosystem that has a wide and impressionable reach within the telecom industry," said Rich Tehrani, TMC CEO and conference chairman. "ITEXPO and FreePBX World attendees will gain valuable new knowledge on progressive VoIP phone systems that will enable them to better service their companies' needs."



# The Billion Dollar Game Changer

## Keynote to Tell the Story of the Open Source Telephony Revolution

**O**pen source communications platforms powered by FreePBX and Asterisk have been under continuous development for more than 10 years. Today both of these account for millions of installations worldwide, contributing billions of dollars in hardware, software, and services sales.

During this keynote presentation, Asterisk creator Mark Spencer, FreePBX Project Lead Philippe Lindheimer, and The IVR Voice's Allison Smith will tell the tale of how open source telephony grew from the necessity of a cash-strapped young entrepreneur's need for a phone system to today's billion-dollar game changer that altered what was once a vendor-locked PBX marketplace.

FreePBX offers a rich, reliable and well-supported ecosystem that gives software application vendors, device manufacturers, and service providers the freedom, power, and choice to build and deliver revolutionary communications solutions – faster, better and at lower costs.



**Philippe Lindheimer**  
Vice President  
Schmooze Com Inc.



**Allison Smith**  
Owner, Professional Voice Talent  
The IVR Voice



**Mark Spencer**  
Chairman, CTO  
Digium Inc.



# What You Need to Know about Schmooze Com Inc.

**S**chmooze Com Inc. is a global telephony software development business based in Neenah, Wisc., and a Diamond Sponsor of this year's ITEXPO in Las Vegas. Schmooze's flagship product, FreePBX, was initially released a decade ago, and is in use on millions of production systems in 210 countries and territories, making it the most prevalent open source PBX platform in the world.

The company was founded by a group of telephony and IT entrepreneurs with a plan to build a better business phone system based on software, not locked down by proprietary hardware restrictions. Requiring a stable, customizable, feature-rich, software base to build on, Schmooze licensed FreePBX as the core of its PBXact commercial telephony platform. Schmooze actively contributed back to the OSS FreePBX project while continuing to improve upon its own PBXact products and solutions.

Schmooze's participation and contributions to open source steadily increased over time, until eventually it made sense for Schmooze to acquire the trademark and copyright to FreePBX to become the project's primary sponsor and manager. Today Schmooze's core focus is to provide direction and financial support of the FreePBX Project, providing active contributions of both open source development and commercial add-ons as well as support and managing the expansion of the FreePBX ecosystem across the globe. The fast moving and mission-critical nature of communications systems means FreePBX is continually enhanced to meet these evolving communications challenges.

An example of the ongoing FreePBX commercial development provided by Schmooze is the recently released and award winning (ITEXPO, Best Large Enterprise Solution) FreePBX High Availability platform. FreePBX HA provides an easy to configure HA solution between two FreePBX systems. Historically, HA solutions have been a costly endeavor requiring dedicated expensive system engineers to configure, support, and constantly maintain. FreePBX HA embeds the setup and configuration of a high availability system all from the FreePBX GUI interface, allowing

system integrators and end users that need a fully commercially developed solution to reliably and economically implement HA and mitigate costly down time.

While the open source development model allows for an innovative product, the Schmooze business model provides a simple way for businesses to deploy communications systems effectively. Schmooze provides FreePBX Certified hardware, software, professional consulting, training and support, as well as a FreePBX integrated SIP trunking service through its popular SIPStation.com VoIP service. All of these services are available directly from Schmooze; however, the primary distribution across all industry segments and sizes is through the Schmooze Channel Program for distributors, system integrators, VARs, and resellers. This program allows for channel partners and service providers to offer seamless communications technology integration, paired with their local industry expertise.

**Schmooze**<sup>™</sup>  
*Schmooze Com Inc.*

In addition to the Channel Programs, Schmooze continues to evolve the FreePBX ecosystem by delivering solutions in collaboration with major hardware and software partners. These extensive collaborations connect every aspect of the unified communications space, and help users deploy integrated and certified configurations of FreePBX. Certified FreePBX software undergoes a rigorous testing process. Above providing a great user experience and enhanced functionality, third-party software must be compatible with FreePBX and easy to install and uninstall. Certified FreePBX hardware must pass a series of validation tests conducted by Schmooze, and provide for easy provisioning directly from within FreePBX. Users can be confident that any certified solution will be compatible with FreePBX and supported by both manufacturers, and the FreePBX development team. Using a rigorous hardware and software certification process, Schmooze helps to ensure a great FreePBX experience, and keeps the entire platform open and not limited by a single vendor's vision of the future.

FreePBX's solid growth is testament that Schmooze is successfully delivering world-class software, backed by fantastic customer service, all at a highly affordable price.





By Erik Linask

## A Q&A with Schmooze Com Inc. CEO Tony Lewis

INTERNET TELEPHONY magazine recently interviewed Tony Lewis, CEO at Schmooze Com Inc., to learn more about the open source movement. Here's what we found out.

### How did the FreePBX Project get started?

FreePBX was initially designed as a simple GUI for managing Asterisk configs and has since become the most prevalent open source PBX in the world. Today's FreePBX includes hundreds of pre-built features, and an easy management tool for implementation and scaling from SMB to enterprise installations. Before FreePBX, all configuration of Asterisk was done by hand. It was not in any manner user friendly, and if you had textermaphobia (fear of the command line) you were out of luck. Even if you were comfortable in the command line and config files you still had to manage them all, which didn't scale very well. FreePBX quickly grew from four simple database tables to a modular design allowing developers to add their own applications along with hooks into the GUI and Dial Plan. This added capability enabled the project to take the leap from hobbyist to mainstream, allowing system integrators to use the platform for their commercial installs. FreePBX has had various project leaders over the years from across the globe come and go as they had time to work on the project, but it is currently managed by Schmooze Com Inc. Schmooze's business model is completely focused on FreePBX's success and the continued expansion of the FreePBX EcoSystem.

### How does FreePBX compare to other open source alternatives?

Most of the direct competitors to FreePBX are closed source or proprietary solutions; however, over the years there have been various open source competitors that have come and gone. Most alternatives you find will likely be underdeveloped or focused on a different objective or component of telephony, or not primarily designed as a PBX. Most do not have the luxury of a corporate sponsorship or a dedicated development staff. You will find that some of the more impressive and vibrant alternatives are not actually open source, and are only available through commercial license. Developing a project like FreePBX is not a trivial task, it has taken us a decade of work to get where we are today.

### How does FreePBX compare to proprietary PBXs?

Many of the proprietary PBXs started out as exclusive hardware-based solutions, basing entire offerings around their own hardware chassis combined with proprietary phones. This meant great margins for the legacy PBX providers, but really high prices for customers and limited or zero flexibility in system design. Most proprietary vendors still stick to this approach preferring to make their margins on equipment, licensing fees, or extensive certification and training requirements. Many of the original commercial offerings FreePBX was designed to compete with are no




Tony Lewis  
CEO  
Schmooze Com Inc.

longer around, as they didn't successfully make the move to a software-centric based approach. FreePBX has always been a software-based offering built upon open source, and open standards, allowing integrators to build systems with the hardware and endpoints that fit their particular needs. FreePBX includes built-in features that rival or surpass most commercial PBX offerings available today, and its modular design allows administrators and developers to continue to push the envelope and add new features and applications.

### Can I use my existing phones and other infrastructure with FreePBX?

FreePBX is built on open standards, so as long as your infrastructure can speak those standards, then FreePBX is very likely compatible. If FreePBX cannot directly interact with your existing infrastructure, there are many hardware-based solutions that can be put in place to enable this compatibility. Examples include PSTN cards, gateways, channel banks, and other solutions that can be used to interconnect with existing systems. Many companies will utilize FreePBX to migrate from end-of-life sys-



tems using their existing handsets, then over time, or as budgets allow, migrate systems to new infrastructure.

#### Can I use UC apps and mobility features with FreePBX?

Yes. FreePBX supports mobility features like find me/follow me, mobile twinning, remote extensions, and various softphone applications, including WebRTC that provides out-of-the-box mobility to end users. With FreePBX being open source it can and has been integrated with multiple applications including various CRM/VoIP applications and corporate e-mail/messaging systems. The FreePBX Distro installs open standards components, such as support for faxing, instant messaging protocols like XMPP/Jabber, e-mail connectivity along with various APIs and interfaces to assist users and developers to link and unify with their existing infrastructure. There are also various certified add-ons that provide turnkey integration with various other platforms, further demonstrating the flexibility of FreePBX.

#### Why should I consider FreePBX over proprietary PBXs? Aren't they more stable?

We are at a point in our lifecycle where we are very stable. There are millions of systems in production with that number growing each day. The FreePBX platform is well established and tested worldwide. We accomplish stability through use and feedback rather than through restriction. If your proprietary PBX has a bug, you may have one source to get it fixed. This may also heavily depend on you convincing that one source that there is actually an issue. As with features, issues that do come up can usually be addressed by the FreePBX community. This means you don't necessarily need to rely on the vendor fixing an issue, since it can be fixed by any individual with the skills to do so. With FreePBX you also have thousands of peers who can verify, troubleshoot, and help you

.....  
The FreePBX platform is well established and tested worldwide. We accomplish stability through use and feedback rather than through restriction.  
.....

fix your issue. We also have a transparent bug process where you can submit your issues for the world to see and help correct.

#### What is the FreePBX EcoSystem and who is involved?

The Official FreePBX EcoSystem is a collaboration that exists to help provide proven hardware, software, and services to users implementing FreePBX solutions. The FreePBX EcoSystem includes consultants, service providers, developers, and hardware manufacturers, all working for the FreePBX community at large under a single worldwide program designed to make it easier for customers to use FreePBX, get new features, and receive assistance when needed.

#### How often does FreePBX update its software, and how are those updates pushed out to users?

The FreePBX Project maintains both the FreePBX Software, as well as the FreePBX Distro, which includes a full turnkey installation of all the components required to build a system with FreePBX. FreePBX itself is modular software package, which allows the developers to provide inline updates for the various modules, and end users can update various modules or applications as needed. In the latest versions of our module administration tool for FreePBX, we allow administrators to choose if they want to participate in beta versions of modules or roll back updates of modules if needed. For the Distro, we provide updates for the entire platform including components, such as the operating system, telephony engine, and the hundreds of other software pack-

ages that make up a full communications system. FreePBX is constantly evolving and providing users with updates; we put the power in the system administrators' hands to decide if they would like to keep systems on known stable versions or push the envelope with us as we continue to add new features and functionality.

#### What kind of support is available to FreePBX users?

Being an open source community, FreePBX users have a wide range of support options starting with a very active online forum at [community.freepbx.org](http://community.freepbx.org). Tens of thousands of knowledgeable participants are also involved with an actively monitored IRC Channel (#freepbx on Freenode) and for in-depth documentation we provide a constantly updated wiki (see [wiki.freepbx.org](http://wiki.freepbx.org)). In addition to free support options, the project also employs a team of professional support engineers that can be engaged on an hourly or contract basis to support systems all around the world. The FreePBX team also conducts certified training and provides resources for our resellers in the form of our channel partner program.

#### What's the significance of the frog as the FreePBX mascot?

Since FreePBX began a decade ago, a red-eyed tree frog has always been associated with the brand. We call this frog Tango. The tree frog was chosen as the mascot of FreePBX because the frog is always moving forward. Tango continues to leap forward and leaves the proprietary systems of the past behind.



By Erik Linask

## Talking with Schmooze Com's VP of Sales and Marketing

INTERNET TELEPHONY magazine recently interviewed Preston McNair, vice president of sales and marketing at Schmooze Com Inc., to learn more about the open source movement. Here's what we found out.

### What is the state of open source communications technology adoption today?

The communications industry is a multi-billion dollar ecosystem benefitting businesses of all sizes and types. Open source communication platforms powered by FreePBX have been under continuous development for more than 10 years, with no signs of slowing down. FreePBX accounts for millions of installations contributing billions of dollars in hardware, software, and services sales. We have analytics showing installations of FreePBX in more than 210 countries and territories around the globe, making it the most prevalent open source PBX platform in the world.

### What is driving growth of open source?

In the past, open source was thought of as a free or low cost alternative to proprietary systems. These days, however, open source is leading innovation and in many cases delivering a higher quality product than its proprietary counterparts. The low cost to implement and the freedom to modify code was the traditional answer of open source's popularity for both small business and enterprise users. What many people do not realize and is probably the biggest driving point of the explosive growth of open source today, is that the majority of open source-related revenues are not made by open source companies. Free open source software, as it turns out, has much stronger ties to traditional capitalism than many understand. The bulk of the revenue open source telephony generates is spent on hardware, services, and related support of the product. Open source community members embrace the technology

to fulfill their own needs, which continues to drive adoption of FreePBX.

### Is open source better suited for on-premises or hosted/cloud deployments?

Open source is well suited for either type of deployment. There is not one model that fits all needs when it comes to comparing hosted or on-premises solutions. The decision as to which one is best is about maximizing the benefits of each solution against business needs and available infrastructure. There are advantages and disadvantages with both options; however, for users of FreePBX we recommend the use of the same Distro package whether you install on premises, or in a hosted environment. The differences would be subtle in the implementation of different security measures for hosting remote endpoints, for remote management of the platform, and of course for specific legacy PSTN trunking. Being able to choose between delivery models and utilizing the same core platform allows FreePBX system integrators to benefit from quality solutions that are also cost-effective to deploy. This allows the focus to remain on the features and benefits, not on the underlying technology or delivery mechanism.

### People often believe low cost means reduced feature set and usability. Are there limitations when using open source, as opposed to proprietary PBXs, such as feature sets, scalability, management, etc.?

To the contrary, with open source, the sky's the limit when it comes to solutions, feature sets, etc. Open source software allows community members to modify and adapt the software for their own requirements, some-




Preston McNair  
Vice President of Sales and Marketing  
Schmooze Com Inc.

thing that is not easily done with proprietary systems. These new features and capabilities are often pushed back into the core product for the benefit of other users. Customers of proprietary solutions are generally at the mercy of the vendor's vision, requirements, dictates, prices, priorities and timetable, and that limits what features they can implement. With FreePBX, users are in control to make their own decisions to do what they want with the software. They also have a worldwide community of developers and users at their disposal for help and support.

### Are open source solutions as secure as proprietary alternatives?

The truth of the matter is security of any technological product is not determined by the method of distribution. In practice there are more eyes on the code in open source than there are in closed source software; the biggest downside of closed source software is you have no idea how it was made. This year's earlier issues with the Heartbleed Open SSL security defect brought to light not only how much of an impact open source software has on the entire Internet infrastructure, but emphasized the fact that we must continually improve the tools we provide our developers and community to review and scrutinize our codebase for potential security issues and bugs. Since





its inception FreePBX has had source and ticket management tools in place to provide transparency to our users. We continue to make huge investments in time, energy, and infrastructure to continually improve these tools. When security problems are found in open source software, the visibility of the code and ease of use provided by these new management tools allow diverse teams to collaborate and contribute code and fixes. Bug and security fixes are often available within a matter of hours.

#### Do I need specialized training to work with open source VoIP?

FreePBX is a mature, easy-to-use platform. A person with limited telephony experience can follow the documentation provided in the wiki and online videos to get a system set up and processing calls. For those looking for advanced configuration and troubleshooting knowledge, there are a variety of certified training opportunities available, as well as professional sales and engineering support available if you need assistance beyond your skills.

#### Aren't proprietary communications solutions more reliable because of the tight integration between PBXs and endpoints?

Not necessarily, and in fact the opposite can be true. With proprietary systems you are usually locked into a very limited set of handsets provided by the manufacturer and you're at their mercy when there are reliability issues. FreePBX supports dozens of manufacturers with hundreds of different endpoints. This type of choice creates competition among manufacturers, resulting in a wider variety of features meeting many different customer needs along with accountability, since customers are not locked in and can choose providers that meet their specific reliability, as well as feature needs. All participants in the open source community join with their own interests in mind, with millions of production systems running FreePBX there is a huge incentive for equipment manufacturers to be active participants of the FreePBX ecosystem. Many of the biggest players have already

### FreePBX supports dozens of manufacturers with hundreds of different endpoints. This type of choice creates competition among manufacturers.

partnered with the project to get their hardware officially certified and supported. This partnership means that they not only work with the FreePBX development team to provide auto-provisioning of their products, but also provide engineering level support to ensure a tight integration of features between FreePBX and their endpoints.

#### Can I use open source in my call center? How do I integrate it into my call center implementation?

FreePBX is a powerful tool for building call center systems and solutions and there are thousands of centers of all sizes built around it. FreePBX out of the box includes support for call center environments including ACD queues, IVRs, unlimited call agents, integrated call recording, call detail reporting, call monitoring, barging capabilities, and more. There are also many call center centric add-ons such as operator panels, advanced reporting tools, automated dialers, and desktop integration that enhance and expand the capabilities that are included by default.

#### Are open source PBXs compatible with emerging technologies like WebRTC?

Since open source tends to be more agile it is usually quicker to adapt to emerging technologies and provides a better platform for innovation and implementation. Investment to build a common platform such as FreePBX is shared among all in the ecosystem; each member can dedicate more of their time developing applications to solve business problems that impact their users. Using WebRTC as the example, the FreePBX development team was able to quickly launch a WebRTC component for the built in User Control Panel, providing the ability for FreePBX users to make and receive calls from their existing extensions utilizing a web browser. Other community

members have also implemented WebRTC directly into their applications. Switzerland's Loway Inc., for example, implemented WebRTC components into its QueueMetrics call center add-ons for FreePBX. So, instead of having to create that emerging technology from scratch, utilizing existing WebRTC libraries, the development teams were able to quickly create go-to-market applications, resulting in a faster pace of innovation than would be found in proprietary solutions.

#### I've heard comments about poor call quality with open source platforms. Is there any truth to those claims?

No. Any phone system is susceptible to poor call quality as a result of poor implementation decisions or low quality providers and Internet connections. FreePBX is designed and developed to promote interoperability and the use of open standards, which provide a clear definition of how information and data are exchanged between different components operating together. Suitably skilled and trusted manpower should be used to implement the platform. Poor call quality is usually a result of a combination of factors, including poor implementation, incorrect estimations of bandwidth requirements, LAN infrastructure, poor choices in SIP trunk providers, or trunking issues with legacy telecom connections. These issues would also be problematic with proprietary closed systems. Like any business decision, when choosing a company to implement business communications, you should fully vet them to make sure they have the capability to implement your communication needs whether they are selling you a proprietary or open source system. FreePBX does have a certification program, a great tool for providers to differentiate themselves when competing for business with companies who have not proven their abilities.



## Billing Solutions

**ACSI-Automated Communications Services**  
[www.weareacsi.com](http://www.weareacsi.com)



**T**rends in billing continue to change and shift. For example, IDC's recently unveiled 2014 Consumer Payments Survey indicates there's recently been a small decline in online bill payment, but that mobile payments have increased slightly.

"After several years of growth, the market for 'alternative' payment methods is now entering a period where adoption gains may come more slowly and where simply providing an alternative isn't enough. Instead, providers need to offer products that add value beyond the payment," said James Wester, IDC's practice director for worldwide payment strategies and the author of the report.

Here is a rundown of some of the companies providing billing solutions, and related offers, in the communications space.

### **Accenture** [www.accenture.com](http://www.accenture.com)

Accenture provides the full range of consulting, technology, and business process outsourcing services that enable communications service providers to develop and deploy the billing and revenue management capabilities necessary to support a more customer-centric business that delivers digital products and services for customers. As CSPs compete in the digital ecosystem, these billing and revenue management capabilities can help provide revenue assurance and be a strategic enabler for CSPs, where billing can be a make or break experience for consumers and enterprises, who switch providers if dissatisfied. Accenture enables clients to establish new or improved billing and revenue management capabilities for consumer and enterprise customers to maximize revenue assurance and rationalize pre- and post-paid billing architectures. Services include billing/BSS transformation and consolidation; billing analytics solution deployment; smart monetization for digital services/content and data in real time, such as dynamic and rule-based pricing; real-time promotions; cost and spending controls; and mobile broadband data monetization through policy control. Accenture enables new billing capabilities to support CSPs' launch of new business businesses, services and pricing models, including value-based pricing, hybrid offerings, policy-driven and dynamic pricing; outsourced billing application development and maintenance, testing and operations; and transformation of revenue assurance capabilities.

ACSI is a communications management and electronic payment solutions service. Our cloud-based software service in combination with our automated document factory allow for the delivery of statements, invoices, and bills through multiple channels including print, e-mail, SMS, and web hosting. Through this platform documents can be viewed, tracked, sorted, cleansed, and searched by job or item. Our software comes with several reporting options that can be easily integrated with any accounting software. This solution also includes a secure electronic payment portal that is fully branded to our clients and allows their customers to pay bills via ACH, credit, and debit. Our solutions are sold as a service, making them affordable and customizable. ACSI also specializes in trans-promo marketing, document design, and process consulting. Our trans-promo services allow clients to reduce their communications and billing costs through advertising revenue or up-sales. Our document design team creates professional invoices and statements that are specifically designed to drive your end users toward cost saving e-delivery and DSO reducing e-payment.

### **Advanced Technology Group (ATG)** [atginfo.com](http://atginfo.com)

ATG is a specialized consultancy that focuses on solving complex quote to cash challenges for our clients. Central to these challenges are the billing and collections for services, especially for our service provider clients who rely on subscriptions, usage-based charges, and bundling of products and services to generate revenue. The billing industry has experienced dramatic changes over the past 20 years, seemingly re-inventing itself every few years or so. Today's buyer of billing services must wade through dozens of alternatives, from stodgy but proven (yet still pricey) on premises systems to state of the art SaaS/cloud billers, to emerging open source billing platforms. If the marketing brochures are correct,





Featuring  
FCC Chairman Tom Wheeler  
as keynote speaker.



# Making the Deal Just Got Easier in Dallas!

## COMPTEL *PLUS* Fall 2014 Convention & EXPO

October 5-8  
Gaylord Texan, Dallas, Texas

### You Spoke and We Listened

We're making changes – big changes to enhance the COMPTEL *PLUS* experience. When you attend or exhibit this Fall, you'll experience the difference: enhanced session content, greater sales opportunities, lively entertainment and a more productive networking environment. If it has been awhile since you were at COMPTEL *PLUS*, you must return and experience the difference. If you're a broadband, cloud, satellite, over-the-top (OTT) or wireless provider, or one of their strategic partners, the COMPTEL *PLUS* Fall 2014 Convention & EXPO will deliver:

- Unprecedented access to key decision makers.
- Extensive networking opportunities.
- An ideal environment for meeting existing clients and new prospects.
- Our innovative, interactive Business PLANner for scheduling meetings.
- Foresight into new trends and challenges.
- Strategic insights into potential policy reform impacting the industry.

### Exciting New Features

- Central EXPO activity hub and stage offering unique advertising and sponsorship opportunities.
- A more comfortable environment. Join us in the COMPTEL member VIP lounge and all attendees may enjoy complimentary lunch on the show floor.
- Focused exhibition hours with no other scheduled activities for a more robust selling environment.
- Pre-show selling tools, including webinar and marketing advice.
- Networking and just plain fun at our after-hours Texas-style party, complete with live band and western-themed activities.
- More educational and policy sessions on topics important to your business and the industry and, as always, free to all exhibitors.
- More exhibitors and attendees!

**Register before July 18, 2014 and save more than 25% off the regular registration fee. Use code CP101 when you register.**



For more information go to [comptelplus.org](http://comptelplus.org),  
email [kmorris@comptel.org](mailto:kmorris@comptel.org) or call 202.296.6650.  
Follow us @COMPTELPLUS.

**comptel**  
*plus*





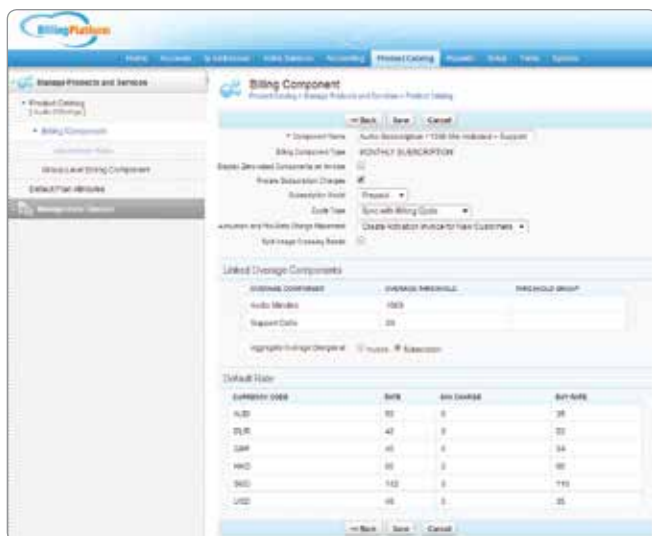
# Roundup

every vendor has the greenest grass on the block. We help our clients sort through the myriad billing alternatives on the market and accelerate the process of finding the right billing partner. Implementing a new billing platform is a mission critical and career impacting decision. If you are in need of a billing solution, give us a call and we will leverage our decades of billing experience and dozens of on premises and cloud billing implementations to help you achieve your objectives.

## BeQuick Software [www.bqsoft.com](http://www.bqsoft.com)

Fusion is a hosted cloud-based billing and fulfillment solution that powers the entire wireless customer lifecycle. From CRM, agent care, and automated order capture, through fulfillment, billing, e-commerce, payment, and analytical dashboards, Fusion offers the entire range of back office capabilities wireless businesses require to thrive and remain competitive. Its focus on wireless business models and on fostering client self-sufficiency accelerates time to market for new products, pricing, and customer experiences. Fusion supports a range of wireless business models including MVNOs, resellers and agents, mobile broadband service providers, and application-based services.

## BillingPlatform.com [www.billingplatform.com](http://www.billingplatform.com)



BillingPlatform.com offers a comprehensive, billing solution for enterprises of all sizes and industries – available in the cloud. Its customer base is spread across a variety of different markets, many of which are in diverse sectors of the telecommunications space including VoIP, cellular, satellite, network backbone, among others. Its suite of features cover the full spectrum of convergent billing needs, and can be rapidly customized to fit any business model or process and quickly adapted to reflect new product and service offerings. The application allows companies to easily create complex, competitive service bundles on demand to help reduce product development cycles and speed time-to-market. The platform can also rate and mediate high-volume usage in any format as well as support blended rate, flat fees, and subscriptions with overage tiers. Its customer-centric invoicing, rating, and dunning allows for client-specific invoicing cycles as well as custom invoice layouts, flat-file feeds, dunning, and payment options. Like Salesforce.com, BillingPlatform offers a completely configurable user interface and data model that can be leveraged to seamlessly integrate related business processes like provisioning and sales into invoicing and rating via built-in, dynamic web service APIs or application front-end extensions.

## Ericsson [www.ericsson.com](http://www.ericsson.com)

Ericsson offers Service Agility to help operators and their partners accelerate innovative service design, assembly, delivery and management. Service Agility makes it easier for operators to collaborate with an ecosystem of partners, suppliers and application developers, facilitating faster launch of a much broader range of innovative products and services. The solution incorporates Ericsson's broad OSS/BSS and Service Enablement portfolio in a framework that provides rapid and efficient innovation for agile service creation needs as well as accessibility by approved business partners for revenue-generating collaboration. It drives service management and includes delivery through a common enterprise product catalog and is pre-integrated with Ericsson's fully convergent charging and billing in one solution. It also provides mechanisms for exposure of new services as well as interaction for smooth collaboration, faster time-to-market, faster service delivery and cost efficiency. Service Agility uses a single, open and flexible framework to provide a complete solution that allows a user to browse and

Monday, August 11, 2014 • The Rio – Las Vegas

# Attend UC University!

## From The Foremost Industry Experts



Collocated With

**ITEXPO**

Get a comprehensive introduction to all of the aspects of UC - the market, the vendors, the deployment process, the benefits and the ROI.

- **Case Studies**
- **Deployment Options**
- **Scenarios**
- **Technology**
- **Use Cases**

*Each participant will receive the UCStrategies UC Benefit and ROI Analysis Tool (a \$700+ value), a pre-packaged tool that will allow you to analyze the benefits of UC in your organization.*

Presented By:

Phil Edholm and Blair Pleasant of UCStrategies



Phil Edholm



Blair Pleasant

### WHO SHOULD ATTEND?

- **Anyone who is considering deploying a UC solution for their organization**
- **Business Managers**
- **CIOs, IT Managers and Telecom professionals**

**Register Today - <http://tmcnet.com/59260.1>**





# Roundup

**Profitec Billing Services Inc.**  
[www.profitecinc.com](http://www.profitecinc.com)

Service Category	Beginning	New Beginning	Usage	Previous	Taxes	Total
Administrative Costs	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Account Level	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Broadband	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Cable	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Cellular	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Digital Subscriber Line	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Fixed Broadband	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 2	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 3	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 4	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 5	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 6	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 7	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 8	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 9	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 10	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 11	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 12	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 13	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 14	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 15	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 16	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 17	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 18	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 19	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 21	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 22	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 23	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 24	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 25	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 26	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 27	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 28	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 29	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 30	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 31	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 32	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 34	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 35	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 36	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 37	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 38	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 39	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 41	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 42	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 43	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 44	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 46	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 47	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 48	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 49	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 51	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 54	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 55	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 56	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 57	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 58	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 59	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 60	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 61	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 62	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 63	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 64	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 65	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 66	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 67	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 68	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 69	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 70	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 71	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 72	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 73	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 74	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 75	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 76	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 77	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 78	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 79	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 80	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 82	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 83	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 84	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 85	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 86	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 87	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 88	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 89	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 90	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 91	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 92	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 93	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 94	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 95	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 96	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 97	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 98	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 99	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Service 100	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

select offerings from an enterprise catalog that stores all product information as components, and provides a uniform way to create and expose service management, such as charging and policy parameters, and service delivery elements. Pre-integrated software, open APIs, and reusable catalog components stimulate fast, economical integration and product development.

**Freeside Internet Services Inc.**  
<http://freeside.biz/>

The Freeside billing platform is the premier open-source billing, trouble ticketing and provisioning software for ISPs, VoIP providers and other online businesses. Like Linux or Android, the platform is available under a royalty-free license and supported by a global community of developers from multiple companies. Since 1996, thousands of companies have used the software to bill millions of customers. The platform includes billing and converged invoicing for Internet, VoIP and telco services, including anniversary/pro-rating, usage-based billing, CDR rating, free minutes, caps, toll-free billing, minute pools, 1/6/30/60 second billing, 30/6 and other split billing, as well as real time credit card and electronic check processing. The CRM module includes prospecting, quotations and customer conversions. An extensive trouble ticketing system assists in support operations, and the customer portal allows customer self-care functionality such as signing up, changing plans, making payments, viewing usage and more. The software supports retail and wholesale operation, and multiple companies or brands in a multi-tenant capacity. Freeside Internet Services offers turn-key billing appliances, implementation and training services, and customized billing solutions.

**LogiSense**  
[www.logisense.com](http://www.logisense.com)

LogiSense is a global provider of billing and usage rating solutions to the telecommunications, cloud communications, machine-to-machine, convergent, and broadband industries. Communications service providers rely on LogiSense's flagship product, EngageIP Billing and Usage Rating to automate, optimize, and simplify their back-office requirements such as billing, order management, usage rating, taxing, invoice presentment, and customer self-care – while staying ahead of their competitors with new service offerings and improve operational efficiency.

Profitec is a SaaS billing provider combining state of the art billing with powerful OSS components. The OmniBill service integrates with platform or carrier usage data to support a wide range of billing methodologies including full taxation support. OSS products OmniBill and OmniCare interact with platform table data, keeping the billing database in synch with recent user changes eliminating leakage and avoiding duplicate data entry. Other system functions include CRM, channel management, e-billing presentment, end user self-care, and end user self-initiation. Profitec's open APIs simplify integration to many third-party applications for integration with sales systems and accounting applications. The core OmniBill OSS is enhanced with the integration of Profitec's OmniAgent sales channel management and OmniSignup end user e-commerce applications. The newest OmniBill release offers complete support for hosted communications including multiple billing options and support for end user-based product bundles. As a service bureau, we provide the service on a pay-as-you-go basis, minimizing startup expenses and capital equipment investment.

**Star2Billing**  
[www.star2billing.com](http://www.star2billing.com)

Star2Billing provides a range of commercial and open source solutions for the telecom industry, specializing in scalable switch and telecom billing systems for residential, business, and wholesale telephony markets, as well as a pre-paid and post-paid calling card platform supporting pinless dialing with a flexible rating and billing engine for imaginative VoIP, DID resale, calling-card and call-back products and services. Additionally, Star2Billing has a telecom CDR mediation, rating engine, and call data record analysis application for post-paid invoicing applications with a range of connectors to different switch types and supporting many call data formats. Star2Billing also supplies other telecom products such as multi-tenant voice/SMS broadcasting and telecom software development.



**SVK Software Corp.**  
**www.svksoftware.com**



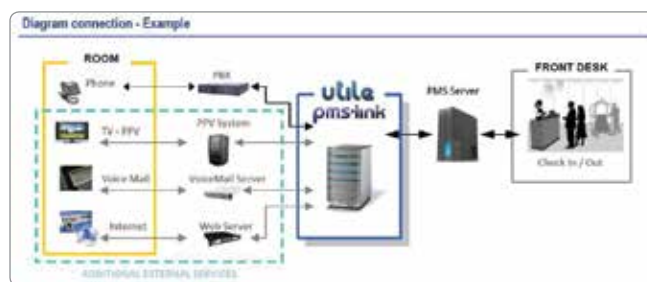
CDR2Cloud is a cloud-based billing solution for call detail record files. CDR files represent the transaction detail of every call/data usage processed through your network, and as such contain billing and statistical metrics needed for normal telco operations. CDR2Cloud is an easy to use, online billing service that provides billing and management metrics from your CDR files. Whether your network processes one hundred or one million calls/transactions per month, CDR2Cloud ensures that you reliably rate and bill every single call/transaction. CDR2Cloud is available 24 hours a day, via any browser/device and allows you to monitor your billing from the office, home or on the go. CDR2Cloud also allows you to invoice your customers for anything, anytime, via the complete invoice/payment module – allowing you to define your own invoice items, price, and minimum quantity. Generate invoices from drafts or from scratch. Text or binary, CSV or TAB, CDR2Cloud will read, process, and rate any CDR file. Every record in your CDR file will be identified according to your customer definition, rated according to your rate, and billed according to you taxes, fees, and billing schedule.

**TransNexus**  
**www.transnexus.com**

Customer Name	Running Total	Enable Threshold	Disable Threshold	Warning Threshold	Currency	Email Address	Created	Updated
Customer-41	1022.00	75.00	60.00	65.00	USD	support@transnexus.com	2014-03-12 13:05:50	2014-05-12 19:23:30
3Account	96.00	50.00	20.00	75.00	USD		2014-03-12 00:27:34	2014-04-11 14:50:20
Altamex	1234.00	345.00	65.00	0.00	USD		2014-03-11 20:04:06	2014-03-11 20:04:06
2Account	35.00	45.00	34.00	0.00	USD		2014-03-11 20:02:40	2014-03-11 20:04:35
1Account	800.00	200.00	100.00	0.00	USD		2014-03-11 20:02:18	2014-04-04 19:47:34
IS-USA0	1000.00	200.00	100.00	0.00	USD		2014-03-11 20:01:41	2014-03-11 20:01:41

NexOSS is a pre-paid and post-paid billing solution for SIP trunking services. It is the only billing solution on the market that is fully integrated with dynamic least cost routing and telecom fraud control. NexOSS features innovative credit controls, which allow users to set customized e-mail and SNMP alarm triggers based on hourly or daily spend rates per customer. This feature allows a service provider to receive real-time alerts and block or divert calls when customers are experiencing unusual or fraudulent activity, preventing future billing disputes. NexOSS includes detailed call traffic and quality of service reporting, as well as multi-currency settlement billing features. The NexOSS CDRAnalyzer feature includes a simple, high performance application for archiving and locating call detail records. NexOSS is interoperable with most popular VoIP equipment including Oracle Acme Packet, BroadSoft, Cisco, Metaswitch, Taqua, and Sansay.

**USA VOIP**  
**www.usa-voip.com**



Utile PMS Link has been designed to facilitate the connection between PBXs and other telecommunication devices (Internet, TV, etc.) with the Proprietary Management System installed within the hospitality market (hotels, resorts, hospitals, etc.) with 90 percent market share in Spain. This product is a middleware between the PBX and the PMS system, enabling an easy and transparent integration between phone or data devices with the management hotel systems. Strengthening the operation of hotel phone services, incorporating advanced telephone services to the PMS, and providing a low cost integration solution that offers security and control in the connectivity between voice and data systems. The application has minimum PC requirements, it's easy to install and configure, and it works as a service. Virtual license is available through the Internet (with no dongle or installation CD needed).

*By Peter Radizeski*

## Is It an Overcrowded Market?

The week I wrote this column two master agencies announced agreements with two different hosted VoIP providers. Each agency now has an agreement with 20 service providers that offer Hosted VoIP. 20.

It isn't just hosted VoIP. The cloud computing space is also getting crowded with VPS, IAAS, PAAS, and other competitors of AWS.

In the midst of all of this, agents will be blamed for selling on price. I think agents – and masters – are being set up to fail.

I get as a service provider you want to have as many feet on the street as possible, so you sign up as many partners as you can. You use mirrors as your criteria. That is the wrong strategy!

It isn't about how many quote you; it is about how many can align their business model with yours so that you both win. That is what a partner is. Unfortunately in these heady days of quarterly improvement, service providers miss the mark on that. You wouldn't hire employees like this would you?

I have seen the results for a service provider that picks wrong: Eight quotes a day that never lead to a sale.

The service provider will get mad at the master agency for the low close rate – even madder when the master charges several thousand dollars to attend the partner event. If you want face time with the agents, it will cost you. How many master contracts do you have? Do the math.

In this overcrowded market, your story is not being heard. But then you aren't really telling it either. I thumbed through some overviews today. You could just change the logo on the top because it is all the same copy.

Where's the sweet spot? Where do you excel? Where should the partner think of you and only you?

Tomorrow and next week, the agent will get three to five quotes for a 50-seat hosted VoIP deployment. How will he figure out which ones to present to the customer? He has his own experiences to go on and maybe some word of mouth from other agents, but nothing the service provider has said will help. In a crowded market, you have to be better marketers. **IT**

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

## Channel Briefs

### Fonolo, Avaya Join Forces

Avaya is now reselling Fonolo as part of the Select Partner Program. As a result, customers in 47 countries can now buy Fonolo's call-back solution for their call center through their local Avaya rep, reseller or distributor. Although Avaya has other companies in this reseller program, Fonolo is the first cloud-based service. As part of the program, Fonolo completed technical certification at Avaya's Interoperability Lab against Aura Communication Manager and Aura Session Manager. The deal does not cover Avaya's mid-market IPOffice call center products, but that is on the roadmap.

### Sprint Panorama Broadens MVNO Opportunities

Sprint Wholesale Solutions has unveiled Sprint Panorama, through which the Sprint Wholesale Solutions sales team assists brands by addressing their wireless objectives enabling them to seize new opportunities, differentiate and grow through mobility. "Providing network access alone to our MVNO customers and turning them loose on the market isn't going to cut it in today's competitive wireless landscape," said Karen Freitag, vice president - Global Sales: Wholesale & International at Sprint. "With years of expertise and proven success in enabling MVNOs, Sprint has the vision and ability to diagnose the most difficult wireless challenges for brands and turn them into a winning financial opportunity."

### Association Buys TechAmerica

CompTIA, a non-profit association for the information technology industry, has acquired TechAmerica, which brings to the table public sector expertise and a member base of large technology companies. CompTIA also recently debuted CertMaster, an online learning solution designed to help students and professionals learn and retain technical information more effectively, better preparing them for IT certification exams and future IT careers.

### KidoZen Welcomes Seven Partners

Enterprise mobility solutions outfit KidoZen has added seven new global channel partners including enterprise mobility specialty firms, system integrators, and technology providers. The new partners will address growing global market demand for KidoZen's enterprise mobile platform-as-a-service solution across Asia, Europe, Latin America, the Middle East, and the United States. The new partners include Asial Corp., Enterprise Mobility, Orchestra Technology, Rheti, Snoop Consulting, Tech Endeavour, and TECKpert.

Fiber Mountain's  
M. H. Raza

# Fiber Mountain Helps Data Centers Scale Affordably

**I**NTERNET TELEPHONY magazine recently interviewed M. H. Raza, founder and CEO of Fiber Mountain Inc., about how the company is leveraging data center infrastructure management, software-defined networking, and virtualization to take data centers to the next level.

**What is data center infrastructure management, and what is its role in today's highly complex data centers?** DCIM software collects, analyzes, organizes and represents critical data center information and metrics, and associates them with the physical location of infrastructure assets in the data center. In addition to tracking power, heat and space, DCIM is used for tracking of virtual resources, software licenses, and various other metrics. Many systems have a physical topology diagram of network layout and equipment, again associated with each physical location, however the documentation process to achieve this is manual, costly to maintain, and usually not 100 percent accurate as it requires frequent human audits. We see DCIM software evolving to include automatic discovery of network devices such as servers, switches, storage, patch panels and cable, and also to be able to automatically and accurately document these devices and cables into cabinets, racks and connectivity diagrams, without human intervention or audit, which will be significant as data centers become more complex.

**What trends are driving evolution in data centers and creating demand for DCIM and SDN capabilities?** DCIM and SDN together, this is a very interesting question! The underlying trend that is driving evolution in data centers is growth in size of network infrastructure; the network is growing both in capacity and complexity. DCIM is required to document capacity and help plan and manage the growth. SDN addresses the complexity side of the equation by promising to simplify the network through virtualization. The challenge is that today's DCIM solutions do not have the intelligence to dynamically associate network devices with their physical location, and consequently lack the ability to associate packet flow metrics with the location of physical assets. Hence, it is difficult to make the leap that DCIM solutions can document network metrics from virtually abstracted layers of a software-defined network when the DCIM solution is not even able to dynamically document

the very hardware that is used by the SDN. We are now looking at next generation network-aware DCIM solutions, which will be able to bridge the gap between the physical and the logical, and understand network flows and congestion as it relates to each piece of physical hardware and corresponding physical paths and locations, and be able to dynamically document the changing abstraction layers. Applications on these layers include cloud apps, content delivery, business continuity, disaster recovery and security.

**SDN is driving network transformation through the virtualization and programmability of switching and routing infrastructure, creating much more agile and flexible network environments. Are current SDN standards and capabilities enough to accommodate these trends?**

The level of agility and flexibility that SDNs provide will continue to evolve for a long time. We started by creating programmable abstraction layers over existing switch and router infrastructures; and we knew that progress in SDN would change the way we build and architect networks. Industry collaborative efforts under way today aim to increase multivendor interoperability, including white box devices, and [are] a precursor to the evolution that is coming in SDN capabilities. I also believe that advancements in photonics and optical switching along with SDN's inherent ability to control packet flows will drive a network infrastructure transformation which will require more discussions in standards bodies and start a race toward new features and capabilities.

**How is Fiber Mountain filling the gap in current SDN models?**

Traditional networks are based on switching and routing principals that were formed decades ago when the problem sets were different than today. With SDN we have an opportunity to transform the network, but to get there we need software control of every hardware element that we install in our data centers, from the servers all the way down to the physical layer cabling that connects the servers to the network. Fiber Mountain's definition of network virtualization or SDN includes the software controlled configuration and reconfiguration of switches, servers, storage, and also the physical layer which is the lowest building block for a connected group of devices, or network. Fiber Mountain is presenting clients with a standards-based solution through a revolutionary fiber core allowing direct connection of critical data flows between resources.

*Continued on page 80*



# Saving on Reverse Proxy Server Runtime

## Public Cloud, Nginx, Docker and VNS3 Can Do the Job

Cloud providers have invested heavily in cloud infrastructure facilities and equipment, making it easy to distribute resources across the globe. Despite the global reach, users hoping to run additional network services like Nginx, HAProxy, or Snort have to use additional VMs and servers. Adding VMs to the network can get very expensive and quickly complicate a network topology.

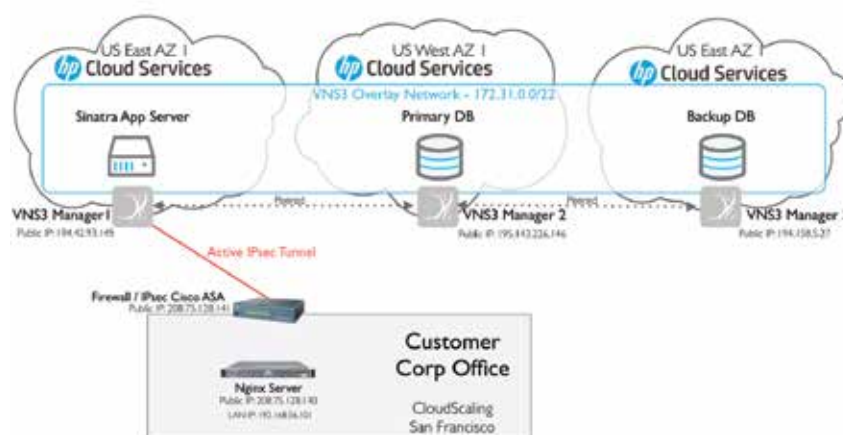
### Connecting Resources with Docker

When one of our customers asked us to help them simplify and save virtual machine runtime, we got creative and tried out a new technology called Docker. We integrated Docker into VNS3, our virtual networking product, to streamline how customers manage virtual networks.

instead of separate VMs. VNS3 provides the core network functions in layers 2-4, while Docker provides a place to run additional layer 4-7 functions.

AZ 2, and put the backup database and Manager 3 in Virginia at US East AZ 1.

The overlay network joins them all together into one logical network. By



spreading the topology across three different cloud regions, or even cloud providers, the overlay network can combat vendor lock-in. Overlay networks let the customer run the usual HTTP and SSL connections in addition to protocols like multicast that frequently aren't supported in public clouds.

### Nginx Web Servers and MySQL Databases

In the Cloudscaling private cloud data center, we set up a simple Ubuntu server running Nginx. The Nginx web server acts as a reverse proxy: Nginx sits at the front end and redirects all traffic to the application server based in US West AZ 1. The Nginx server is connected to the Sinatra application server on that same IP address in HP cloud availability zone 1. In HP region US West 2, there is a MySQL database.

The connection between the Nginx web server and VNS3 Manager 1 (as well as the Sinatra app server sitting behind it) is over a secure IPsec connection. Users can configure that IPsec connection in the VNS3 Manager administrator browser UI.

We bet on this technology even though it is less than a year old because Docker is solving an age-old problem of efficiently using virtual machines with the container concept. With Docker, VNS3 users can load applications into one device

To add more geographic variety to the mix, we set up availability zones in HP Public Cloud data centers across the U.S. Manager 1 and the Sinatra app server are in US West AZ 1. We put the primary database and Manager 2 in US West



In the Admin panel, the Manager IP address (192.168.56.253, in this case) has a single connected client. Users can also use the browser UI to view displays and set the client's physical IP, set an overlay IP address, and set connections to other Managers.

the same checksum settings, and users can validate the Managers are peered together with the same cryptographic keys to form a single, secure subnet overlay.

## Scaling Up for Savings

A standard extra small Linux instance



The encrypted IPsec connection creates a tunnel between the subnets within this cloud and across the other three cloud availability zones. Any packets being sent to the Sinatra app server or the app server database are being sent down the encrypted tunnel.

The VNS3 Manager UI lets users man-

age and view the app server's connections to Manager 1, the physical IP address, and the other end where the IPsec tunnel connects to the web server from the UI. Also, users can check their security settings with information on the Manager pages. If the Manager 2 and Manager 3 admin pages show

Ultimately, our customer used the foun-

dational functions of VNS3 – running an app server in one cloud while connected to a data center in another cloud – and the new Docker features in version 3.5 to do more with virtual networking. They economized cloud networking functions and saved VM runtime across multiple cloud regions. Their VMs can also be moved from one cloud to another using an overlay network.

Building overlay networks on top of the public clouds' compute and network resources extends traditional LAN or WAN networks with extra security, such as SSL encryption of all data in motion and IPsec VPN connections.

Our customer has saved roughly \$21.60 per month on VM runtime fees of since using Nginx reverse proxy in public cloud inside VNS3 3.5. This use case is exciting because our customer is now able to reduce cloud runtime capex by simplifying the number of VMs needed to run application servers in the cloud. It also avoids vendor lock-in with the ability to move an IP address from one cloud to another by creating cryptographic identities based in the client packs. The flexibility of network topology helps bind VNS3 Managers in one network, allowing multi-availability zone, multi-region, and multi-provider capability. This approach also allows users and their partners to build industry-compliant security measures into the overlay network using SSL and IPsec in a virtual private network. The traffic to each cloud and inside each cloud region is encrypted and never stored in plain text. And it can simplify cloud networking by keeping multicast protocols while other cloud networks disable multicast. The UI-based management tool also helps network administrators keep tabs on the setup, security, and topology to reduce management headaches. **IT**

Ryan Koop is director of marketing at CohesiveFT ([www.cohesiveft.com](http://www.cohesiveft.com)).

### AT&T Brings Salesforce into its Ecosystem

AT&T has added Salesforce to its network-enabled cloud ecosystem. As a result, AT&T customers will be able to use their VPNs to connect to Salesforce services using AT&T NetBond. That allows it to work with existing AT&T VPNs through APIs, with no additional equipment or access lines require; enables companies to save as much as 60 percent on networking costs; delivers as much as 50 percent lower latency and three times the availability compared to the public Internet; and increases security.

### SAP Cuts Price

SAP reportedly has fired the head of its cloud business unit, Shawn Price, as the company continues to adjust its leadership and portfolio. Additionally, SAP has made various executive changes, including changes to its senior cloud business leaders, and brought in new board members.

### Data Center Study Looks to 2025

A new report called "Data Center 2025: Exploring the Possibilities," which summarizes survey data gathered from more than 800 data center and telecom professionals from around the world, indicates that nearly 80 percent of them believe at least half of telcos will be using colocation facilities in their networks in 2025. The study, from Emerson Network Power, also reports that data center density in 2025 is expected to reach 52 kW per rack. A mix of sources will be used to meet those power requirements, with solar in the lead, followed by a nearly equal mix of nuclear, natural gas and wind.

### Ciena Gets Colo Deal

Colocation provider New Continuum Holdings Corp. has tapped Ciena's converged packet optical solutions to connect its data center in Chicago's western suburbs to key regional exchange points

including 350 Cermak in Chicago. The Ciena platform will provide low latency 100G connectivity to support applications like cloud computing, storage networking, and big data for service providers, financial service companies, research institutions and content delivery networks.

### Pharma Firm Taps Tintri

Global pharmaceutical supplier Colorcon is using Tintri's storage solution in its virtualization environment. The new solution – which includes four Tintri VMstore T540 storage arrays – has improved administration times and cut VM deployment times by 10X, according to Tintri. The solution also allows Colorcon to replicate critical VMs from the U.S. to the U.K. for disaster recovery purposes.

### Splunk App Delivers New Insights

Software firm Splunk Inc.'s new 3.1 Splunk App for VMware provides higher level visibility into virtualized environments. New with this release are the ability to generate 200 out-of-the-box reports, identify outliers for real-time triage, and do correlation into storage systems including a direct drill down into data from NetApp Data ONTAP. Leena Joshi, senior director of infrastructure operations marketing at Splunk, said: "The latest version of the Splunk App for VMware pre-packages correlations across virtualization and storage tiers to help organizations tackle the hardest operational problems."

### TriCore Partners with Actifio

Application management outfit TriCore Solutions has partnered with Actifio to offer back up as a service and disaster recovery solutions within its managed application services. Leveraging Actifio's copy data virtualization technology, the partnership will allow TriCore to quickly deliver new solutions to its enterprise customers that virtualize data management, decoupling application data from

its physical infrastructure to eliminate the complexity and cost of traditional systems. "Managing large and increasing amounts of data and preparing for the loss of that data is one of the biggest pain points for our customers," said Gina Murphy, executive vice president at TriCore Solutions. "Through our partnership with Actifio, we are able to deliver better data protection, availability and access to data when and where customers need it in addition to a more robust disaster recovery solution. It allows us to expand the portfolio of services that we currently offer our customers –helping them to address their data management."

### Asian Cloud Service Prices Plummet

In the last week of March, major cloud services providers in Asia dropped their prices for core services dramatically, according to IDC, which says that will make it very difficult for smaller players to stay in business with basic, undifferentiated services. "If the smaller CSPs are strong enough with decent customer bases, they will be acquired by larger providers. If not, then they're road-kill. In any case, both of the above will drive consolidation amongst the cloud vendors," said Chris Morris, an analyst for IDC Asia/Pacific.

### Cloud Platform Targets Media Vertical

SAN Solutions Inc. has launched SAN Metro Media, an offer targeting media and entertainment companies. The cloud platform will deliver full resolution file-based workflows that support production, post-production, broadcast, distribution, archival and the monetization of media. It will integrate directly into an existing studio workflow through a private, secure, high bandwidth, ultra-low latency network for storage and digital video, and can be configured as a private or semi-private platform off the public Internet.



August 11-14, 2014 | The Rio—Las Vegas, Nevada

ITEXPO | ITEXPO



# The Business Technology Event



# ITEXPO

itexpo.com



## DISCOVER



Review innovative solutions that increase productivity, reduce maintenance and lower costs.

## The One and Only Event For

- All Executives: CIO, CTO, VP & More
- Enterprise/SMBs
- Government
- Reseller/Channel
- Service Providers
- Developers

## Keynotes By:

**AARP**

Real Possibilities

**iRobot**

Schmooze

**Yealink**  
EASY VoIP



at&t

### Diamond Sponsor

Schmooze

### Platinum Sponsors



INTERACTIVE INTELLIGENCE



**Content Boost**

### Gold Sponsors



BROADVOICE

NETSAPIENS



VITELITY

**Yealink**  
EASY VoIP

### Cisco Expands Portfolio with Elastic Access

Cisco Systems has unveiled the Elastic Access portfolio, a collection of software and hardware products – including a new GPON solution, and new mobile backhaul capabilities – to enable service providers to affordably expedite the delivery of such offers as advanced bandwidth-on-demand, cloud-based managed business services, and consumer mobile broadband. A key component of Cisco's Evolved Programmable Network architecture, the Elastic Access portfolio promises to reduce service providers' network deployment costs by up to 56 percent and maintenance costs by up to 21 percent by leveraging virtualization, programmability, economical scale and architectural convergence in the access part of the network.

### Ericsson Awaits Growth in NFV, SDN, Small Cells

Ericsson's first quarter revenues were down significantly, but things were looking up in terms of net profit. Sales in the quarter were off 7 percent from the first quarter of last year and decreased 28 percent from last quarter, marking Ericsson's lowest quarterly revenue in more than three years. Meanwhile, operating margin improved year over year improved in all segments to 5.5 percent. The good news is the company in the first quarter won some business from Vodafone, which plans to use some of the profit from its deal with Verizon Wireless to make an addition \$9 billion investment to improve networks in Europe, and emerging markets like India and South Africa. Ericsson also expects in-building small cells, network functions virtualization and software-defined networking to create opportunities in the long-term future.

### Edgewater Raises \$5M

Edgewater Networks has raised \$5 million in debt financing from Eastward Capital to develop network functions virtualization and software-defined networking solutions. Edgewater's current product portfolio – for which many top-tier service providers and integrators are customers – includes enterprise session border controllers, which are used to enable device and protocol interoperability, policy management, quality of service, security, and troubleshooting related to unified communications deployments.

### Juniper, Nokia Strengthen Relationship

Juniper Networks and Nokia are expanding their long-standing partnership to address mobile broadband in the new world. That involves combining the Juniper MetaFabric data center architecture, which includes its SDN-based Contrail network virtualization and cloud network automation solution, with the Nokia NFV-based Liquid Core solution. The joint solution is slated to be available later this year. The growing relationship between Juniper and Nokia is interesting given the were rumor circulating in February that Nokia Oyj was considering a purchase of Juniper.

### Cyan Delivers SDN to KVH, The Kenton Group

Japan's KVH Co. Ltd. is using the Z-Series Packet-Optical Transport Platform and Blue Planet SDN and NFV orchestration platform from Cyan to power a scalable new Carrier Ethernet service it launched in Kawasaki, Osaka, Tokyo, and Yokohama in May. The service, called etherXEN, will be expanded in August to also include a burstable feature option and multipoint connectivity, and will replace KVH's Ether-MAN Service, which the carrier expects to phase out by

2016. In a separate deal, Cyan has signed on The Kenton Group, a fast-growing European network access specialist whose clients include BT, Talk Talk Business, and Virgin Media, which will use its products to implement 100G networks with NFV and SDN capabilities for customers in Europe and the Middle East.

### NFV, SDN Ready to Roll

This is the year that SDN and NFV will move from the lab to field trials, according to a recent report from Infonetics Research. The firm says that many carriers are in the process of moving from SDN/NFV proof-of-concept projects to productize software that will become the basis for commercial deployments. "I saw a lot of this software running in demos in vendor and operator stands at the recent Mobile World Congress, and it's easy to see it is much more real this year," notes Michael Howard, co-founder and principal analyst for carrier networks at Infonetics Research.

### Tiscali Taps Metaswitch for NFV, SDN

Tiscali has successfully built on Metaswitch's Clearwater Core and Perimeta Session Border Controller as part of its Indoona over-the-top application. "A network functions virtualization infrastructure is the perfect environment in which to construct, test, deploy and scale innovative network functions. We're pleased that Tiscali chose Metaswitch's NFV expertise to help it grow Indoona while providing telco-grade reliability," says Dave Reekie, general manager of Metaswitch's open source and security/interconnect business units. "We're confident that as the Indoona service continues to scale and evolve and become more popular with consumers, Metaswitch will be right there helping Tiscali promote the rapid innovation of new services."





## Mobile Payments Conference Mobilizing Retail

October 6 - 8, 2014 • Skokie, IL  
DoubleTree by Hilton - North Shore  
[MobilePaymentConference.com](http://MobilePaymentConference.com)

REGISTER



The Fall 2014 Mobile Payments Conference will be held at the DoubleTree by Hilton, North Shore, Skokie, IL, October 6 - 8, 2014. There will be a large Retail presence added to the conference this fall. The conference will highlight the many new mobile commerce platforms, services, solutions, and standards that continue to enter this exploding market. If your company is either a Retailer, financial institution, ISO, or a Vendor and are looking at or already participating in mobile commerce, you'll find invaluable resources at this event!

**We will emphasize current issues and trends in the mobile wallet and mobile payment spaces, with a special focus on retail payments as well as person-to-person and online payments. Session topics will address:**

- SoLoMo Payments and the New Recent World Order
- Repurcussions from Recent Data Breaches
- The Growing Threat of Cybercrime
- Making the Switch to EMV Chip Card Payments
- Sure Ways to Reduce Payment Processing Fees
- PCI Compliance: What Not to Do with Cardholder Data
- Which Mobile Payment Standard Will Win Out?
- Boost Revenues by Integrating Mobile Payment and Loyalty
- How Mobile Payment Helps Tame Big Data
- Adapt/Replace? Mobile Payment and Your POS System
- Current and Pending Regulations Impacting Mobile Payment
- What the Visa/Mastercard Settlement Means for Your Business
- Mobile Payment's Evolving Role in Retail and eTrail
- Top Trends Transforming the Retail Customer Experience
- Engaging Customers/Consumers with an Omni-Channel Strategy
- The Best Way to Secure Your Mobile Data
- Building an Omni-Channel Friendly Network
- The Right Way to Mobilize Your POS
- Business Forecast for Mobile in Retail

### SPONSORS:



### MEDIA PARTNERS:



Sponsors as of May 22, 2014.

## **\$100 off Conference Fee!**

Use Promo Code: **TMC100DSC** when registering online!

[MobilePaymentConference.com](http://MobilePaymentConference.com)



## Security

# Five Ways to Help Enterprises Secure Applications and Customer Data

**A**s reports of companies suffering data breaches continue to roll in with alarming frequency, concern about data security has moved beyond the realm of IT pros and into the mainstream. Security breaches at a wide range of companies, from brick-and-mortar institutions like Target, which allowed hackers to access data on as many as 100 million customers in December, to web-based platforms like Kickstarter, whose site was breached in February, have shown that no organization is beyond reach the reach of persistent attackers. While each company faces different security challenges, there are several specific measures that web-based application providers should take to keep customer data safe.

Enterprises that provide web-based applications should take a broad approach to securing sensitive company information, ensuring that the data is protected from all possible attack angles. This means defending the network using strong and standard encryption – in transit and at rest – hardened devices and servers, next-generation firewalls, IPS/IDS, monitoring/logging, antivirus, and writing secure code for the web-based application itself.

## Developer Training

In addition to offering security awareness training for all new employees – and an annual refresher – the engineering team should receive regular training on how to code securely, what to watch out for, and how to use tools to help them test for vulnerabilities. Numerous organizations that review security and breaches have created lists of top web application vulnerabilities, along with classifications of those vulnerabilities. These include exposure to cross site scripting (XSS), cross-site request forgery (CSRF or XSRF), injection (SQL and otherwise), click jacking, failure to restrict access to resources, bad use of cryptography, and bad session management. A great starting point for developer training includes the following four websites:

- OWASP (Open Web Application Security Project) Top 10
- CWE (Common Weakness Enumeration)/SANS (SysAdmin, Audit, Networking, and Security) Top 25 Most Dangerous Software Errors
- WASC TC (Web Application Security Consortium Threat Classification)
- Cloud Security Alliance

The training should include descriptions of the issues, real-world examples – in some cases from the web application itself (all fixed, of course) – and ways to address these issues.

## Code Review

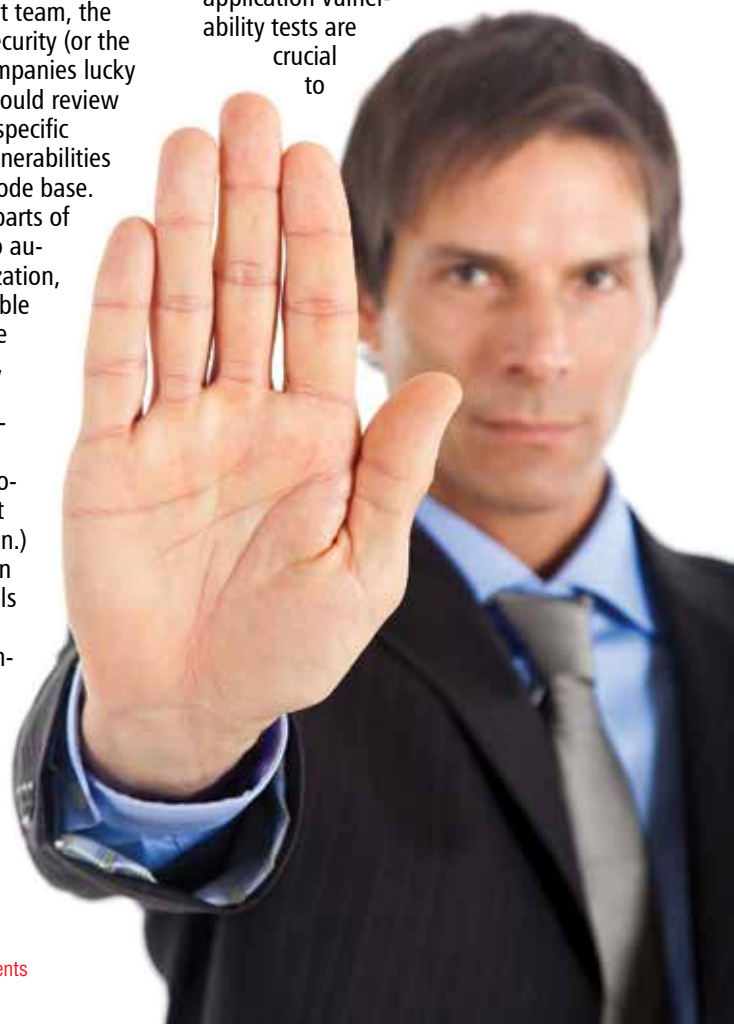
In addition to the regular code reviews done by the development team, the person responsible for security (or the full security team, for companies lucky enough to afford one) should review and test code in several specific areas to validate that vulnerabilities have not crept into the code base. These areas include the parts of the application related to authentication and authorization, along with other vulnerable areas, including database access, input and output, and use of cryptography. (Pro tip: Always use standard implementations of strong cryptographic algorithms – you're not smart enough to write your own.) The engineering team can also use a number of tools to help uncover issues. Depending upon the company's budget, this may include commercial tools such as Veracode and Burp. There are also a number helpful open source tools such as Findbugs, OWASP Zap, and a free version of Burp.

## Internal Testing

QA teams should perform a set of security tests on each release (automating as much as possible) to validate that vulnerabilities do not find their way into the application. To keep track of potential vulnerabilities, organizations can set up a ticketing system to keep track of all security-related issues. This keeps the company aware of all vulnerabilities and helps ensure that security problems are resolved as quickly as possible.

## External Testing by Security Vendors

Internal testing alone won't stand up to today's threats, which is why organizations need outside validation of their security. External audits, ISO certification, and third-party penetration and web application vulnerability tests are crucial to



confirming that sensitive data remains protected. These third-party tests should be done on a regular basis – or done continually if possible. At a minimum, these tests should be performed whenever there is a significant change to the code base.

There are many vendors that can test the security of an application. Vendors that I have used include Cenxic, WhiteHat Security, and Veracode. Cenxic and WhiteHat Security do vulnerability testing via the front door (manual and automated). Veracode scans the code itself to look for vulnerabilities. These two types of testing complement each other. The front door tools can quickly try out known vulnerabilities and record how your application reacts. The code scans look at how all input data is processed and how this

data drives the output. These tools are particularly good at finding places in the code where output is not being properly escaped (potentially allowing XSS) or being built up incorrectly (for example, HTTP header splitting). They also help find issues related to the incorrect use of cryptography (for example, using bad random number generators). Code scanning tools can find a wider range of possible issues, though there is also the expense of having to review the false positives that they may generate. Other vendors, mainly consulting firms, can be employed to do manual vulnerability and penetration testing on a regular or ad hoc basis.

#### **Staying Up to Date**

Security personnel and other top IT staff should stay abreast of new security issues by

monitoring security sites, blogs, social media, and e-mail lists. Hardware and software vendors, security providers, governments, independent experts, the security press, and hackers all have important insights to offer.

Attending local security meetups (for example, many cities have a B-Sides group) is also a great way to stay up to date.

Security is a never-ending process. Enterprises must remain vigilant as new threats continue to emerge. Make improvements to the security infrastructure early and often to best protect customer data.

*Rick Spickelmier is the CTO of Birst ([www.birst.com](http://www.birst.com)).*

## **Security Briefs**

### **Masergy Buys Global DataGuard**

Cloud and managed services provider Masergy Communications Inc. has acquired Global DataGuard Inc. "In today's rapidly evolving threat landscape, discrete signature or rule-based security solutions alone are not adequate from a risk management perspective. And as seen in recent news, even when businesses invest in advanced security solutions, the lack of systematic sharing and correlation of subsystem data and vigilant 24/7 monitoring leaves them exposed to advanced threats," said Masergy's CEO Chris MacFarland. "Cyber attacks are only going to become more intense and sophisticated – it's a new battlefield. The acquisition of Global DataGuard uniquely positions Masergy to deliver solutions engineered to address these advanced persistent threats."

### **ADVA Unveils 100G Encryption Solution**

New 100G Metro technology from ADVA Optical Networking offers built-in line-side encryption. Integrated into the ADVA FSP 3000, this feature is based on the 4x28G technology of the original ADVA 100G Metro. It leverages the Advanced Encryption Standard with a key size of 256 bits, and features a Diffie Hellmann dynamic key exchange with more than 60 exchanges per hour.

### **Appetizer CEO Dishes on Heartbleed**

Jordan Edelson, software developer and CEO at Appetizer Mobile, says we need to understand the gravity of the recent Heartbleed attack, that any Internet-connected device could be susceptible to such an attack, and that people should monitor their bank accounts to make sure there's no nefarious activity taking place on that front. "People just have to be aware of

potentially other people having their info," he adds. "People just need to be alert. That's just what the big picture is."

### **Study Warns of SQL Injection Attacks**

Wholesale fiber optic open-access network transport provider Mid-Atlantic Broadband Communities Corp. recently completed a trial of Infinera's DTN-X packet optical transport networking platform, featuring 500gbps super-channels and multi-terabit capacity. The trial took place on the existing southern Virginia network of Mid-Atlantic Broadband, which recently launched an economic development initiative called GoSOVA to attract companies to locate in Southern Virginia. "This trial underscores MBC's ability to rapidly deliver terabit capacity on our existing network," said Tad Deriso, president and CEO of MBC. "As we look toward expanding and enhancing MBC's network infrastructure to accommodate 100Gb/s transport circuits throughout the region, this successful trial is validation that MBC will be able to continually deliver high capacity, scalable bandwidth to our carrier customers."

### **Report: 72 Percent Expect Cybercrime**

A new report conducted by Opinion Matters and sponsored by ThreatTrack Security indicates 72 percent of respondents are confident they will be the target of an Advanced Persistent Threat, targeted malware attack or other sophisticated cybercrime or cyber-espionage tactic in the next 12 months. Work on the report involved surveys of 200 IT security managers or IT security administrators in energy and financial services organizations. Of that group, 38 percent said an attack is either a "certainty" or "highly likely."

# Is Your Company's Software Underused?

## If So, Perhaps It's Time to Look to the Cloud

Subscribe FREE online at [www.itmag.com](http://www.itmag.com)



# Web RTCV

## CONFERENCE & EXPO

[www.webrtcexpo.com](http://www.webrtcexpo.com)

November 18-20, 2014

**Explore Changes  
in Enterprise  
Communications**

- Adding Video to Web Apps
- Contact Centers/Customer Service
- Enterprise UC
- Financial Services
- Healthcare
- Vertical Applications
- Retail



Platinum Sponsor

**Dialogic**

Gold Sponsors

 **AudioCodes**

 **VOXBONE**  
The Inbound VoIP Provider

**inGate**

  
**HUAWEI**

**San Jose Convention Center  
San Jose, California**



@webrtcexpo | #webrtcexpo

The top hosted VoIP providers in North America are 8x8, West IP Communications, Comcast, and Verizon, according to Infonetics Research. "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," reports 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." Meanwhile, West advanced from fourth place last year to the second place position this year due to strong demand for its Cisco-based solution, and Mitel made its debut on this year's scorecard, due in part to its merger with Aastra.

Interactive Intelligence Group Inc. has entered into a letter of intent to acquire OrgSpan Inc., a privately held company that offers cloud-based enterprise social communications solutions. "OrgSpan develops socially relevant communications products that our customers have found valuable and unique," said Bill Gildea, Interactive Intelligence senior vice president of corporate development. "These social customer service components, together with the core cloud architecture that OrgSpan has developed, are important to the foundation of our cloud offerings moving forward. Additionally, this acquisition will streamline our development efforts and give us the benefit of OrgSpan's numerous patent filings and access to its customer and prospect base." OrgSpan offers OrgSpan Select, which enables customers to search and view agent social profiles by multiple criteria, creating new and more effective ways of connecting customers and contact center agents. The company also offers OrgSpan Connect, a unified company directory of OrgSpan Connect users that includes information-rich personal profiles designed to improve employee collaboration.

ShoreTel, in a move to capitalize on the changes that Obamacare will bring, has launched a health care industry-focused sales program. Under this program, the company delivers dedicated solutions to hospitals, physician practices, and extended care providers. The company is working to develop a partner/reseller community network to help bring its products and solutions to the vast health care market.

The UC and VoIP market is set to grow to \$88 billion by 2018. "Business VoIP services have moved well beyond early stages to mainstream, strengthened by the growing adoption of SIP trunking and cloud services worldwide. Hosted unified communications are seeing strong interest upmarket as mid-market and larger enterprises evaluate and move more applications to the cloud, and this is positively impacting the market," said Diane Myers, principal analyst for VoIP, UC, and IMS at Infonetix Research

The new Zultys Mobile Communicator version 4.0 for Android extends advanced IP business phone system functionality like voicemail management and contact center agent capabilities to the mobile device. The new application is now available to download from the Google Play Store. With Zultys Mobile Communicator 4.0, mobile and remote workers can now answer contact center agent calls from their Android devices and access the same call management features as their office counterparts. Also, with release 4.0, mobile employees can see voice messages left for their personal extension and any call groups of which they are agents. Messages can be saved, deleted, or forwarded to a coworker with an attached personalized message.

The AudioCodes 420HD IP Phone has received recommended status for use with Interactive Intelligence's Customer Interaction Center all-in-one IP communications software suite. Receiving the recommended status requires vendors like AudioCodes to have provisioning integration support for CIC, and to meet stringent requirements related to configuration, documentation, installation, performance, reliability, and SIP interoperability. An Interactive Intelligence partner since 2001, AudioCodes has both recommended and validated status with CIC for various products, including session border controllers and VoIP gateways.

RingCentral Meetings, a multi-point HD videoconferencing and web sharing app built for smartphones, tablets and computers, has been expanded to be available across all RingCentral Office Editions. RingCentral Meetings as part of RingCentral Office Enterprise Edition, was introduced in January 2014. With this new release, RingCentral Meetings will now be included in all RingCentral Office Editions: Standard, Premium and Enterprise, varying by the number of attendees.



AUGUST 12-14, 2014 | THE RIO—LAS VEGAS



# SOFTWARE TELCO Congress™

## *The NFV & SDN Event*



### The Network Operator's Guide to the Key Economics of a Software-based World

*Attend Software Telco Congress  
and Understand:*

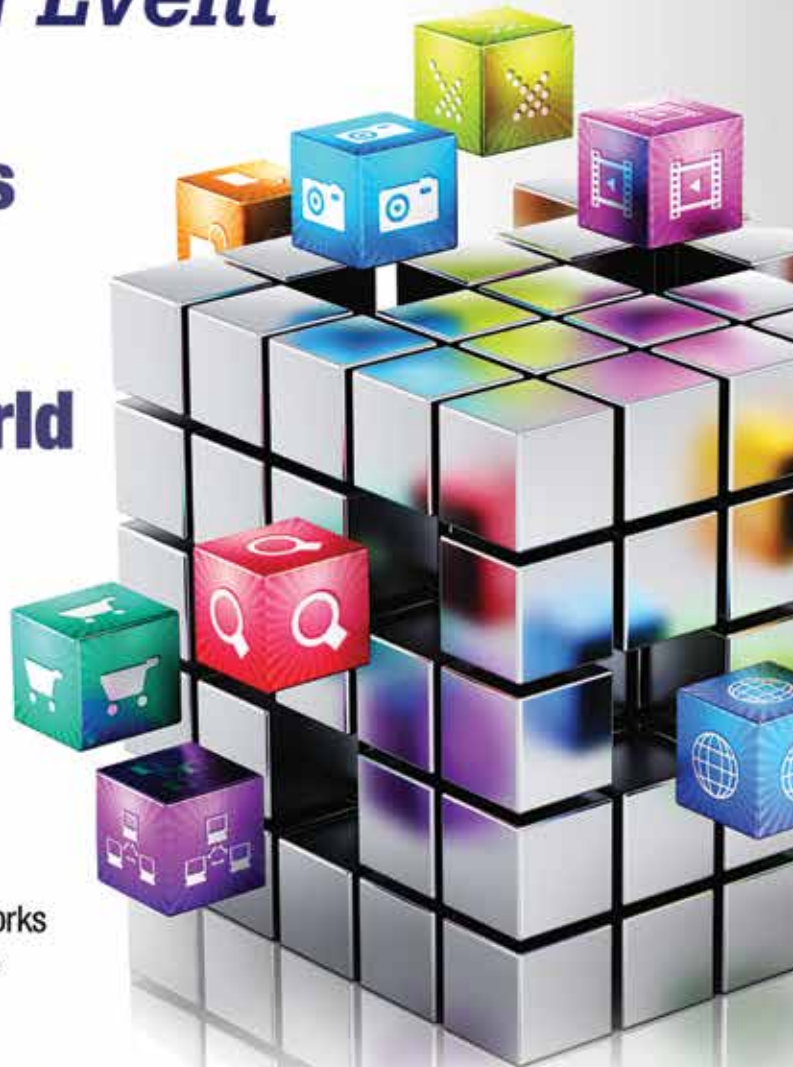
- The Economics of SDN & NFV
- How Open Source will Drive NFV and SDN
- Building a Network DevOps Practice for SDN and NFV
- Competing in an OTT World
- Multi-vendor Service Chaining
- Building New Applications for SDN & NFV Networks
- Other Key Concepts in the Move from Hardware to Software.

## The Software Telco Congress

Your experience includes access to the hundreds of exhibitors participating at the ITEXPO exhibit hall. In addition, SmartVoice Conference, M2M Evolution Conference & Expo, and Super Wi-Fi Summit are collocated with Software Telco Congress and provide access to additional vendors and potential partners you won't meet anywhere else.

**Are you a service provider? You could be eligible for a complimentary pass.**

Contact Frank Coppola at 203.852.6800 x 131 for details  
or register with code ServPro.



**Register Today at**

**[www.softwaretelco.com/conference](http://www.softwaretelco.com/conference)**



# An IoT Booster

## CEO Explains Why This Signal Technology is Coming Out of the Shadows

**F**or more than 10 years, technology vendors have been creating signal boosters to address the issue of poor indoor cellular coverage and dropped calls. Until recently however, carriers outlawed boosters due to network interference. But finally, the tide is changing and the market has come of age. The timing is ideal given the groundswell in the Internet of Things.

A key turning point for the booster market is the FCC regulation guiding the use of consumer boosters on licensed spectrum, which went into effect on April 30. The natural outcome of regulatory involvement in most markets is a significant shakeup among vendors, and the booster market is no different. We're already seeing the early signs of that.

As the regulations take hold, smaller, less established players will either exit the market, or be acquired by stronger booster

technology has a valuable and important place in providing the signal strength needed in increasingly connected indoor environments where signal strength and coverage is integral to seamless operations.



Rather than working in the shadow areas where carrier signals could be compromised, boosters can now work in tandem with carrier networks and small cells to provision indoor signals at a far lower cost than new infrastructure deployments. There is a rapidly growing dispersion of sensors in industrial complexes, factories, warehouses and storage environments, all of which are challenged by coverage dead spots. In many cases, carriers and their customers have had to go to great lengths and expense to address them through the use of technologies such as picocells. But these approaches may require more dense distribution than carriers can afford.

With FCC authorized boosters – coupled with the Small Cell Forum's endorsement of smart signal boosters as a

complement to small cell installations – the potential gains are clear. Rather than relying exclusively on capex-heavy picocells or other small cells to bring coverage relief, partnering these small cells with smart signal boosters offers a wiser, cheaper and more effective solution.

Carrier-specific smart signal boosters leverage edge network sensitivity and self-organizing network capabilities that can make determinations about interference, and can readily collocate with enterprise-grade small cells to ensure clean signals. That can help spread a bubble of connectivity that will connect sensors throughout a designated area. That's a critical distinction from wideband boosters for which a higher risk of interference could potentially wreak havoc with carrier signals.

*Werner Sievers is CEO of Nextivity Inc. (<http://cel-fi.com>).*

---

**A key turning point for the booster market is the FCC regulation guiding the use of consumer boosters on licensed spectrum, which went into effect on April 30.**

---

developers. This consolidation will leave mainstream incumbents fighting for market share, and in some cases battling it out on pricing at the cost of performance and features.

This is a natural evolution that will benefit enterprises and consumers. The booster market has long been highly fragmented and loosely regulated. Now that performance guidelines are being enforced, signal booster pricing levels may stabilize. We will also see innovation from vendors that have developed technology to maximize productivity and performance gains.

The FCC guidelines are a first for the often-ignored booster market. This regulatory acknowledgement is a strong endorsement that booster technology has a legitimate place in the cellular world. Carriers have finally recognized that despite massive capex investment in cellular infrastructure, booster

# VoIP Recording was **NEVER EASIER!**

## SIP Print

Your IP PBX increases the productivity of your users and lowers your operational costs. It makes excellent business sense. Enhancing your system with SIP PRINT makes it even better.

### **SIP PRINT offers award-winning solutions for:**

**CALL RECORDING** - Record in-bound and out-bound calls for specific users, for training, customer satisfaction or legal compliance requirements

**QUALITY ASSURANCE** - Integrated Agent Scoring Module imbedded in SIP Print new CR 2.0 version

**SESSION BORDER CONTROLLER RECORDING** - SIP Print new CR 2.0 now records SBC protocol based on RFC 3261

**CALL ACCOUNTING** - Control costs and compliance with detailed reports on historical usage, and plan for the future with forecasting

**And Much More!** - Visit [www.sipprint.com](http://www.sipprint.com)  
For more Information





## BYOD: An Ongoing Challenge

**F**or all the talk in recent years and months about the bring-your-own-device trend, you'd think businesses would have this situation well in hand. But, in fact, BYOD continues to be one of the issues that keep company executives awake at night and has them considering strategies to completely lock everything down in an effort to limit corporate and personal liability, and keep their organizations safe from a data breach. However, while managers are feeling the heat from BYOD concerns, employees could not be more chill about it.

Tim Williams, director of product management at Absolute Software, a company that has been managing and securing mobile devices since 1993, says that although some managers want to lock everything down, that's not possible. The good news, he says, is they don't have to. Instead, he comments, organizations need to institute

with their private device last year, yet just 27 percent of that group felt the need to report that to their employers.

Meike Escherich, principal research analyst at Gartner, comments: "One of the biggest challenges for IT leaders is making sure that their users fully understand the implications of faulty mobile security practices and to get users and management to adhere to essential steps which secure their mobile devices. For many organizations, overcoming BYOD security challenges is a full-time task, with a host of operational issues."

Meanwhile, AdaptiveMobile recently reported that 83 percent of employees would stop using their own device if they knew their employer could see what they were

---

**"Without the ability to control when and how users connect to different networks, through different access points, the long-term impacts of mobilizing the work force can be quite damaging to the bottom line."**

---

**– Smith Micro's Carla Fitzgerald**

---

processes to encourage employees to follow best practices around BYOD and to transform businesses' IT staffs as the path of least resistance to get tools that allow employees to do their jobs. And, he says, rather than addressing BYOD from a device-centric standpoint, businesses should shift to a user-centric stance.

Gartner lately has looked at the BYOD from the end users' standpoint, and nearly half of those they surveyed said they spend more than an hour a day using their private devices for work. The firm's survey also indicates a quarter of business users admitted to having had a security issue

doing at all times – and said that 61 percent of enterprises already have this level of access.

"Without the ability to control when and how users connect to different networks, through different access points, the long-term impacts of mobilizing the work force can be quite damaging to the bottom line," says Carla Fitzgerald, chief marketing officer for Smith Micro. "However, by creating a strategy to address BYOD with policy-based management, IT administrators can enable employees to get the information they need, anywhere, without compromising productivity, cost or security."



# Lync Your Enterprise Network

## More Lync Qualified SBCs Than Any Other Provider

Whether inside or outside the four walls of the enterprise, Microsoft Lync enables users to communicate securely and stay connected with colleagues and customers, from virtually wherever they choose.

Integrating Sonus SBCs into your Lync deployments helps your Unified Communications vision become a reality. These powerful network devices protect, secure, simplify and standardize real-time, SIP-based multimedia communications, including voice over IP (VoIP) and video.



A recent study from Forrester indicated an average of nearly \$3 million first year savings across 12 companies that implemented Lync .

Learn how Lync and Sonus can help you increase your profitability. Call 1-855-GO-SONUS today.

**Microsoft Partner**

Gold Communications

Voice  
Unified Communications  
Business Productivity Solutions  
Midmarket Solution Provider



Scan to learn more on Lync

# What's New in the Satellite Orbit

**T**he FCC's planned Incentive Auction, growth in the Internet of Things, LTE build outs, and Wi-Fi proliferation have been grabbing a lot of headlines lately in the wireless sphere. But another hot area of wireless expansion these days is satellite.

As you probably have heard by now, Google in June purchased Skybox Imaging for \$500 million. Meanwhile, several of the satellite network operators have been investing richly recently to expand their capabilities, as noted by industry pundit and TMCnet satellite expert Doug Mohny.

"If it is broadband/communications Ka-band and O3b, for M2M, Iridium and ORBCOMM are both putting in new satellite networks, with Iridium also supporting voice services and some broadband," says Mohny. "Globalstar has a new set of satellites up, they do all the SPOT stuff and also cheap sat phones. They're literally

giving away sat phones to promote the voice service, depending on what contract you want. For non-Internet telephony, but still cool and [with] big data, Planet Labs is going to put up over 100 breadbox satellites to do Earth imaging at 3- to 5-meter resolution. We'll be able to watch the polar icecaps melt in near real time."

## Globalstar

SPOT LLC is a wholly owned subsidiary of Globalstar Inc. focused on supporting satellite messaging and emergency notification for aviation, enterprise, government, and outdoor recreation applications. It enables users to track their assets and use location-

based messaging and emergency notification beyond the boundaries of cellular networks.

The SPOT service launched in 2007, and as of this May, there were more than 200,000 SPOT units in service and SPOT was used in 3,000 rescues worldwide.

"Lifesaving rescues around the globe are now a daily occurrence for our SPOT products. SPOT is an absolute must for the outdoor recreation market and aviation, as well as an essential government and enterprise solution," said Jay Monroe, CEO and chairman of Globalstar, which in the first quarter saw a 6 percent year-over-year revenue increase (at \$20.5 million), and in April began trading on the New York Stock Exchange.

SPOT services include SPOT Gen3, a rugged device providing off-the-grid messaging, emergency alerts, extended battery life, and





GPS tracking at 2.5-minute intervals; SPOT Global Phone, a satellite phone available via retail channels for \$499, that allows users to make calls virtually anywhere; SPOT Trace, a GPS tracking device commonly used to track the whereabouts of person vehicles; and the SPOT App, a web-based interface allowing users to easily view their SPOT messages, show their track points, and monitor their assets via smartphone or tablet.

Duplex equipment sales revenue for the first quarter 2014 at Globalstar increased nearly 22 percent from the first quarter of 2013, which the company reports was driven primarily by the SPOT Global Phone. SPOT equipment sales revenue increased 54 percent, or \$0.5 million, due to sales of SPOT Gen 3 and new SPOT Trace.

### **Google**

As for Google, as Doug Mohny reported for TMCnet on June 13: "Skybox Imaging

has built a company around high-resolution satellite imaging, HD video from orbit, and big data analytics services to dig meaningful results out of all the imaging it plans to take and archive. The key to Skybox is information, specifically imaging and being able to process it. Customers can get good imagery today, but want the ability to measure changes over time. Skybox has built the systems and tools to catalog a flood of imagery from the constellation of satellites it will put into orbit, then be able to compare those images." That, he said, will enable Google to keep Google Maps up to date and accurate.

### **Iridium**

Global mobile voice and data satellite communications network operator Iridium Communications Inc. in April announced the completion of what it calls an extensive upgrade to its ground

station infrastructure in preparation for the launch of Iridium NEXT, its next generation constellation. The NEXT launch is expected to begin in 2015 and be fully operational on Iridium's constellation of 66 satellites in late 2017 or early 2018.

The ground-based upgrades involved deployment of a new architecture, called TelePort Network, that allows for dynamic traffic routing for improved performance and reliability. The build also entailed the installation of new antenna and pedestals from L3 Datron in the feeder link terminals; the use of Radisys T-Series gear for autonomous failover and increased reliability; and the implementation of software-defined modems from RT Logic.

Satellite technology is being quickly outdated because advancements in ground-based technologies are moving so fast, says David Wigglesworth,





vice president and general manager, who adds that the NEXT deployment will enable Iridium to keep more up to date. NEXT will enable Iridium to get more out of its spectrum due in part to improvements in encoding and modulation schemes.

These improvements will allow Iridium to deliver higher speed data and more of it, he says, to power voice, SMS, circuit-switched data, short burst data, higher speed aviation and maritime, and new higher data rate (up to 512kbps) services. Today, before the NEXT launch, Iridium's data rates top out at 120kbps. But Iridium is not so much about delivering the fastest connections as it is about providing customers with reasonable speeds at reasonable cost, he adds.

Iridium customers, to which the company provides services exclusively through its distribution channel partners, are mainly enterprise companies in various vertical markets, especially those in the aviation and maritime areas. That includes organizations in fisheries management, supertankers that need data communications connectivity to send data to their offices, communications systems used in airplane cockpits, and military use cases.

M2M is also an important focus for Iridium, which provides connectivity for such applications as asset and fleet management. For example, an aftermarket integrator packages Iridium into a solution used for cargo theft prevention in Brazil, says Wigglesworth. You could just use cellular communications to track moving assets and vehicles, he says, but thieves tend to know where cellular coverage does and does not exist, so they often attack trucks when they pass through cellular black holes, he says. To prevent that, the solutions provider Zetix added satellite connectivity to its solutions so vehicles never fell off the map.

Iridium aims to be as easy to integrate as possible, so its partners and their customers can easily add its services into any mix. Its adoption of IP via NEXT will help with that, he says.

"As we go toward NEXT, we're looking at making everything IP addressable, that's where we're heading toward," he explains.

Iridium's network is unique in the world in terms of its breadth of coverage, adds Wigglesworth.

"We cover the open oceans, the Poles, all the land masses, everything," he explains.

Connectivity from Iridium is available in outdoor environments in which end user devices are within line of sight of its satellites, he says, while some competing satellite solutions are based on a bent pipe architecture in which the satellite must be in site of the ground

services in the fourth quarter of 2014 to complete the constellation.

These new satellites, which ORBCOMM says will drastically increase network capacity, will enable faster message delivery, larger message sizes, and better coverage at higher latitudes.

"Launching our first OG2 mission is an important milestone in advancing our global satellite network to a higher level of performance, coverage and efficiency," said ORBCOMM CEO Marc Eisenberg in April. "Our customers are looking forward to our new constellation, which will enhance their M2M applications, as well as new partnerships

---

## Planet Labs early this year launched its 28-satellite constellation.

---

station and the endpoint must be in line of the satellite. Iridium is also unique because it has the lowest latency in the satellite business, he adds, saying Iridium's short burst data latency is a consistent 5 to 15 seconds.

Wigglesworth says the satellite industry tends to go in cycles with its launches. In the mid to late 1990s, he notes, there were lots of launches and new satellite companies, some of which never made it off the drawing board. But getting into the satellite business is a capital-intensive exercise, he says, so there is unlikely to be much in the way of new satellite entrants.

### ORBCOMM

However, as indicated above, there are a few existing players, one of which is ORBCOMM, which bills itself as an M2M solutions provider that delivers devices coupled with global satellite, cellular services, and web applications.

The company in April announced plans to launch six OG2 satellites May 10. Did the launch happen? On schedule? ORBCOMM anticipates launching the remaining eleven OG2 satellites and enhanced OG2

in the multiple additional markets for which OG2 is well suited."

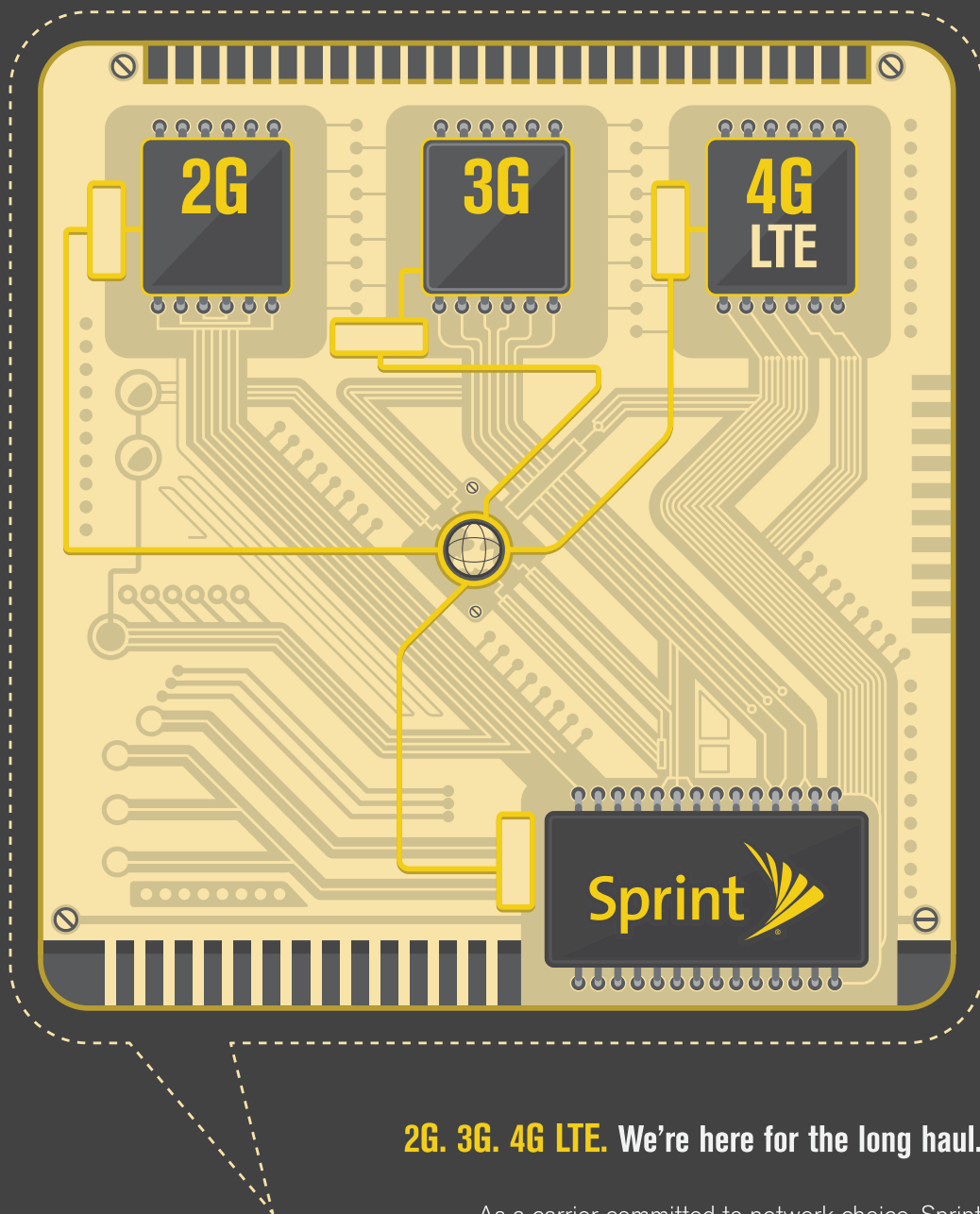
ORBCOMM customers include Caterpillar Inc., Doosan Infracore America, Hitachi Construction Machinery, Hyundai Heavy Industries, I.D. Systems, Inc., Komatsu Ltd., Cartrack (Pty.) Ltd., and Volvo Construction Equipment, among others.

### Planet Labs

Meanwhile, a lesser-known entity called Planet Labs out of San Francisco, early this year launched its 28-satellite constellation of Earth-imaging satellites.

"Planet creates commercial and humanitarian value with the market's most capable global imaging network," according to the company's website. "Fresh data from any place on Earth is foundational to solving commercial, environmental, and humanitarian challenges. Our global sensing and analytics platform unlocks the ability to understand and respond to change at a local and global scale."

The company, which declined to return INTERNET TELEPHONY's request for an interview, is led by former NASA scientists. **IT**



## 2G. 3G. 4G LTE. We're here for the long haul.

As a carrier committed to network choice, Sprint believes customers should be able to choose based on their custom need, whether it's 2G, 3G or 4G LTE. That's why we plan to maintain each—including 2G—for the long term as part of the overall Sprint Network Vision strategy.

In short, we're in this for the long haul.

Visit [m2m.sprint.com/sprint2g](http://m2m.sprint.com/sprint2g) to learn more about Sprint's network commitment to 2G or to attend a seminar near you.

### **FCC Issues Incentive Auction Plan**

The Federal Communications Commission in mid May adopted rules to implement the Broadcast Television Incentive Auction, which aims to recover spectrum from television broadcasters in exchange for payment, and reallocate that spectrum by auctioning new licenses to wireless providers. The effort involved a 600MHz band plan that consists of specific paired uplink and downlink bands comprised of 5MHz building blocks. The plan also accommodates limited variation in the amount of spectrum recovered from broadcasters in different geographic areas. The plan also designates one naturally occurring white space channel in the remaining TV band in each area for use by unlicensed devices as well as wireless microphones. Any other unused television channels in an area following the auction will also be available for these uses.

### **AT&T Rolls Out HD VoLTE**

AT&T in May began the introduction of High Definition Voice VoLTE in parts of Illinois, Indiana, Minnesota and Wisconsin. It's initially available to users of the Samsung Galaxy S 4 mini, with more devices to be supported in the future.

### **Research Group Offers LTE Market Prognostication**

The global LTE market is forecast to reach \$997 billion by 2020, according to new data from Allied Market Research. The firm says the market could see compounded annual growth of 58.2 percent between last year and 2020, with much of that growth taking place in the Asia Pacific.

### **Ericsson Retains LTE Leadership**

For fifth consecutive year Gartner has named Ericsson a Leader in the LTE industry in its Magic Quadrant report, highlight the company's end-to-end LTE offerings, expansive installed base (more than 190 commercial contracts for LTE and EPC), and global professional services. Thomas Norén, Ericsson's vice president and head of product area radio, commented: "Ericsson LTE is differentiated by its performance, enabled through innovative products such as Ericsson AIR and Radio Dot System as well as industry-leading solutions including LTE-A Carrier Aggregation, LTE Broadcast and our industry-leading VoLTE solution. Ericsson's end-to-end LTE offering, large footprint and worldwide service capabilities have enabled us to serve 50 percent of all LTE smartphone traffic worldwide."

### **InfoVista Expands Support for Small Cell Backhaul**

The latest version of InfoVista's microwave backhaul network planning solution contains a new 3D viewer and detailed reflec-

tion analysis for NLOS links in urban environments. Additionally, Mentum Ellipse 8.4 includes P3M, a propagation model for urban environments, and new, more efficient workflows to improve point-to-point and point-to-multipoint backhaul network planning and optimization.

### **IDT Appeals to MNOs with IPX**

Wholesale service provider IDT Corp. is integrating IPX into its global network to appeal to mobile network operators and their customers. IDT's IPX offering is a Packet Voice Inter-networking Exchange designed to meet i3 Forum and GSM specifications that MNOs can leverage connect to other operators around the world with a high-quality, secure connections. Quality of service, and measurement tools are provided as part of the service.

### **Westell Division Intros DAS Solution**

Cellular Specialties Inc., a division of Westell, now offers the ClearLink Universal DAS Interface Tray. This active radio frequency DAS conditioner and management system optimizes signal performance between any variety of a small cell or high power base station transceiver and a DAS. Included in the solution are remote monitoring of DAS alarms, RF parameters, and configurations via a web-based graphical user interface.

### **Telcos Tap Globalcomm for Hosted LTE**

Adams NetWorks Inc. and Chariton Valley have commercially launched 4G LTE services to their customers leveraging Globe-comm's Hosted LTE solutions. Adams, a regional telecommunications company providing Internet, voice and video services, is now offering LTE to its customers in Illinois. Adams is one of Globecom's first carriers to deploy a 4G LTE hosted hybrid model. Chariton Valley, a locally-owned and operated communications carrier in Northeastern Missouri, has launched service for home network subscribers on 700MHz through Globe-comm's hosted LTE solution.

### **Ericsson, NTT DOCOMO Plan 5G Trials**

NTT DOCOMO and Ericsson are doing trials of 5G technology this year. With the Ericsson 5G trial system, NTT DOCOMO plans to achieve ultra-high bit rates of more than 10Gbps, or more than 1,000 times that of existing LTE networks. Ericsson has developed advanced antenna technologies with wider bandwidths, higher frequencies and shorter transmission time intervals, as well as radio base stations built with baseband units and radio units developed specifically for the 5G trial, which will take place in Yokosuka, Japan.



Why settle for a  
**make-believe** UC Solution?



When you can have a real one.



**Teo<sup>®</sup>**

Unified Communications

Discover Real UC

[www.teotech.com](http://www.teotech.com) // 1.800.524.0024

# INTERNET TELEPHONY Reveals TMC Labs Innovation Award Winners

Welcome to the 15th annual INTERNET TELEPHONY magazine TMC Labs Innovation Awards where we honor innovative technologies. This year we had some interesting applicants, including HD videoconferencing, a virtual SBC, cloud-based Wi-Fi, mobility solutions, security applications, and more. TMC Labs has enjoyed discovering and testing innovative products and services within the communications industry for many years, and one of the things we enjoy most is giving TMC Labs Innovation Awards to innovative technology products. TMC Labs uses a rigorous application and selection process when choosing innovative products and services. This year, TMC Labs proudly recognizes the following companies with TMC Labs Innovation Awards.

## Sonus Networks SBC SWe [www.sonus.net](http://www.sonus.net)

The SBC market is seeing a good deal of change thanks to M&A activity and, as a result, customers are enjoying a tremendous amount of innovation as many players up the ante by improving their features and functions. Case in point is Sonus – the company that really made its name as a softswitch provider and in the past few years has become an important player in the session border control space. The Sonus SBC SWe can be installed on industry-standard servers, in virtualized environments, or as a hosted service. Because the SBC SWe does not require a physical footprint and can be remotely installed and managed, it offers increased flexibility compared to hardware-based solutions in terms of redundancy planning to mitigate the effects of network outages and natural disasters. As telcos become software telcos and move toward network functions virtualization, this is the exact sort of innovation that is needed.



## Grandstream Networks Inc. GXP2140/GXP2160 Enterprise HD IP Phones [www.grandstream.com](http://www.grandstream.com)

With competition from softphones and cellphones, the desktop IP phone has had to keep up with competition from various directions. Grandstream's GXP2140/GXP2160 Enterprise HD IP phones are Linux-based devices and include four lines, five XML programmable soft keys, and five-way conferencing. A 4.3-inch color LCD screen and HD audio allow for a crisp display and high quality calls. The GXP2140 comes equipped with Bluetooth, USB, and EHS capabilities for flexibility. The phone also comes pre-loaded with weather and currency exchange apps. In addition, you can add up to four GXP2200EXT modules to view

160 more lines, and customize your language for global use. Sure, mobile phones may be more portable, but they still lack the core telecom functionality of this multifaceted IP communications device and at a starting price of \$139, cost shouldn't be an obstacle to purchase.

## VirtualPBX.com Inc. VirtualPBX CRM Connector [www.virtualpbx.com](http://www.virtualpbx.com)

Years before more mainstream hosted voice services came on the scene, VirtualPBX was there, leading the way. In fact, the company persevered during the same dotcom bust that killed off a slew of competitors. Now, it has added CRM Connector, which helps bring the platform into the wonderful world of customer relationship management – allowing companies to utilize the cloud for all of their customer-facing interactions. The solution utilizes ruby and nginx web technologies and works across Windows, Mac, or Linux computers, and a range of Polycom and Yealink VoIP phones.

## MRV Communications OptiDriver [www.mrv.com](http://www.mrv.com)

OptiDriver addresses one of the largest ongoing operational costs for data centers and service providers today: space and power. MRV's OptiDriver lowers critical power and real estate expenses by offering data centers and service providers low power consumption per 10G/100G service and compact element for high service count delivery. As a result, power savings can be up to 60 percent while space savings could hit 50 percent. OptiDriver can be used in data centers, content delivery networks, and large carrier environments. Moreover, it supports

*Continued on page 76*



**July 22-24, 2014**

The Kimmel Center at NYU • New York City, NY

@WearableTechCon



# Wearable TECH EXPO

Featuring  
Fitness & Sports Wearable Technology

**FAST**  
WEARABLE - MOBILE - DATA

July 22, 2014



**Dedicated to Everything  
Wearable Tech—  
Mobile, Data, Consumer,  
Fitness & Sports**

**EXPERIENCE 3 FULL DAYS OF DEMOS,  
INSIGHT & NETWORKING**

Gain perspectives on how wearable tech devices and technology differ from each other, how and why they work the way they do, and discover what lies ahead for the billion dollar industry.

**INCREDIBLE KEYNOTES EACH DAY**

dc|Artform  
Retail Redefined  
A Mannon/Berkshire Hathaway Company

vuzix®  
View the Future®

CEA  
Consumer Electronics Association

bmcsoftware

Deloitte.

**REGISTER & EXHIBIT TODAY!**  
[www.wearabletechexpo.com](http://www.wearabletechexpo.com)

Diamond Sponsor

**Deloitte.**

Gold Sponsors

augumenta

Chetu  
Delivering World-Class IT Solutions

H2O  
FROM THE WORLD OF SPORT

Jabra®  
YOU'RE ON

Content  
Boost

freescale

pivothead

Silver Sponsor

JETTA

SENSOPLEX  
TESTING AND ANALYSIS





# Upcoming **TMCnet** Webinar Schedule

**Archived • View Today!**

## **SIP, SBCs and Lync – The Knockout Punch for Productivity and Profitability**

SPONSORED BY:



[http://www.tmcnet.com/webinar/sonus/  
SIP-SBCs-and-Lync-The-Knockout-Punch  
-for-Productivity-and-Profitability.htm](http://www.tmcnet.com/webinar/sonus/SIP-SBCs-and-Lync-The-Knockout-Punch-for-Productivity-and-Profitability.htm)

**Archived • View Today!**

## **The ROI of Integrated Communications: Replacing an Aging Infrastructure while Cutting Costs**

SPONSORED BY:



[http://www.tmcnet.com/webinar/  
ringcentral/The-ROI-of-Integrated-  
Communications.htm](http://www.tmcnet.com/webinar/ringcentral/The-ROI-of-Integrated-Communications.htm)

**Archived • View Today!**

## **Solving the top 5 SMB Challenges with Video Conferencing Appliances**

SPONSORED BY:



[http://www.tmcnet.com/webinar/telylabs/  
Solving-the-top-5-Challenges-with-  
Video-Conferencing-Appliances.htm](http://www.tmcnet.com/webinar/telylabs/Solving-the-top-5-Challenges-with-Video-Conferencing-Appliances.htm)

**Archived • View Today!**

## **Ask the Expert: SIP Trunking and WebRTC**

SPONSORED BY:



[http://www.tmcnet.com/webinar/  
ingate-systems/Ask-the-Expert-SIP-  
Trunking-and-WebRTC.htm](http://www.tmcnet.com/webinar/ingate-systems/Ask-the-Expert-SIP-Trunking-and-WebRTC.htm)



**Archived • View Today!**

### **New Marketing Rules for Generating and Converting Inbound Sales Calls in a Mobile World**

SPONSORED BY:



[http://www.tmcnet.com/webinar/ifbyphone/  
New-Marketing-Rules-for-Generating-and-  
Converting-Inbound-Sales-Calls.htm](http://www.tmcnet.com/webinar/ifbyphone/New-Marketing-Rules-for-Generating-and-Converting-Inbound-Sales-Calls.htm)

**Archived • View Today!**

### **Identity Related Risks: What is the Real Insider Threat?**

SPONSORED BY:



[http://www.tmcnet.com/webinar/centrify/  
Identity-Related-Risks-What-is-the-  
Real-Insider-Threat.htm](http://www.tmcnet.com/webinar/centrify/Identity-Related-Risks-What-is-the-Real-Insider-Threat.htm)

**Archived • View Today!**

### **Manage the Risk – and Reap the Reward – of Session Initiation Protocol (SIP)**

SPONSORED BY:



[http://www.tmcnet.com/webinar/sonus/  
Manage-the-Risk-and-Reap-the-Reward.htm](http://www.tmcnet.com/webinar/sonus/Manage-the-Risk-and-Reap-the-Reward.htm)

**Interested in upcoming  
and past archived webinars?  
Visit <http://www.tmcnet.com/webinar/>**



4579235642402457959319

Continued from page 72

intelligent ROADM and 100gbps transport, and features built-in testing and rapid turn-up capabilities. Bandwidth requirements aren't predicted to decrease anytime soon, but electricity budgets and space aren't growing as quickly – if at all. This is the exact sort of environment where a product like OptiDriver should shine.

---

### **Jabra** **MOTION OFFICE** [www.jabra.com](http://www.jabra.com)

With built-in NFC, motion sensors, 300-foot range, as well as the ability to connect to a softphone, mobile and desk phone as well as touchscreen support, the Jabra MOTION OFFICE has to be one of the most feature-packed headsets on the market. If that isn't enough, it can also connect to a laptop or home office through a USB adapter and has industry-leading battery life and looks that kill. In a world where tech style is more important than function, Jabra proves you can have both.

---

### **Voxox** **Cloud Phone** [www.voxox.com](http://www.voxox.com)

As mentioned above, IP phones are competing with mobile phones – but in the case of this product, Voxox is not fighting the trend but embracing it. Cloud Phone is a solution that merges the best of the cloud with mobile devices, allowing a small business to have workers found by their customers via the device they rely on most. Moreover, the solution is a great way to connect branch offices with CRM systems, as there is no remote software or hardware needed to make this a viable solution.

---

### **RingCentral** **RingCentral Office** [www.ringcentral.com](http://www.ringcentral.com)

The mobile-centric cloud platform is a recurring theme in this year's awards, and RingCentral Office is an established player in the hosted communications space with a new offering worth considering. The product enables any size business to communicate and collaborate across multiple office locations. It includes integrated voice, fax, text, HD video and web conferencing, plus out-of-the-box integrations with business apps, such as Salesforce, Dropbox, and Box. There are also mobile apps for iOS and Android platforms, and a softphone option for Windows and Mac. Since RingCentral is a hosted PBX solution there are no on-premises hardware requirements for customers.

---

### **Genesys** **Business Edition-Premises version** [www.genesys.com](http://www.genesys.com)

In the nineties, Genesys was one of the first companies to connect PBXs and computer systems across a wide variety of platforms. Over the years the company has always stood for leading edge contact center technology – even as it became merged with Alcatel, later Alcatel-Lucent, and now as a standalone company. Built on the Genesys Customer Experience Platform, the Genesys Business Edition delivers the optimal customer experience with the simplicity and functionality required by mid-sized contact centers ranging up to 1,000 seats. The edition has best-in-class capabilities delivered with simplicity to maximize first contact resolution, meet customer SLAs, improve website sales conversions, optimize cross-sell revenue from existing customers, and improve customer loyalty. It also improves employee satisfaction and results, and reduces the cost of operations through efficiency gains. All of this is delivered over your customers' channels of choice, with low customer effort. Customers can choose to run their contact center in the cloud, on-premises with a pre-configured appliance, or in a hybrid cloud configuration. The on-premises appliance comes in multiple configurations. Hybrid cloud options allow you to use your existing telecommunications providers, store sensitive data locally, or augment existing Genesys on-premises deployments. The Business Edition offers multi-channel workforce management, tightly integrated with interaction routing capabilities, to optimize the efficiency of your workforce. While delivering a great customer experience, Genesys allows your operational managers to control routing execution through the workforce schedule, greatly improving responsiveness and agility.



---

### **ADTRAN Inc.** **ProCloud Wi-Fi** [www.adtran.com](http://www.adtran.com)

The need for wireless connectivity is a critical and growing requirement for business operations. As these needs grow, organizations are challenged to handle the growing number of employee-owned devices to connect customers and guests to Wi-Fi networks, as well as recruit sufficient IT resources to support the increasing demand. ProCloud Wi-Fi by ADTRAN offers a fully-managed, business-class Wi-Fi service built on ADTRAN's Bluesocket cloud-based virtual wireless LAN solution. ProCloud Wi-Fi delivers a "no worry" cloud-hosted and fully managed, business-class Wi-Fi service with guaranteed 99.99 percent up-



time, 24x7 monitoring, technical issue resolution, and advance hardware replacement. In addition, ADTRAN's ProServices offers comprehensive network design and installation services (optional), ensuring hassle-free installation that optimizes wireless coverage across the organization, addressing the needs of practically any business size, from a small business with a few APs, to a very large enterprise spread across multiple locations with thousands of APs. Finally, there is a private-label option, empowering ADTRAN's customers to deliver their own branded managed services, relying on ProServices for hosting infrastructure and back-end support.

---

**Venyu**  
**Venyu Sentinel Security Suite**  
<http://venyu.com/>

Venyu Sentinel Security Suite, powered by Alert Logic, was one of the first offerings to provide security-as-a-service in the cloud to customers. It combines Alert Logic's security tools and expertise with VMware vCloud Director Cloud. Having a solution in the cloud removes any need for the customer to purchase dedicated software, compute, or appliances. The suite provides customers with an up-to-date IDS database with assistance from the Alert Logic staff, which monitors all security events occurring in a customer cloud and/or physical environment. Features include intrusion detection, intrusion protection, and network log management.



---

**Plixer International Inc.**  
**Scrutinizer V11**  
[www.plixer.com](http://www.plixer.com)

The nightmare scenario – your CEO's board meeting videoconference is choppy because the majority of the company has just launched a viral video of a kitten chasing a green laser. Nothing shortens an IT career quite as quickly. Enter Scrutinizer, a tool that provides incredibly detailed network utilization information of users and applications causing the highest network traffic. Through NetFlow Technology, Scrutinizer is able to retrieve the network traffic details and present them in a flexible graphical view. In addition, Plixer's Flow Analytics brings traffic flow diagnostics to the next level by adding historical reporting, advanced alarming, and in-depth traffic analysis algorithms to the Scrutinizer software. It easily identifies top applications, conversations, flows, protocols, domains, countries, and subnets on the network, as well as monitors and issues alerts on suspicious or potentially hazardous network behavior patterns.

Supported platforms include Cisco Catalyst 2960-X NetFlow-Lite export as well as the Cisco Wireless Controller flow exports, while supported devices include iOS or Flash-based systems like a PC. Threat Index combined with the Threat Heat Map allow security professionals to see past the slew of false positives that plague many threat detection systems. The high and to the right technique of the Threat Heat Map, as well as the Threat Index for weighing different violations differently, provide two specialized metrics that can be observed in the same tab of the Scrutinizer web interface.

---

**Masergy Communications Inc.**  
**Intelligent Service Control (ISC)**  
[www.masergy.com](http://www.masergy.com)

Masergy's Intelligent Service Control, designed for Masergy customers using the company's managed cloud networking services, enables them to dynamically control their network services in real time, giving them complete interaction with Masergy services in real time from any web-enabled device. ISC's global on-demand network elasticity and control provides instant bandwidth that can be dialed up or down to meet any application needs. Customers can increase and decrease the port size and service planes in real time with just a mouse click or swipe of a finger, and only pay for the extra bandwidth used – and just for the

specific time they used it. ISC's on-demand dynamic bandwidth allows customers to increase capacity based on specific enterprise business requirements, enabling efficient data back up or replication, disaster recovery and business continuity, unplanned high-definition videoconferencing calls, software updates, or cloud computing resource allocation. ISC gives enterprise networks the real-time flexibility needed to keep the most demanding applications running smoothly. Recent additions include calendar-based bandwidth scheduling, and iOS and Android administration support.

---

**CSG Invotas**  
**CSG Invotas Security Orchestrator**  
[www.csginvotas.com](http://www.csginvotas.com)

The CSG Invotas security orchestration solution is designed for large global organizations with investments in threat detection capabilities to enable security operation centers to accelerate incident response and risk mitigation efforts. Target industries include communication service providers, governments, managed security providers, financial institutions, and utility service providers. Invotas helps operators respond in near real time,

which allows them to mitigate risks in seconds or minutes, and significantly reduce the window of attack exposure. Using automation technology and a library of workflows, companies can save personnel hours and operational costs. Moreover, they can study network data and identify repeatable actions to create a cyber playbook for all security analysts to use. Security Orchestrator excels at accelerating repetitive responses and automating manual tasks. Manual tasks include writing tickets, switching between tools to take various actions, and sending e-mails for approvals. The system is tailored to emulate organizational procedures and evaluate automation procedures so that all pre-planned actions are tested and approved based on existing roles and authorities. Ultimately, orchestration tools allow security teams to manage organizational risk holistically to preserve business continuity and revenue generation. Invotas allows security analysts to actively participate in revenue generation discussions and increased bottom-line performance. Invotas prides itself on allowing organizations to focus on complex defensive strategies as it deals with repeatable, measureable processes to speed response time and free resources.

**Calabrio**  
**Calabrio ONE**  
[www.calabrio.com](http://www.calabrio.com)

Calabrio ONE is a comprehensive suite of contact center workforce optimization and analytics software that's easy to imple-

ment, use, and maintain. Calabrio ONE includes call recording, quality assurance, workforce management, speech, text, and desktop analytics and performance-based dashboards and reporting. Calabrio ONE is flexible – providing product bundles and add-ons that make it easy for customers to begin with the right set of applications and features for their businesses today, then build on their success with new applications and features as their businesses mature and their needs evolve. Calabrio ONE is built on a modern Web 2.0-based architecture that al-

lows the contact center to integrate new applications easily, as well as personalize and optimize the desktop toolset for each user – agents, supervisors, managers, knowledge workers, and executives. Highlights include widget-based agent functionality as well as suitability to working with unstructured phone data to turn it into valuable and potentially strategic information. Some recent additions to the product include text analytics,

tighter integration between Calabrio ONE applications, a new multi-channel media player, and broader integration to third-party applications, new mobile iCal and Outlook integrations, and a new WFM forecasting and scheduling features sporting an intuitive, social media-like design (useful if you just can't get enough of Facebook).

As you can see, there are a wide range of companies here reflecting some of the hot trends in the market such as security, cloud, and mobile. We congratulate the winners and look forward to seeing what sorts of new and exciting improvements we'll see going forward.



## Get the Latest **NEWS** and **RESOURCES**.

Stay up-to-date on the latest in IP Communications including:

- Network Infrastructure
- Open Source
- Mobility
- Security
- Unified Communications
- Video
- Wireless
- And More...



SCAN HERE FOR

# FREE

## Subscription

or go to [www.itmag.com/subscribe](http://www.itmag.com/subscribe)

## Advertising Index

**Alcatel-Lucent**.....31  
[www.alcatel-lucent.com/solutions/cloud](http://www.alcatel-lucent.com/solutions/cloud)

**ANPI**..... Back Cover  
[www.anpi.com/partners](http://www.anpi.com/partners)

**Comptel Plus**.....43  
[www.comptel.org](http://www.comptel.org)

**Contact Center Solutions Global Online Community**..... 9  
<http://callcenterinfo.tmcnet.com/>

**Genesys Angel** .....17  
[Angel.com](http://Angel.com)

**Grandstream** ..... IBC  
[www.grandstream.com](http://www.grandstream.com)

**iAgent Network**.....15  
[iagentnetwork.com](http://iagentnetwork.com)

**Ingate** .....19  
[www.ingate.com](http://www.ingate.com)

**Interactive Intelligence**..... 7  
[www.inin.com/TheIntelligent](http://www.inin.com/TheIntelligent)

**Mobile Payments Conference: Mobilizing Retail**..... 55  
[www.MobilePaymentConference.com](http://www.MobilePaymentConference.com)

**Next Generation Communications Global Online Community**.....13  
<http://next-generation-communications.tmcnet.com>

**SIP Print**.....63  
[www.sippint.com](http://www.sippint.com)

**Sonus** .....65  
[www.sonus.net](http://www.sonus.net)

**Sprint**.....69  
[M2m.sprint.com/sprint2G](http://M2m.sprint.com/sprint2G)

**Teo**.....71  
[www.teotech.com](http://www.teotech.com)

**VoIP Logic** ..... 3  
[www.voiplogic.com](http://www.voiplogic.com)

**Votacall**.....27  
[www.votacall.com/why-votacall/overview/](http://www.votacall.com/why-votacall/overview/)

**Yamaha/Fontel**..... 5  
[www.fontel.com](http://www.fontel.com)

**Yealink** .....ifc  
[www.yealink.com](http://www.yealink.com)

## Coming Next Issue...

■ **BSS/OSS Roundup**

■ **How to Realize Carrier Energy Savings**

■ **The Latest on NFV, SDN**



*Continued from page 49*

Explain Fiber Mountain's Glass Core and what it means to traditional packet aggregation points in the network core and end-of-row and top-of-rack switches.

Over the past years, as bandwidth needs have grown, network infrastructure in the data center has gone through several transitions, one of these being the proliferation of packet aggregation points. First there was the core switch, then we created a second packet aggregation point at the edge of the row (end-of-row switch), and then a third packet aggregation point at the edge of the rack (top-of-rack switch), and now a fourth packet aggregation point at the edge of the server. Fiber Mountain has developed a glass core, which replaces several packet-processing hops in the network, allowing direct connections between edge devices. This results in less packet processing in the network, which directly translates to fewer switches, less power consumption, less heat dissipation, less space requirement, and a better TCO model for the data center.

What is Fiber Mountain's network fabric, and how does it enable the kind of infrastructure provisioning and management Fiber Mountain envisions?

Fiber Mountain provides an optical core, which is made up of a high density of fiber-optic cable strands. These strands of fiber are a consumable resource that can be programmed via software to deliver 10, 40, or 100gbps connectivity between any two points. Network virtualization is not complete without the ability to virtualize switches and the cable that connects the switches.

What does the increased fiber density mean for network latency?

Network designs proposed by Fiber Mountain definitely have a higher level of fiber cable density, particularly in the core of the network. The increased fiber connectivity results in a reduction of core switches and latency associated with these switches. A Fiber Mountain network has far less latency than traditional three-tier or two-tier networks.

Network discovery and diagramming, especially down to the individual cable level, is a cumbersome task. How does Fiber Mountain ease this burden?

Fiber Mountain's Alpine Orchestration System separates the control and management plane from switches and other active devices, and also creates an abstracted control and management plane for fiber optic cabling. The ability to have a unique identifier for each fiber optic cable strand, and the ability to communicate in real time with each strand, is the key ingredient to dynamically discovering cable connectivity and reconfiguring it within the glass core.

How will data centers deploy Fiber Mountain technology within their existing infrastructures?

Fiber Mountain technology is designed and developed to co-reside with a customer's legacy network. A customer may choose to integrate the technology at a pace that they are comfortable with, a single rack or an entire row at a time. The technology will work seamlessly with an existing infrastructure as it has industry standard interfaces and is tested with best-of-breed network devices.

How will Fiber Mountain's approach to SDN change how and where data centers are built?

Fiber Mountain has the unique advantage of being able to virtualize servers, switches, and cabling. This truly enables remote management and control of

the data centers that are geographically dispersed. The ability to manage multiple data centers from a single pane of glass also helps reduce operations cost. Fiber Mountain creates a foundation where customers will be able to manage remote data centers with the same ease as managing a local data center and also be able to scale the data center as their needs grow.

How will the idea of connectivity virtualization change data center economics?

Fiber Mountain's technology provides new simplicity, higher performance, lower latency, and real-time managed networks that can also boast a significant reduction in operating costs with less power, heat, cooling, and space. Data center economics can be summarized as: Two times the capacity for half the cost. **IT**

Fiber Mountain has developed a glass core, which replaces several packet-processing hops in the network, allowing direct connections between edge devices.

# Your Communications Solution



New GXP2140



UCM6100 series  
IP PBX



New GXP2160



Pin-drop HD audio clarity

Simple installation & use

No recurring costs...Ever

All the bells and whistles to  
compete with enterprise-level PBXs

Contact your Certified Grandstream Partner **today!**

[www.grandstream.com](http://www.grandstream.com)



[info@grandstream.com](mailto:info@grandstream.com)

IT'S NOT OFTEN YOU FIND SOMETHING WHERE  
EVERY ASPECT IS PREMIER QUALITY



**PREMIER PRODUCT**

**PREMIER COMPENSATION**

**PREMIER TECHNOLOGY**

**PREMIER SUPPORT**

**PREMIER COMPANY**

The ANPI Premier Partner Program delivers something few other service providers can – premier everything. Our full-featured Hosted UC solution includes an easy-to-use widget-based Customer Administration Portal, plus an Agent Portal for quoting and ordering. We also have 18 years of experience, a private nationwide IP network, a generous compensation plan and best-in-class support. Join our Premier Partner Program today. Call (877) 936-3003 or visit [anpi.com/partners](http://anpi.com/partners).

