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IP-Enabled Contact Centers



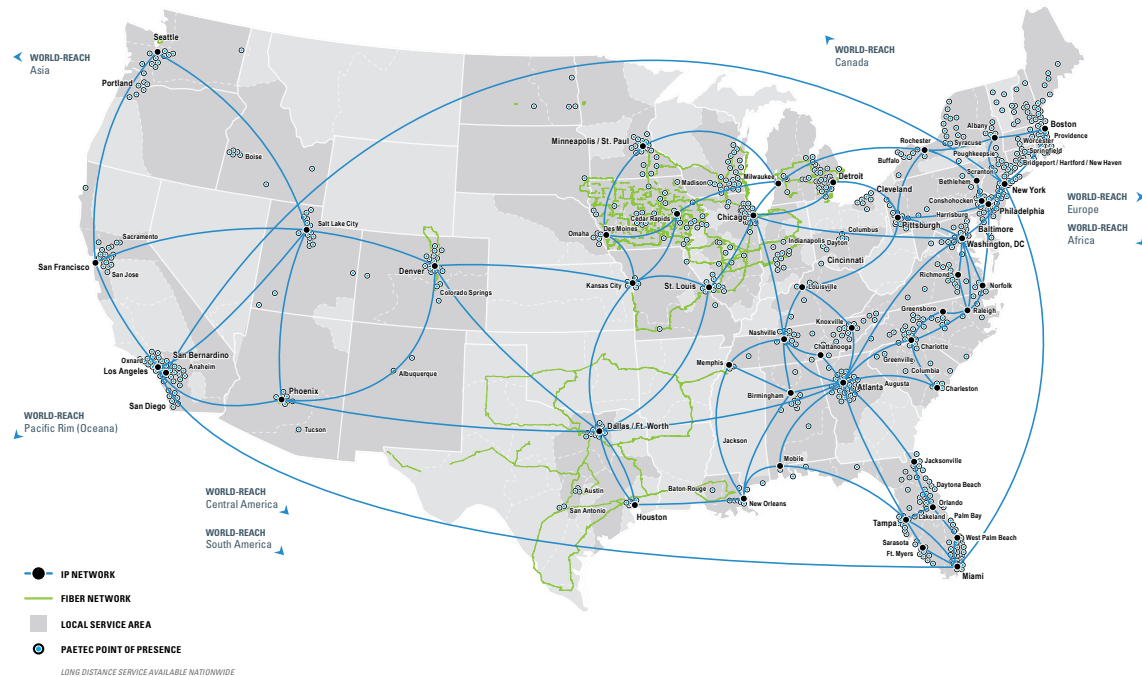
2009 WiMAX Distinction Awards

Billing for
Service Providers

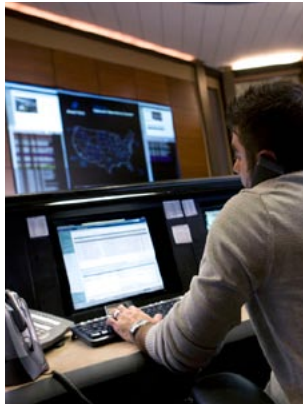
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When Fantasy Becomes Reality, Sort of

There's been a long debate over whether science fiction/fantasy writers have some kind of precognitive ability. Jules Verne may have described the modern submarine so accurately in print that it could not later be patented, but submarine-like devices, diving suits, and rebreathers had been demonstrated in the 1860s. On the other hand, H.G. Wells, in his 1895 novel *The Time Machine* (as well as in his earlier, more obscure story, titled, *The Chronic Argonauts*) described the Block Theory of the Universe, which holds that time is a fourth dimension of space. This was written a decade before Einstein's theory of special relativity and the work of the German mathematician Hermann Minkowski, who in 1907 realized that the theory of special relativity could be described using a four-dimensional spacetime. Wells' later 1914 description of a zeppelin-dropped atomic bomb is also strangely prescient, so much so that that Leó Szilárd later remarked that Wells' story helped give him the idea for the bomb when nuclear fission was finally discovered.

In the world of electronics, it's practically a truism that anything you can conceive will ultimately become real. As a boy in the 1960s watching the crew of the starship Enterprise use their communicators every week on the TV series *Star Trek*, Yours Truly couldn't help thinking that although it was theoretically possible to build such a device, integrated circuits had just been discovered and the device if built at that time would have looked more like a really big walkie-talkie — or one of the early [Motorola](#) cell phones.

Now, however, playing on the pangs of nostalgia simmering in aging geeks and nerds everywhere, a working replica of the original *Star Trek* communicator is on the market. It's not wireless (no cellular service, EVDO, [WiFi](#) or Iridium-like satellite communications capability), but you can use its USB connector to plug it into a computer running Windows XP, Vista, Tiger or Leopard, where its built-in microphone and speakers will help you make VoIP calls using [Skype](#), iChat, AOL Instant Messenger, and so forth. There's also a volume control and mute function. You can mount it just about anywhere via its velcro backing. It even has a button that, when you press it, cycles through 9 different voice phrases of the original Enterprise crew that include: "Enterprise, this is Kirk." (Captain Kirk) "Spock here, Captain." There are also the standard communicator sound effects from the original series. Now you can satisfy your inner Trekkie/Trekker by spending all day flipping open the mesh cover, just like any other respectable member of a Trek "away team", except that now you can make terrestrial VoIP calls.

Said to be the only officially approved replica of the original series communicator available, the new *Star Trek* USB Communicator originally retailed at \$75, but I've seen it offered on [Amazon.com](#) for \$23.99. **IT**



Richard "Zippy" Grigonis is Executive Editor of *TMC's IP Communications Group*.

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EasyRun's EPICAcce Aces Contact Centers

One consequence of IP Communications applied to the call center has been the multimedia contact center as exemplified by the EPICAcce product line of EasyRun (www.easyrun.com).

I recently spoke with EasyRun's Vice President of Marketing, Mike Long, and their technical guru, Vice President of Channel Development David Young. They told me about their new product, EPICAcce, a VoIP contact center running in a 2U-high appliance for the small to medium-sized business that supports the control, management, monitoring and support of multimedia blended inbound/outbound corporate communication channels. EasyRun's EPICAcce is PBX-agnostic: it runs on virtually any legacy PBX or IP PBX platform. Customers can use the same application across either or both telephony platforms.

Over the years, EasyRun has partnered with large voice solution providers as 3Com, Shortel, and Tadiran, which resold their solutions. "Now, we're launching our own brand," says Mike Long, "and are developing our own reseller channel."

EasyRun's multimedia contact center solutions can do transparent information retrieval from a business application or external database, and they support email messaging and web interaction capabilities. They've also managed to create an intimate integration with Asterisk open source IP PBX technology. They bundle all of their expertise and functions into one client.

Long and Young say that products such as EPICAcce are perfect for the current economy. A company investing in a contact center no longer has to upgrade or replace their existing Definity, Norstar or Mitel PBX systems. Consolidating companies can keep their equipment and can even combine their respective contact centers, made possible by EPICAcce's modular architecture and implementation tools that easily scale and change a contact center's functionality/structure. Result: no big expenditures for an infrastructure upgrade.

EPICAcce supports SIP Trunking, another money-saver. SIP Trunking has three "legs": One to the PBX (e.g. Mitel – the contact center integrates via PRIs and analog lines to the PBX), a second to the PSTN and a third to the SIP Trunk provider. The system's foolproof redundancy yields high availability. (Calls can be transferred to another system within 30 seconds of failure, though calls in the queue will be lost.)

EasyRun's EPICAcce supplies you with all the advanced contact center functionality to which you're accustomed, supporting extensive inbound and outbound features (e.g. progressive dialing, predictive dialing, preview dialing and broadcast campaigns), along with email, an ACD, and such advanced chat functions as internal chat with agents and supervisor-to-agent chat. Their real-time monitoring capability is part of their really cool control app. Designed for non-technical users, the customer need not write an interface, since the friendly GUI Visual Script Generator lets you do things such as forward calls after 5 p.m. to voicemail. The seamless backend integration allows for quick installation. ("You can set up a 50-agent system with some database dipping in about 2 weeks," says Young.)

Contact center supervisors can access such functions as barge-in, silent monitor, real-time recording, whisper, control the ACD, release and resume agents. There's cradle-to-grave reporting with open and published schema; third-party apps can extract whatever data is needed. EasyRun even has its own smartphone and is creating a softphone. Agents can answer calls and disconnect via Firefox. Though not a full toolbar, you can use the browser to control basic functions like hold, release, resume, retrieve, etc.

An entry-level EPICAcce ranges from \$5K to \$10K, or \$500 per agent. **IT**

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<http://next-generation-communications.tmcnet.com>



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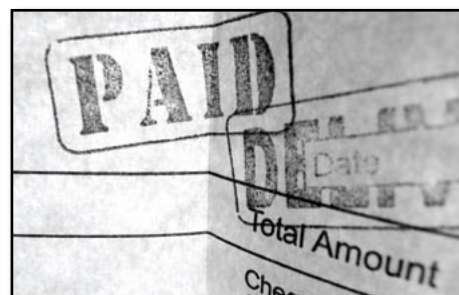
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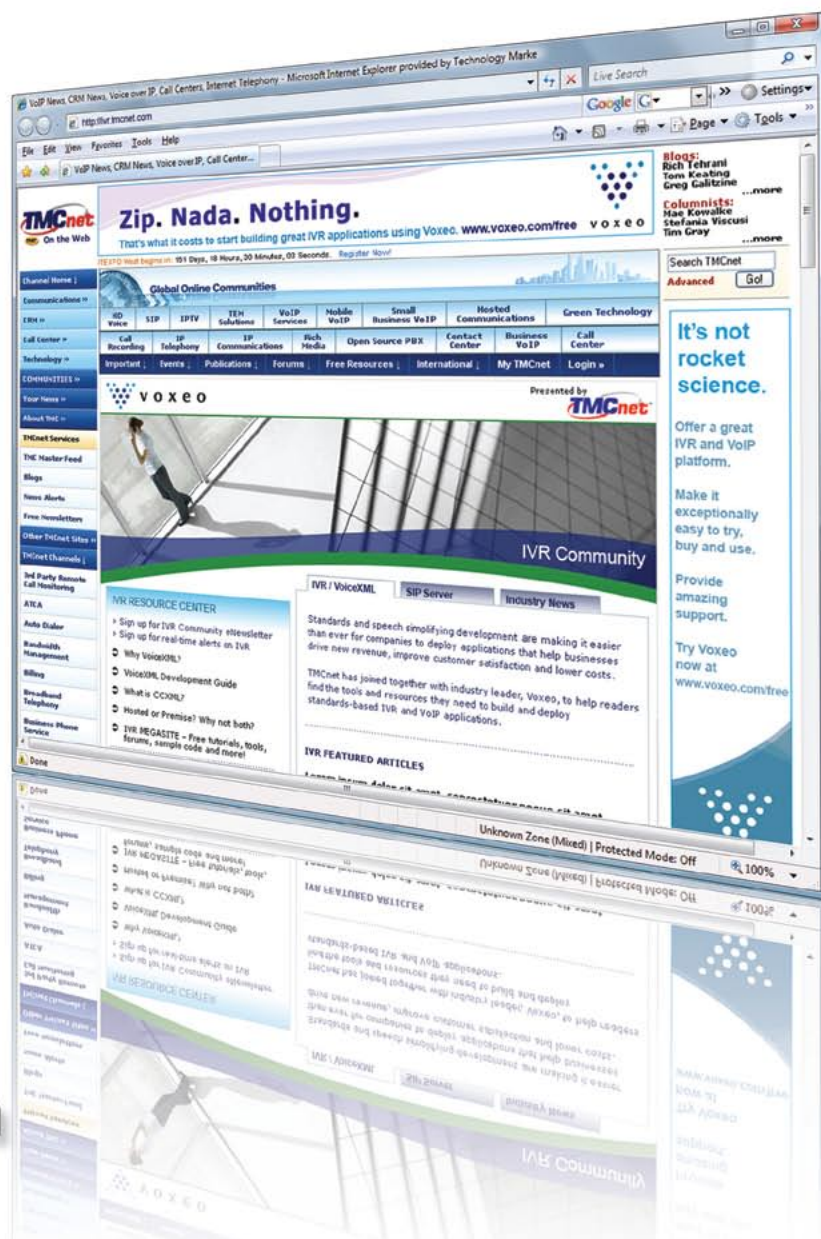


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To stay current and to keep up-to-date with all that's happening in the fast-paced world of IP telephony, just point your browser to www.tmcnet.com for all the latest news and analysis. With more than 36 million page views per month, translating into more than 3.1 million unique visitors, TMCnet.com is where you need to be if you want to know what's happening in the world of VoIP.



Here's a list of several articles currently on our site.

Is Your Business Ready for the Recovery?

Just like the seasons, economic busts turn into economic booms. Whether the economy or the stock market has bottomed out is irrelevant; one day soon the economy will turn around. Will your business be ready to handle the increasing volume of orders smoothly and efficiently, or will you find yourself back in firefighting mode, scrambling to deliver?

www.tmcnet.com/9017.1

WiMAX to Increase in Usage by 2013

WiMAX 802.16e might take as much as 12 percent of the global digital subscriber line installed base by 2013, say analysts at Juniper Research. A significant percentage of those customers likely will be found in the North American, Western European and Far East regions, Juniper Research suggests.

www.tmcnet.com/9018.1

What Service Providers Can Learn From CSI and Television

Anthony Zuiker's model for CSI and his other ventures has a lot to offer for service providers. The message is that if carriers try to reinvent themselves with telco-centric models, they will fail. The future is about content and creating engaging experiences that leverage multiple modes of communicating. This may be asking a lot from service providers, but even if they just take small steps along the way, they will be ensuring their future.

www.tmcnet.com/9019.1

Application-Assured VPNs Raise the Performance Bar

Baseline connectivity VPNs are becoming commodity products. Many carriers have leveraged their network assets and introduced service-aware VPNs. Application assurance is the next evolutionary step. This development addresses the application requirements of enterprises for better, consistent, visible, end-to-end performance.

www.tmcnet.com/9020.1

TMC's Whitepapers of the Month

Visit TMCnet's Whitepaper Library (www.tmcnet.com/tmc/whitepapers), which provides a selection of in-depth information on relevant topics affecting the IP Communications industry. The library offers white papers, case studies, and other documents that are free to registered users.

Cloud Telephony for Carriers and Service Providers

In these economically challenging times, many businesses are reacting by hunkering down and looking to reduce expenses. There now exists a great opportunity for innovative carriers and service providers to leverage contemporary information technology to the advantage of a market anxious for cost-effective telecommunication solutions. Cloud Telephony is a powerful new Web-based voice telephony option for the SMB market.

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Managing Convergence: How MSPs Can Increase Profits and Drive New Business

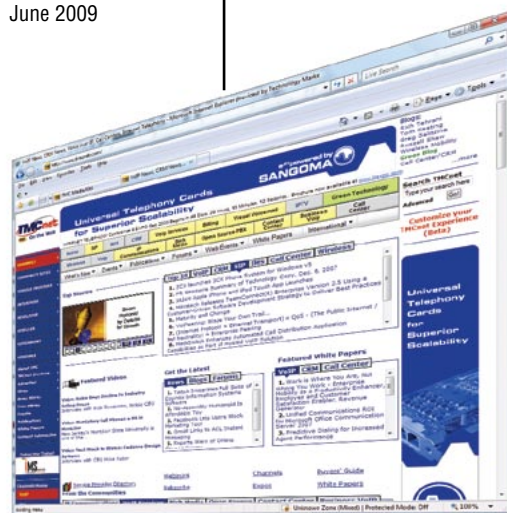
Managed service providers (MSPs) are at a critical juncture, facing an increasingly competitive marketplace. Service offerings built to remotely manage clients' converging voice and data systems present an enormous business opportunity—but significant challenges emerge. How can a Managed Service Provider profitably deliver on converged IP telephony promises? Is there an easy way to cost effectively deliver managed services for clients' entire converged telecommunications network? This step by step road map guides you through effectively delivering competitive converged voice management services that will lower your overhead costs, increase your profits, and grow your business.

www.tmcnet.com/9022.1

Selecting a Gateway for Your Microsoft Office Communications Server 2007 Deployment

Microsoft Office Communications Server 2007 allows companies to integrate VoIP technology into existing telephony infrastructure, eliminating the need for expensive network overhauls and also extending the useful life of existing investments. The purpose of this white paper is to propose the criteria on which to select a SIP-based gateway appliance to connect Microsoft Office Communications Server 2007 with legacy TDM-based equipment. Topics addressed include: deployment scenarios; lowering the total cost of ownership; ease of use; protocol support; and the benefits of a hybrid gateway.

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By: Brough Turner



The Real Benefit of WiMAX in the U.S.

Today's WiMAX vs. LTE arguments are all posturing. WiMAX has the early lead. LTE, in 2010, will be little more than a trial. Indeed, it will be 2012 before LTE is widely

usable, and then only for data! Mobile voice telephony on LTE will take longer, as the industry only recently agreed how it should work. Specifications still need to be completed; then the equipment must be designed, tested and deployed.

However, 2013-2014 will see stable voice over LTE, plus the spread of mobile devices supporting both 3GSM (HSPA) and LTE. At that point, the enormous base of GSM/3GSM users (currently 88 percent of all mobile subscribers worldwide) will tip the advantage to LTE. Volume drives down costs. LTE infrastructure will cost less. LTE handsets will cost less. By 2020, LTE will be the clear winner leaving WiMAX perhaps a 10 percent global market share, similar to CDMA 2000 today.

In the long run, WiMAX can't win against GSM/3GSM/LTE but technology-specific spectrum licenses also mean it can't fail. Many countries (not the U.S.) have licensed spectrum specifically for WiMAX services. Markets may shift every few years, but bureaucracies take decades. So market forces tip the balance to LTE while politics guarantees WiMAX a place, independent of which system is better or which system is first.

What's interesting is the major positive impact WiMAX will have on U.S. mobile data services. Again, the reason is spectrum licenses.

Today, the U.S. has three national 3G networks — Verizon, AT&T and Sprint — with T-Mobile in the process of rolling out a fourth. These networks use traditional mobile technology (3GSM&CDMA 2000) on relatively narrow bands of spectrum — typically just 10-20 MHz each. Verizon and AT&T acquired additional spectrum for their LTE launches in the recent 700 MHz auction. Verizon obtained 22 MHz of "C" block spectrum, while AT&T won 12 MHz "B" block licenses.

Compare this with Clearwire's emerging WiMAX network. Clearwire has 90-120 MHz of licensed spectrum (at 2.5 GHz) in regions across America. WiMAX and LTE are roughly equivalent in efficiency (bps per Hz) at any given point in their respective roadmaps, so 4x to 10x more spectrum means 4x to 10x more capacity for Clearwire. What's more, higher capacity allows significantly higher peak data rates — a major competitive edge when marketing mobile Internet access.

Clearwire is a newcomer going up against four established national operators and it could be 2011 before they are competitive nationally. But then, it's a newcomer using higher data rates and more capacity to compete against four incumbents. Let the price wars begin! The benefit of WiMAX in the U.S. will be affordable mobile Internet access for all. **IT**

Brough Turner is Chief Strategy Officer of Dialogic (www.dialogic.com).

Regulation Watch

By: William B. Wilhelm Jr.



VoIP Taxation — Change You Can Believe In?

Earlier this year, the House of Representatives Subcommittee on Commercial and Administrative Law held a hearing concerning jurisdictional issues related to taxing VoIP services. Witnesses included: John Barnes, the Director of Product Management and Development

at Verizon Business; Robert W. Cole, Manager, Tax Accounting at Sprint Nextel Corporation; Phil Montgomery with the Wisconsin State Assembly; and James R. Eads, Jr., Executive Director at the Federation of Tax Administrators.

At the hearing, the four panelists and members of Congress largely focused on the possibility of amending the Mobile Telecommunications Sourcing Act ("MTSA") to include "VoIP" as a means to clarify how VoIP should be taxed at the state and local level. Under the MTSA, wireless carriers apply state and local taxes based on the customer's primary use location (typically the billing address), not on the end points of a call. All four panelists strongly urged the subcommittee to consider legislation to expand the MTSA to cover VoIP services, although no panelist testified as to

the particular type(s) of VoIP services that should be covered by such legislation. All agreed, however, that applying the MTSA to "VoIP" would benefit industry by avoiding double taxation and even litigation over the proper "tax" jurisdiction for VoIP calls or services. They also highlighted that bringing VoIP into the MTSA would give customers clarity over the taxes applicable to such services and, therefore, predictable billing.

No legislation is currently pending before Congress on this issue, but the written testimony of the panelists will be included in the proceeding record. Given the strong endorsement of adding VoIP to the MTSA by both business and government representatives, it's reasonable to expect that the industry could see shifts in VoIP taxation models later this year or early next. **IT**

William B. Wilhelm is a partner in the law firm of Bingham McCutchen LLP. For more information please visit them online at www.bingham.com. The preceding represents the views of the author and does not necessarily represent the views of Bingham McCutchen LLP or its clients.

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By: David Yedwab



Interoperability Revisited

In a recent article I suggested that “interoperability of the existing standalone applications needs to become a requirement that Enterprise IT organizations should be driving their existing vendors and Systems Integrators to elevate to a priority. Without such interoperability, building a roadmap of either a ‘Best of Breed’ or a ‘Best of Suite’ will be very difficult, if not impossible. And deploying against the roadmap is likely at least an order of magnitude even more difficult.” I’m not the only one suggesting that application interoperability is going to be critical to the successful implementation of all of IT’s future plans. We’re seeing this over-arching need for interoperability coming from many directions:

- My UCStrategies.com colleagues have defined UC as “Communications integrated to optimize Business Processes,” claiming UC’s biggest benefits come from UC-B — communications directly integrated into business processes, or what many have termed Communications-Enabled Business Processes (or CEBP) — clearly an interoperability requirement between communications and business processes.
- The mash-up culture giving rise to manifold applications created by putting one or two separate applications/capabilities together to provide some value/utility — an example was the many applications designed to find the lowest price for gasoline in your vicinity, based upon GPS positioning and web-updated

prices by consumers, during the recent price run-up — once again, clearly interoperability being used to create value.

- IBM’s recently launched Sametime Unified Telephony (SUT) and its interoperability with and call routing to many different PBXs and endpoints, as demoed at the recent VoiceCon — again clearly interoperability required.

- And several vendors are developing new platforms/capabilities/tool-kits to facilitate interoperability — [Avaya’s Aura](#) — Cisco’s connectivity to Microsoft’s OCS (CUCIMOC) — both demoed at VoiceCon.

- Apple’s recent demos of possible interoperability between the iPhone and various medical devices at its recent intro of iPhone 3.0 software.

So, interoperability is becoming built in to solutions/capabilities across the landscape and all will make it easier for IT to meet its charges to improve how businesses operate and, ultimately generate profits for the future. Stay tuned as this theme will continue in future articles as additional interoperability provides more opportunities to extend existing investments and create new benefits. **IT**

David Yedwab is a Founding Partner in Market Strategy and Analytics Partners LLC. Contact him at 908-879-2835 or david.yedwab@mktstrategy-analytics.

Tech Score

By: Jeff Hudgins



Getting the Most from Your Telephony Application Platform

IT professionals tasked with implementing the latest and greatest IP-based telephony services are increasingly turning to applications delivered on a COTS-based appliance platform. One prominent reason behind this trend is that these solutions can deliver substantial cost and performance benefits, especially considering that purpose-built platforms require little or no customization or post-deployment tuning. Appliance platforms are easy to deploy and able to deliver value almost immediately. What IT departments need to remember when considering these devices for their mission-critical telephony applications is that not all appliances are created equal. If the software vendor hasn’t followed certain best practices when building the appliance, the benefits can be easily diminished.

For IT managers responsible for evaluating how to introduce new IP-based telephony services into their enterprise and considering an appliance ecosystem, there are several critical attributes to look for. First, you should understand the potential pitfalls of applications delivered on open servers. This model allows unfettered access to the application and increases the possibility of modifications that may cause the appliance to under perform, fail or increase security exposure. Alternatively, a well-constructed appliance will feature a tuned

and “locked down” operating system — optimized for its reduced footprint and maximum performance. This tuning process can be done for both Linux and Windows environments. It’s also important to consider that routine auditing of the operational condition of core appliance elements, including CPUs, power supplies and disk drives can help ensure proper performance over the life of the box. Appliances that can “phone home” and automatically generate a maintenance request in the event of a hardware or software malfunction, crash, runtime error and system boot failure will save the enterprise time and money. Any appliance worth its salt should be able to manage its software application as a holistic image and not just a collection of software parts. In the event of device failure, appliances that feature this capability can be rolled back to a complete pre failure image and quickly restored for proper operation.

Final Score Make sure you’re using appliances that can successfully automate the process of remotely tracking and managing the delivery of updates, patches and other upgrades to boxes deployed in the field, including the OS and all peripheral applications. Evaluating prospective application partners on these criteria will help future-proof your IT infrastructure. **IT**

Jeff Hudgins is VP of Product Management at NEI, Inc. (www.NEI.com)

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By: Rich Tehrani & Max Schroeder



Continuity Planning 101 — Good Habits

Example: Change the batteries in your smoke detectors

when the time changes so you get two annual reminders.

Hurricane season begins on June 1, each year and lasts for six months. June 1st also triggers many people in hurricane-prone areas to review their Business Continuity (BC) plans. It may also be a good date for all organizations to use since it is very well-publicized. Of course, if you do not have a plan in place, now may be the time to get it done.

The first step is to *make the first step*.

Step 1 — The first and most critical step is getting the attention and commitment of top management.

Step 2 — Establish a Business Continuity Planning Committee. In a small organization this could be a single person with part time responsibility. The title is not critical (Contingency Planner, BC Coordinator) but having a designated person is vital to the success of the project.

Step 3 — Bring in an experienced consultant or reseller to get the process started. The adage “You never get a second chance to make a first impression” also holds true for BC plans. Once the business is gone, it is gone and many businesses never recover from a major business interruption.

Steps 1 and 2 only cost time mind-share. Step 3 will have an associated monetary cost but in the long-run bringing in an experienced reseller/consultant will shorten the process and result in many cost savings. Developing a quality plan can be a major task for a company of any size and an experienced reseller will have a have a library of information as a solid foundation.

Fortunately, today’s communications technologies provide businesses with many affordable options including VoIP, managed services, hosted services and [SaaS](#). So what are you waiting for — make the first step today. **IT**

Max Schroeder is the Senior Vice President of [FaxCore](#), Inc. ([www.faxcore.com](#)) and Managing Director of the DPCF.

Rich Tehrani is the President and Group Editor-in-Chief at TMC and is Conference Chairman of Internet Telephony Conference & EXPO.

Nitty Gritty

By: Richard “Zippy” Grigonis



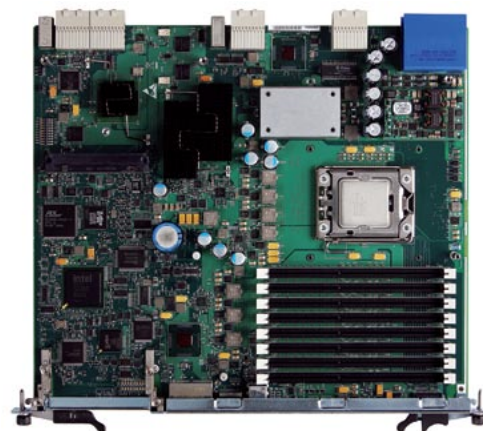
RadiSys ATCA-4500, the First ATCA Single Board Computer for the 4G Market

AdvancedTCA (ATCA) is supposed to be a more powerful, higher density computing platform than its predecessor, CompactPCI, so you’d naturally expect

AdvancedTCA platforms to meet up with bandwidth and processing-hungry 4G wireless applications. Sure enough, RadiSys Corporation, one of the great names in AdvancedTCA (not to mention advanced embedded solutions in general) has released the Promentum ATCA-4500, a new ATCA single board computer (SBC) powered by the new [Intel](#) Xeon processor 5500 series (in particular the Xeon L5518 which offers more than a 50 percent increase in performance per watt per dollar over a dual socket Intel Xeon processor L5408-based ATCA blade).

The ATCA-4500’s high performance, large memory capacity and expansion flexibility was formulated to address advanced control, gateway and telecom server functions for a varied set of 4G applications including [LTE](#) (Long-Term Evolution), WiMAX, NMS (Network Management Systems), and IMS (IP Multimedia Subsystem). The processor and feature set were selected so it could pass the NEBS thermal requirements in chassis already deployed in the field, eliminating the need for a forklift upgrade. Support for a massive 8 DIMM array of VLP DDR3 scales up to 64GB of memory. Storage

options include RAID, [SAS/SATA](#), solid state USB flash drives and the board supports iSCSI boot. For low-level software, the ATCA-4500 is based on the Extensible Firmware Interface (EFI), an advance over older BIOS firmware, providing a pre-operating system shell where customers can build and execute EFI applications, such as setup, OS install, diagnostic or configuration utilities. Support for extended Intel Virtualization Technology (VT-x and VT-d) on the board decreases the overhead associated with virtualization. The ATCA-4500 has been tested against CP-TA guidelines to ensure interoperability across the ATCA ecosystem. **IT**





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By: Don Van Doren



A Seismic Shift for Communications

A dramatic change is taking place in communications that goes far beyond VoIP and IP transport and infrastructure. The communications industry is being transformed from vertically-integrated silos into a horizontally layered, standards-based, increasingly-open environment where system components, operating systems, and applications programs may all come from different, specialized companies. We've seen the trend to standardized hardware. Now, we're beginning to see communications applications emerging to support and extend this trend throughout enterprises of all sizes and types.

This new communications era will be characterized by an emerging ecosystem of application developers, partners, and systems integrators. SDKs, APIs, GUIs, and toolkits will all linking to evolving capabilities within suppliers' solutions. Third-party developers, in-house experts, and the solutions providers themselves can create applications programs with embedded communications functionality — capabilities that will integrate communications functionality directly into business processes. We are seeing signs of this change from a number of market players — [Microsoft](#) has embraced communications with OCS 2007 R2, IBM's Lotus Connections offer a comprehensive toolkit that lets business managers and knowledge workers

create ad hoc dashboards via mashups. [IBM](#) also announced a July release date for Sametime Unified Telephony (SUT), their product for extending their UC capabilities to most installed voice communications environments. [Avaya](#) announced Aura, a SIP-based, simplified, and highly-scalable unified architecture based on IMS concepts but designed for the enterprise. [Siemens](#) announced a proof-of-concept trial of UC capabilities running on Amazon's virtual servers to provide UC as a service in the future. They join UC services from IBM's LotusLive and Cisco's WebEx Connect.

I am especially drawn to the strides that new communications suppliers are making. They are fundamentally re-imagining existing capabilities, and doing creative, out-of-the-box thinking about how communications could work. The data processing industry went through a similar transformation several decades ago. The resulting explosion of creativity in applications programming fundamentally altered business activities in virtually every enterprise on the planet. The communications industry will be undergoing the same sort of seismic shift, so fasten your seat belts. **IT**

Don Van Doren is Founder And President of Vanguard Communications Corporation, and a principal with UniComm Consulting, LLC. Reach Don at dvandoren@vanguard.net or 973-229-7185.

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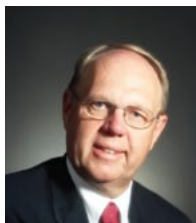
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The Right Technology. Right Away.®

By: Steven Johnson



SIP Trunks and Unified Communications: Making the Connection

SIP trunks are a simple, extremely cost-effective way of deploying VoIP. But the potential SIP trunks can unlock for your network is a big theme we'll be seeing more of, especially as we approach the [ITEXPO](#) in September.

In fact, SIP trunks are an easy way to open the door to Unified Communications.

In deploying SIP trunks, it is necessary to put together all the pieces — of equipment, of service — necessary to make secure VoIP, a SIP-based application, work. This means having an IP-PBX, ITSP and SIP-capable security device to solve NAT traversal. You must also make sure the IP-PBX and ITSP are fully interoperable (another way the SIP-based edge device can help).

Once SIP trunks are up and running, you're not only VoIP-capable, but you're fully SIP-capable, too. VoIP is just the tip of the iceberg with SIP applications. Now that NAT traversal and interoperability are solved, and security is in place, the wide array of applications available with SIP are at your disposal.

Think of it: by deploying SIP trunks — and reaping the proven ROI with that kind of installation — employees, customers, partners can all benefit from:

- Remote SIP Connectivity — Allowing remote users to leverage the VoIP capabilities of your company, from anywhere as long as they're connected to the Internet. For many businesses, this means the entire sales force can use VoIP instead of their cell phones.
- Instant Messaging — Have customers IM with your call center for immediate responses to queries.
- Realtime video — Collaborate with partners/colleagues.
- Find Me/Follow Me — Have your work phone ring on your cell, or at your desktop to your VoIP number.

And myriad applications to be developed down the road.

The beauty of SIP is that it facilitates "global connectivity:" everyone reachable anywhere, anytime. The true vision behind SIP was to bring the global business community together for collaboration, to improve productivity and generally help everyone work smarter, together. SIP trunks are a first step toward that goal, by providing a simple way to introduce SIP to the network. Once that happens, Unified Communications isn't far behind. **IT**

Steven Johnson is President of Ingate® Systems.

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By: Don Witt



So You Want to be a Telco

Today, there are not that many barriers to entry into providing telephony services. In fact, if you have a thick wallet, you can get started right away. It is important to understand you and your organization before you proceed. Are you engineering-oriented or marketing-oriented? The composition of your organization will have a significant impact on your implementation strategy and pricing.

When you sell someone else's services, you are limiting your margin and marketing options. You are also tied to the service levels of the carrier.

Engineering-Based Organizations

Engineering-based organizations tend to have the advantage. They have in-house staff that knows the technology. They can choose one of two directions, either make or buy the switching and iPBX technology to be used. The "make" direction can be very difficult but also very rewarding. To start from scratch would be time prohibitive, thus one can choose to implement solutions based on [Asterisk](#), FreeSwitch, YATE or others in conjunction with Open SER and other technology.

With any of these choices there will be additional work to be completed. For example, Asterisk has limitations on the switching side and FreeSwitch has limitations on the iPBX side. Given time, these obstacles can be overcome and you can start providing service once you have integrated with your billing solution.

Even with good engineering in house, if the funding is available, the switching and [PBX](#) technology can be purchased. While expensive, BroadSoft will provide you with a high-quality solution that your in-house engineers can enhance and support instead of develop. If you are looking for a similar solution at a lower price point, Ring Carrier's Ring Provider is a good alternative.

The purchase of the technology will insure that support engineers will be available when something goes wrong. The acquisition of high end product is generally performed by the more mature and more established telephone companies. Look to see this change as entry-level prices for softswitches becomes more competitive.

Marketing/Business-Based Organizations

If you are a non-technical organization, you are going to need to acquire the technology and services you will be selling in one of a couple ways. You can contact a carrier and resell their services under your brand name. This is an easy way to get started, but it has its drawbacks. When you sell someone else's services, you are limiting your margin and marketing options. You are also tied to the service levels of the carrier. You need to check the carrier out closely under this scenario including their redundancy and back-up procedures.

Another option for the non-technical entrepreneur with some funding would be to purchase the required equipment and hire people to manage the services. Companies like Ring Carrier specialize in this area providing the wannabe telco excellent support services and high quality product. This will increase your margin and provide a great deal of flexibility in your marketing approach to the business consumer. **IT**

Don Witt is President of [cyLogistics](http://www.cylogistics.com) (www.cylogistics.com).

Did you know...

In a new report by Research and Markets (www.researchandmarkets.com) on business and telecoms software consulting, in 2007, business and telecoms software consulting represented 16 percent of revenue; systems integration, 27 percent; custom development, 14 percent; outsourced operations, 16 percent; and managed/hosted applications, 9 percent. The remainder came from service provided in support of vendors' telecoms software solutions. Consulting and systems integration companies had the largest share of revenue in 2007, with 26 percent. The "big three" NEMs and ISVs (Ericsson, Alcatel-Lucent and Nokia Siemens Networks) accounted for 21 percent. IT systems suppliers, and Indian IT services companies had 12 percent.

www.tmcnet.com/7525.1

Zenoss Now Member of Open Source Channel Alliance

Zenoss, a provider of enterprise network and systems management, has reportedly joined the Open Source Channel Alliance, an association of Independent Software Vendors (ISVs).

The Open Source Channel Alliance was created to deliver high-value open source technologies to a large base of Value Added Resellers (VARs) and System Integrators (SIs) through expanded partnerships with [SYNNEX](#), a business process services company, servicing resellers and original equipment manufacturers.

"Organizations worldwide are looking for proven software solutions that allow them to move their businesses forward while saving money. The Open Source Channel Alliance will help connect customers with trusted open source vendors who consistently deliver value," said Bill Karpovich, CEO, Zenoss.

Peter Larocque, president of U.S. distribution at SYNNEX Corporation said that the new alliance will enable them to provide complete open source solution packages that can deliver the kind of return-on-investment that their customers require, especially given the current economic environment.

www.zenoss.com

www.tmcnet.com/7526.1

Stratus Telecommunications Announces Channel Program for ENTICE VoIP and Converged Services Products

Stratus Telecommunications, LLC, a provider of end-to-end VoIP infrastructure, has announced a channel partner program for telecommunications resellers worldwide for ENTICE VoIP and converged services products. Emerging Networks Telecommunications Infrastructure Control Environment (ENTICE), is designed to interface to new or existing networks to provide control services and a software foundation for launching new services. Stratus Telecom has been specializing in the development of a complete set of software products which all operate under their ENTICE architecture.

Stratus recently made a series of major enhancements to the ENTICE platform and the general availability of its ENTICE Converged Application Server. The Converged Application Server supports local number portability (LNP) and the market's first jurisdictional routing capability for converged SIP and SS7 networks.

Stratus Telecom is offering a complete reseller program with substantial margins for VARs that want to sell and install Stratus Telecom products and provide Level I support. Additionally, VARs also have the option to participate in a separate referral program that rewards resellers for closed sales opportunities.

www.stratus telecom.com

www.tmcnet.com/7527.1

Siemens Enterprise Communications Inks Strategic Business Agreement with SYNNEX

[Siemens](#) Enterprise Communications has announced a strategic business relationship with SYNNEX. As per terms of this latest agreement, the entire portfolio of Siemens Enterprise Communications is expected to become flagship products offered through SYNNEX' Integrated Communications Group (ICG).

The portfolio includes complete end-to-end solutions for voice, data, video and security. Company officials said that the access to Siemens portfolio allows for a layered or incremental approach to unified communications (UC) based on an organization's need.

"Our agreement with SYNNEX underscores our dedication to the North American market and will significantly expand our ability to drive adoption of next generation UC technologies," said Michael Garland, senior vice president of North American alliances and channels at Siemens Enterprise Communications.

www.enterprise-communications.siemens.com
www.synnex.com

www.tmcnet.com/7528.1

Level 3 Establishes Reseller Agreement with IPtimize

Level 3 Communications, Inc., has established a reseller agreement with IPtimize,

Inc. to expand its network service offering to local cable operators. Under the agreement, IPtimize would be able to offer wholesale voice, data and Internet services in rural communities targeted for broadband access. According to Level 3 officials, IPtimize will access the company's network at transmission sites along the 42,000 route miles that span North America.

Officials were of the view that Access to the company's network outside major metropolitan markets enables IPtimize to offer an expanded portfolio of network services to local cable operators. "Rural access to the Level 3 network opens new opportunities for IPtimize to bridge the gap between local cable companies and nationwide communications networks," said Mitch Garlock, vice president of global sales for IPtimize.

www.level3.com

www.ip timize.com

www.tmcnet.com/7529.1

Xila Broadband Enhances Wholesale DSL & VoIP Reseller Program

Xila Broadband has announced a comprehensive wholesale ISP and VoIP reseller program after making several enhancements to its DSL and VoIP reseller program. High-speed Internet and VoIP applications can now be accessed by businesses of all sizes by employing just one source and one system. Xila Broadband's wholesale DSL and VoIP reseller program makes this possible and enables the activation of DSL high-speed Internet and VoIP home and business telephone using one integrated platform, according to the company.

The reseller program directs clients to the Broadband Account Control Center or BACC. It is Xila's billing and provisioning system, which enables resellers to place new orders for DSL service across DSL networks and also activate unlimited VoIP services throughout the world.

Xila Broadband was initially offering DSL and bundle plans which comprised of residential or business DSL and unlimited US/Canada calling over VoIP. The new enhancements make it possible for resellers to activate VoIP outside the bundle plans as a full standalone product.

www.xilabroadband.com

Talking with Ben Sayers, CEO of VoIP Supply

By: Richard “Zippy” Grigonis

Benjamin P. Sayers is the founder and CEO of VoIP Supply (www.voipsupply.com), a leading VoIP solutions provider for North America, having since 2004 delivered solutions for some 60,000 customers worldwide. Its 70 employees, 2,500 products and 40,000 square feet of office space together are responsible for a nearly unlimited number of VoIP solutions that meet the VoIP needs of consumers, businesses, service providers and resellers.

RG: I find it amazing that the roots of your company are in a software development firm that worked on a stock trading platform based off of Trade Station.

BPS: After selling my company IVR, Inc., I had a three-year non-compete agreement to kill off. I founded B2 Technologies at the beginning of 2002 and spent a year working on the stock trading platform. My childhood friend and former IVR, Inc. colleague, Cory Andrews [VoIP Supply's current Director of New Market Initiatives], helped to transform B2 Technologies from a software development company to an IT asset management firm that assisted companies looking to liquidate their IT infrastructure. We spent about a year-and-a-half brokering in the secondary market for [Cisco](#) equipment, since there was a lot of stuff available following the dot com implosion. Many data centers had new or nearly new equipment that needed to find a new home, so we moved a lot of product that we picked up from auctions and liquidations. In late in 2003, Garrett Smith [VoIP Supply's current Director of Marketing and Business Development] joined our team as a sales executive. By the end of 2003, B2 Technologies had a staff of six and \$2.3 million in sales. During the first six months of 2004 customers began asking more and more for VoIP solutions, so in August 2004 we launched

VoIPSupply.com. At the start of 2007, we renamed B2 Technologies to VoIP Supply, LLC. We finished 2007 with \$24 million in sales.

RG: How do you categorize VoIP Supply?

BPS: I'd say you could call us a Value-Added Reseller (VAD). We're also an online retailer with the differentiator that we've got an in-house call center of training sales reps. Some of our competitors are significantly smaller than we are, and act a bit differently in that they 'lead with price' and may not necessarily want to talk with customers. We, on the other hand, don't lead with price and would rather that you call in to us, talk things over, and end up with a product that's right for you. Our web-based model is a great way to cast a wide net and pull in droves of customers. Over the years we've been at the forefront in terms of offering everything you need for VoIP, and we've acquired customers that range from VoIP service providers all the way down to folks who just use IP in their home with their own BYOD (Bring Your Own Device) VoIP provider.

It's interesting in that we service many different kinds of verticals, we have the online retail piece as well as the offline call center that offers sales and technical support staff. So it's really a newer model. Not too many companies out there are very similar



to us, which is probably one reason why we've been very successful over the years – we not only offer everything you need but we also have the expertise to put everything together. If you go to a 'big box' company, they may sell VoIP stuff, but if you call and talk to a customer service rep, they don't really know what's going on. Moreover, even some of the 'VoIP-specific' online retailers often don't have the staff to support many consultative sales. Between those two types of companies, there are 'pure distributors' or 'value-added dealers' which focus on reseller recruitment and building the channel for manufacturers. We play in many different 'pools'. So in describing us, 'VAD' is the best fit, but the emphasis for us has always been, 'Here's what we offer: the ability for you to come to VoIP Supply and get everything that you need, and you can talk to somebody who knows VoIP inside and out.' Our specific business model probably doesn't have a name yet, but what I described is what we do.

RG: So VoIP Supply has quite a range, servicing everybody from consumers to business.

BPS: We don't send too many people away. In terms of geographical coverage, we have a global customer base, though we do emphasize our efforts in North America, mostly from a fraud control standpoint. It's difficult to protect yourself in Europe, eastern Europe in particular, as well as Africa and even some countries in South America. We do about 8 percent of our business in Canada, 91 percent in the U.S. and about 1 percent elsewhere in the world. There's certainly a huge market in Europe and there's no significant competitor over there, but if you're not entrenched over there and have a good measure of self-protection and fraud prevention, it's not a place where I'd venture into lightly. Maintaining an international presence requires having staff in those far-flung locations. We found that if you're German and you live in Germany, you want to speak with somebody who understands the locale and the ins and outs, and not necessarily somebody who may be based in the U.K. or Austria or wherever. So, one encounters many peculiarities when doing business overseas. It requires more of a 'push' than we are willing to make right now.

RG: So you tend to offer many professional services? How much of your business involves customization as opposed to straight resale?

BPS: Most of it is straight resale, but we do offer paid support, service programs and pre-configuration and provisioning. But for the most part it's all part of the presale experience for the customers. We make sure that we examine what their needs are and get them the proper equipment, and we can help them with configuration issues if they need that. We don't roll trucks in every state of the U.S., but if they really need that much 'hand-holding', then we'll certainly work with them to get them a local provider that can come in and help them do more complicated things onsite. But the way IP PBXs are these days, we can pretty much configure all of whatever you need in terms of extensions, IVR menus, and voice prompts in our lab and then ship it out in a state where as long as the customer can get the IP PBX up on their network when they receive it, everything should be fine. Later, we can call it up remotely if need be to modify a configuration. But the core of our business is hardware retail with some service, but even there we give away much of that as part of the sales process.

RG: Is there any limitation on the size of your customers?

BPS: We can handle large or small customers. We're highly reactive to our customers' needs. We serve large enterprises, government and institutional customers that

might have a 500 or 5,000 seat deployment. And yet we have thousands of Small-and-Medium Businesses (SMBs) that are between 8 and 25 seats. Our core does tend to be SMBs implementing a new system, replacing an old one, or expanding by opening up a new location.

RG: I see you also deal in open source telephony platforms. Is it difficult to make money with open source?

BPS: When we first got into VoIP, the only platforms that were totally accessible to companies such as VoIP Supply were the open source Asterisk-based systems, the PCI I/O card business and things that serviced a limited number of endpoints. There was SIPura, now a part of Cisco, and the Grandstream BudgeTone series and droves of folks who were converting Cisco 7940s and 7960s from the Skinny client protocol over to SIP. So our first customers were really very early adopters, many of whom were building their own IP PBXs. Many companies, whether an SMB or a large enterprise or even those big on open source, helped us achieve early presence and visibility. People gravitate to us because we offer that 'small shop' feel, where you get an intimate customer experience, but we also can achieve the kind of economies of scale to help a service provider who perhaps needs 5,000 or 6,000 devices. We have the back-end logistics to go out there and pre-configure all of the devices, ship them out to the provider's customers, do the RMAs, do the customer service, and then, on the next call, get in there with a 5-person shop that just needs a hosted VoIP solution. We may sell them the phones and partner with a hosted provider that leverages one of our service provider-type services on the hardware side of things to ultimately deliver the service. So it's really something of a mix-and-match situation. In general, we try to attract SMBs, but just by being a great business that's easy to work with, we attract all comers.

RG: How has the downturn in the economy affected VoIP Supply?

BPS: We've felt the same pressure as has any retailer in the middle to the end of 2008. But we've certainly seen a positive increase in business and activity since then. The first quarter of 2009 was strong and profitable for us, so many customers are coming back, government money is certainly being freed up under the Obama Administration. We're not exactly where we were back in June of 2008 or prior to that, but we're optimistic and we're currently doing extremely well, all things considered. **IT**

Richard Grigonis is Executive Editor of TMC's IP Communications Group.

By: Peter Radizeski



Expect the Unexpected

The economy is havoc on telecom underneath the surface. O1 just suspended its channel program. XO let a few channel people go due to lack of impact on channel sales. Moody's released a report on B3 credit-rated public companies that Moody's thinks will be having a bad year (see: www.huffingtonpost.com/2009/03/10/moodys-bottom-rung-list-o_n_173378.html). The telecommunications companies on that list include Global Crossing, Integra, CavTel, ClearWire, Cleveland Unlimited, Intelstat, Securus, Level3, and Primus (which just filed for protection in other countries recently). And these are just the publicly-traded companies. We don't know how the privately-held companies are doing financially. I'm watching several VC-backed companies laying off and re-organizing. We just saw Charter file bankruptcy. The debt loads in the telecommunications industry are straining under a flat or declining income stream.

This presents a problem and an opportunity. The opportunity is that these companies could leverage the indirect channel more to drive sales. If they already have a channel, they need to be looking at ways to get more out of their existing agents.

I'm not talking about more money either. Find out why they are selling your stuff. It could be the system to get quotes and contracts is too arduous. It could be the agents don't know what the fit is. Ask them. Interact with them.

The problem is for the agent – or more precisely the agents – is the revenue stream. If you don't know that a carrier is having financial difficulties, it will be a surprise when the commission checks stop or bounce. I don't see a carrier letting their agents know that their commissions are in jeopardy. It would be a double-edged sword that cuts off both heads because customers and agents would flee and the company would die.

What's an agent to do? It's hard enough to go out and get sales closed in this economy, but to then not get paid on the sale. Defeating.

My advice is to have a dialogue with your vendor; diversify your income streams; pay attention to the industry, especially your core carriers; and not worry about what you can't control. **IT**

Peter Radizeski is head of RAD-INFO, Inc., a consulting agency specializing in the telecom industry.



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8x8, Inc.



Introducing the Small Business VoIP Online Community

Small business VoIP adoption is growing, largely because of the cost benefits, but the fact is that hosted VoIP services for small business, like Packet8's Virtual Office, provide much more than cost savings. The greater versatility of hosted VoIP system allows businesses to customize their telecommunications packages to meet their unique needs, but without requiring large up-front expenditures for equipment, installation, maintenance, or IT staff. For the latest news and information on VoIP services specifically designed for the small business market, visit the Small Business VoIP community on TMCnet, sponsored by 8x8. Packet8 Virtual Office is an affordable, robust and easy-to-manage phone solution with all the premium PBX features and functionality of a traditional telecom system.

On the Small Business VoIP Community, you'll find:

- Free consultations
- Free trials
- Free quotes
- Feature articles
- Case studies
- Technology briefs

<http://small-business-voip.tmcnet.com>



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By: Rose Klimovich



How to Extend the Life of Your Data Center

New applications, server sprawl, massive storage requirements and changing demand have put more pressure on data center space. In the past, when you got close to running out of space in your data center, you would build a new data center or augment the one you have. You would design the new space for longevity, ensuring you have adequate floor space for growth and making sure you have all the redundancy and power you could afford. This plan often over-provisions power and cooling and has a high upfront cost. Also, capital constraints may limit your ability to build new capacity. So what can you do to extend the life of your data centers?

1. Put high density pods together. This allows more efficient use of power. Doing this can save 20 percent of costs.

2. Augment your space by using a colocation facility. A colocation facility is more efficient in terms of power and space because all of this is shared among customers and the space can be configured so that high density users can be put together. This will allow you to support

new services while lowering the upfront capital needed to build out.

3. Because capital is tight, look at ways of saving space in your present facility. For example, in our Phoenix data center we were able to get 10+ new cabinets in our present space by looking at the way the space was configured and making changes such as moving walls, reconfiguring the space, building a few cabinets near hallways, etc. This can extend the life of your present center.

4. Look at Server Virtualization. Often servers are under-utilized. Per Quocirca Ltd., servers are often used only 10-20 percent of capacity. So go to fewer brands/sizes, use server consolidation, virtualization and blade servers. If you go to virtualization you can better utilize your servers and thereby better use your space.

5. Utilize Cloud and SaaS services. This allows more efficient use of your space for critical applications and thereby saves space and power. **IT**

Rose Klimovich is Vice President, Product Development, Telx (www.telx.com). Reach her at rklimovich@telx.com.



Channels Corner

www.tmcnet.com/channels

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By: Erik Linask



www.tmcnet.com/7490.1

Telx Officially Opens Doors to Fourth Colocation Site in NY Metro Area

One of the keys to any colocation and interconnection facility is power — and the requisite cooling capability. As it built out its newest facility in Clifton, New Jersey, that was among the many factors Telx had to consider, and find the right partners to make the project a success. After just more than two months from the start of the project — yes, just two months — Telx today officially opened the facility with a ribbon cutting ceremony preceded by a roundtable discussion that included a number of key Telx partners and industry experts.

I was fortunate enough to attend the event, and learned quite a bit about the facility and the data center space, including what it takes to actually build out a facility like this one.

For its energy needs, Telx teamed with local utility PSE&G, who also participated in today's festivities by way of a short address by Gregory Dunlap, Director, Large Customer Support & Area Development for PSE&G — which includes responsibility for managing relationships with PSE&G's largest commercial, industrial, and governmental customers, like Telx. Dunlap explained that the utility company prides itself on partnering with many of the best businesses in country, a category into which he quickly placed Telx.

The data center market is growing nationally, as well as in the New York Metro region, and PSE&G has committed itself to, as Dunlap put it, "getting it right," and ensuring they are able to provide the reliability and capacity to support the growth in industry, as well as the growth Telx anticipates for itself. That vision is clearly in alignment with what I heard from Telx, which is opening the site now, with expectations of rapid growth, as enterprises, network operators, and content deliver providers increasingly look to benefit from the combination of colocation and interconnection that has helped Telx grow to what is now its fourth Metro New York site. Importantly, all four sites in New York and New Jersey are connected by a DWDM ring, providing its tenants even greater connectivity and redundancy options.

In fact, one of the reasons Telx chose the Clifton site is its ability to grow with its needs — Telx has first right of refusal for additional space. Growth in the New York area is why it needed to extend its presence in the region in the first place, which now includes more than 400 carriers, exchanges, and enterprises. By the way, Terlizzi told me the initial data center build-out is nearly accounted for already.

Another key element of the rapid development of this facility was Fortress International Group (formerly Rubicon Professional Services), which came up with a creative plan for quickly and efficiently completing the project. According to Bill Perrone, SVP of Strategic Development at Fortress, this project stands out among the many Fortress has been a part of in the New Jersey market. Specifically, it was a result of near-perfect alignment of PSE&G, local authorities, and creative planning that included finding best-in-class contractors to ensure compliance with requirements of both the Township of Clifton and the building landlord, Mountain Development Corp.

In fact, nearly everyone from Telx with whom I spoke noted how easy Mountain Development has been to work with. (Look for a series of video interviews from today's event to be posted to the Colocation community and the TMC Newsroom very soon.)

One of the creative things Fortress did to ensure this project would be completed successfully and on time was, rather than developing the facility and then outfitting it with specific hardware, it worked the other way around. Using immediately available inventory from dealers and embedding those into the facility design saved both time and money — both of which are precious commodities.

When it came down to it, in order to extend its presence in the ninth largest metro market for colocation services, Telx had no choice but to find a physical building that was well suited for the strain it will have to endure, both in terms of power, cooling, and networking infrastructure, but also in terms of natural hazards — which Telx says the 100 Delawanna Avenue site has been purpose built for.

That was the only way it could ensure its customers would have the reliability and resiliency they require to keep pace with the continued growth of high-bandwidth applications and services, many of which are now being delivered via a SaaS model — which is among the drivers of Telx' growth. In addition, increased broadband penetration rates and a growing movement towards all-IP networks is adding to the need for network operators, content providers, and enterprises to connect to numerous peers and partners — the private peering model that Telx' interconnection business and its entire ecosystem is built upon. **IT**



Introducing the **IP-PBX Global Online Community**

If you are in the market looking to purchase a new phone system, chances are you'll be looking at an IP PBX. The IP PBX market has been growing steadily, which means there are a plethora of choices and options. And, with all the choices you face, it can get quite confusing.

The **IP PBX Global Online Community** is an excellent resource for companies and individuals who are facing the difficult decision of purchasing a new phone system. This community features breaking news, in-depth feature articles, case studies, links to white papers and webinars... all the information you need if you are charged with learning about the current state of the market and making a purchasing decision.

Featured on IP-PBX Community:

-  Real-World Case Studies
-  Breaking News
-  In-Depth Feature Articles
-  Expert Insight
-  Free Demos and Whitepapers

[HTTP://IP-PBX.TMCNET.COM](http://IP-PBX.TMCNET.COM)
Visit the IP PBX Global online community today.

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www.tmcnet.com/8044.1

CommuniGate Launches Mobile Office UC Solution

CommuniGate Systems has recently launched their latest offering, the "Mobile Office." Mobile Office addresses the market shift from fixed to mobile convergence for broadband and communications, and is designed to help mobile operators deliver Value-Added Services through mobile UC to the lucrative business subscriber market.

Mobile Office, which empowers mobile operators to deliver a "Virtualized Office" with UC as Software-as-a-Service to small- and medium-sized businesses, is a fixed to mobile convergence solution that includes CommuniGate's Flash-based Web 2.0 client called Pronto!

Pronto! delivers messaging, contacts and collaboration tools such as shared folders and shared calendars in a single dashboard. The mobile device access for Mobile Office is supported natively for the iPhone 3G, Nokia, and WinMobile devices.

www.communiGate.com

www.tmcnet.com/7497.1

Aastra Announces Two New SIP Phone Models

Aastra has expanded its SIP desktop and wireless phone portfolio by adding two new models of SIP phones, Model 6730i and Model 6731i. The new models offer enterprise-grade advanced features and performance that are typically found in higher priced models. The new models are powered by the



open-standards firmware design found on all Aastra 67xi SIP telephones.

The new models have six lines with call display, full-duplex speakerphone as well as intercom, paging and auto answer features. In addition, the phones also feature XML browser capabilities.

The new models are interoperable with Aastra's own IP systems as well as other certified solutions, including Broadsoft, Metaswitch, Nortel, and Digium's Asterisk Business Edition.

www.aastra.com

www.tmcnet.com/7492.1

AltiGen Communications Enhances MAX Communications Server

AltiGen Communications, a provider of Microsoft-based Voice over Internet Protocol (VoIP) business phone systems and unified communications (UC) solutions, has announced updates for its MAX Communications Server (MAXCS) 6.0 VoIP unified communications platform.

The new MAX Communications Server 6.0 Update 2 provides call center customers with completely redesigned desktop applications for agents and workgroup supervisors. In addition, it provides several improvements to existing features and new applications such as New MaxAgent 6.0 Desktop Application for Call Center Agents, New MaxSupervisor 6.0 Desktop Application for Call Center Supervisors and New MaxInsight 6.0 Readerboard Application for displaying real-time call center statistics. The MAXCS 6.0 also features a new .NET-based desktop telephony client with enhanced call control features and an expanded meet-me conference bridge with scheduling application supporting 120 participants.

www.altigen.com

www.tmcnet.com/7493.1

IPscape Deploys IP Communications Platform for Australian Call Center

Pacific FX Traders reportedly signed a

contract with IPscape recently to implement IP-based call center routing, tracking, alerting and management of call work flow. The IPscape platform offers the following features:

- VoIP;
- call information logging: start, finish, duration, recording and alerts for the follow-up call;
- interaction reports;
- workflow management; and
- visible billing on a per second basis.

Importantly, the solution is offered as a service, which immediately cuts down upfront payments while being managed from a remote location by a third party, thus reducing IT staff and maintenance costs.

www.ipscape.com.au/

www.tmcnet.com/7494.1

WatchGuard Launches Fireware XTM OS

WatchGuard Technologies, a provider of extensible network security and connectivity solutions, has launched its new operating



system, Fireware XTM for WatchGuard security appliances. The new operating system is designed to allow WatchGuard customers to extend the capabilities of their unified threat management (UTM) firewall appliances with new security features, networking capabilities and management functions.

Fireware XTM comes with added security features, including full HTTPS inspection, VoIP security, and IM and Peer-to-Peer (P2P) application blocking. Additionally, Fireware XTM is also said to integrate new networking capabilities, including clustering, load-balancing and other networking features. Added to this, the new operating system also extends management capabilities by adding role-based access control (RBAC), centralized multi-box management and enhanced reporting functions.

www.watchguard.com

www.tmcnet.com/7504.1

Tellabs Intros Ethernet Broadband Access Solution



Tellabs recently announced an upgraded Feature Package on their 1000 Multiservice Access Platform (MSAP) solution. The new Feature Package 14 offers an innovative solution to help service providers succeed with Ethernet and IP access in a very cost-efficient manner.

The company says the solution is a “perfect fit” for migrating underserved areas under the federal broadband stimulus program. With more than 84,000 Tellabs 1000 Remote Subscriber Terminals (RSTs) installed in North America, hundreds of service providers now have an instant “shovel-ready” solution. The upgrade does not require infrastructure changes, eliminating the rip-and-replace approach. It enables service providers to continue delivering profitable traditional services as they add next-generation high-speed Ethernet and IP services via an end-to-end Ethernet access platform.

www.tellabs.com

www.tmcnet.com/7498.1

XConnect Boosts VoIP, Next-Gen Offerings for Service Providers

XConnect has announced that its members now can take advantage of new options that increase their ability to benefit from VoIP and a handful of next-gen technologies.

Company officials say that under their enhanced “Global Alliance” program, service providers can connect through private or public IP and choose their own policy terms. Eli Katz, who founded XConnect four years ago and serves as its chief executive officer, said the alliance “will enable more service providers to enjoy the benefits of VoIP or NGN interconnection.

“Today’s launch adds a deep layer of Web-based control and policy choices to meet service providers’ emerging needs,” Katz said.

XConnect’s global alliance currently includes more than 100 service providers, and the group’s announcement is expected to help them use policy control to create and manage federations, as well as exchange voice and multimedia traffic with peering partners they select.

www.xconnect.net

www.tmcnet.com/7499.1

Broadvox SIP Trunking Interoperates with Toshiba’s VoIP Systems

Dallas-based managed VoIP services provider Broadvox announced that its flagship SIP trunking services interoperate with Toshiba America Information Systems Inc.’s “Strata CIX” VoIP systems.

Essentially, SIP trunking is a service offered by Internet telephony service providers so that businesses can adopt VoIP using their Internet connection. That way, they can communicate with others who rely on the PSTN, since the enterprise IP-PBX is connected to the service provider’s PSTN gateways over the Internet.

According to Pete Sandrev, vice president of customer experience at Broadvox, Strata CIX VoIP system users now will have more efficient bandwidth usage for voice and data applications, “plus an overall lower service cost for their telephony needs including unlimited local calling and reduced fees for long distance and international toll calls.”

Broadvox recently announced a similar deal with Panasonic, as the firm agreed to resell Broadvox’s GO! SIP trunking-based products.

www.broadvox.com

www.toshiba.com/tai

www.panasonic.com

www.tmcnet.com/7500.1

Speakeasy’s Ethernet Service Extends to Los Angeles, San Francisco and Washington D.C

Speakeasy, a broadband voice (VoIP), data and IT service provider, has reportedly

expanded its Business Ethernet service to Los Angeles, San Francisco and Washington, D.C. These latest expansion increases Ethernet coverage in both the Los Angeles and San Francisco markets by 50 percent and increases coverage by 20 percent in the Washington, D.C. area.

Bruce Chatterley, Speakeasy CEO said that extending the reach of Business Ethernet in these important markets is of strategic importance to Speakeasy as they continue expanding the nationwide data and voice footprint. He pointed out that, Speakeasy Business Ethernet is a compelling value to their small and mid-sized customers, who need increased bandwidth at a reasonable price point. In addition to direct customer interest, the company’s channel partners have also found much success offering Business Ethernet to their customers as part of their overall solution.

www.speakeasy.net

www.tmcnet.com/7502.1

ZyXEL’s P-2910 Gateway Series Achieves DOCSIS 3.0 Certification

ZyXEL Communications Inc. announced that it has achieved certified status for CableLabs Data Over Cable Service Interface Specifications (DOCSIS) 3.0

and PacketCable 1.5 on behalf of its P-2910 Series. ZyXEL provides secure broadband networking, Internet connectivity and routing products.



The P-2910 Series of gateways offer very high speeds of up to 160 Mbps with two phone lines and four gigabit Ethernet ports. It supports four bonded downstream channels and four bonded upstream channels. It is also backward-compatible so that it can be used as a single-channel modem with DOCSIS 1.1/1.0 and 2.0 networks. This kind of interoperability makes the ZyXEL DOCSIS 3.0 P-2910 Series suitable for high-speed multiple-play services, clear voice and ultra high-speed data.

www.us.zyxel.com

www.tmcnet.com/7505.1

Vopium Extends Application to iPhone to Offer Significant Savings on International Calls

Vopium, a carrier-grade mobile telephony service designed to offer affordable and reliable international calls from any mobile handset, has announced its application now supports Apple's iPhone. Through the use of Mobile VoIP and WiFi technology, this new app can help iPhone users to make free and heavily-discounted international calls that save them up to 90 percent of the costs associated with traditional international mobile and landline calls.

Consumers and businesses who register and download this app via the Apple Store can take advantage of an introductory offer of 30 minutes of free calls and 30 text messages (SMS).

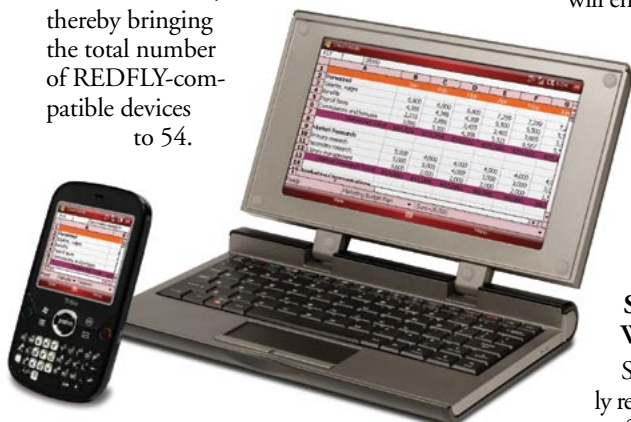
When users download the app into their iPhone it integrates with the address book and when users make an international call, Vopium re-routes the call as a local call to a Vopium gateway and then via premium global traffic carriers, to ensure top-notch voice quality. Users pay their mobile provider for a local call and Vopium for the international add-on.

www.vopium.com

www.tmcnet.com/7506.1

REDFLY Mobile Companion In Sync with 18 Windows Mobile Smartphones

Celio Corporation, recently announced that its REDFLY Mobile companion is now compatible with 18 new Windows Mobile Smartphones including the AT&T Fuze, Sprint Touch Pro, and HTC Touch Diamond, thereby bringing the total number of REDFLY-compatible devices to 54.



The Celio' REDFLY Mobile Companion is a wireless Smartphone terminal that houses a large screen and a full keyboard. It has no operating system, no central processing unit (CPU), nor storage. The terminal links to the user' Smartphone via a USB cable or wireless Bluetooth connection and extends the Windows Mobile interface to a more convenient and capable environment, says company.

Apart from providing an easy way to write email, read attachments, work with spreadsheets, make presentations, view Web sites, and use CRM applications, the REDFLY terminal also connects to Web 2.0 and line of business applications that exist on company network or the Internet by leveraging Smartphone's data connection. The USB ports of the terminal can be used to connect a mouse and keyboard; charge the smartphone directly; and access data on USB Flash drives. The REDFLY Mobile Companion comes in two models: the C7 and C8N.

www.celiocorp.com

www.tmcnet.com/7510.1

TransWorld Network and Zing Networks Chooses Alianza for Hosted VoIP Services

Alianza, Inc., a provider of hosted voice over WiMAX solutions, has been selected to provide hosted VoIP services for Transworld Network and Zing Networks.

Alianza's technology is designed to enable a service provider to quickly launch their entire voice communications services, under their own brand, with no upfront costs. Accordingly, the two service providers are leveraging Alianza to add feature-rich voice services to their broadband offering, which will enable them to increase market share and margin by deploying a fully integrated, white label voice solution.

www.alianza.com

www.twncorp.com

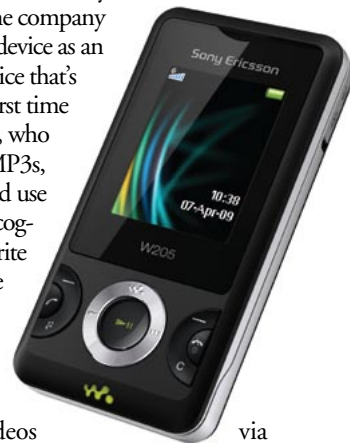
www.getzing.com

www.tmcnet.com/7509.1

Sony Ericsson Unveils W205 Walkman Phone

Sony Ericsson describes its newly released W205 walkman phone as an affordable slider phone that

comes bundled with Sony's Walkman music experience. The company promotes the device as an entry level device that's designed for first time mobile buyers, who can listen to MP3s, FM Radio, and use TrackID to recognize their favorite tunes from the airwaves.



Users take snapshots

or capture videos the 1.3 mega pixel 2.2x zoom camera integrated with the phone. The multiple phonebook function is an added bonus for users to share their phone with their family but keep their contacts separate from the shared ones. The W205 also uses an Opera browser, with 5 MB of memory and supports up to 2GB of memory expansion with an M2 card. The W205 Walkman has dual-band GSM support (900/1800MHz) with additional variant that supports 850MHz and 1900MHz GSM bands.

www.sonyericsson.com

www.tmcnet.com/7507.1

Wi-Fi Arrays Replace Wired Switches At Edgbaston Cricket Ground

Xirrus Inc. has deployed its WiFi Arrays at the prestigious Edgbaston Cricket Ground in the United Kingdom. The arrays will replace wired workgroup switches to supply large amounts of bandwidth to journalists who cover the cricket matches. Company officials claim the Xirrus WiFi Array uses fewer devices, cabling, switch ports, power, space, and installation time when compared with any other offering from its competitors

A Wi-Fi network will allow major media companies to connect their PCs, MACs, and PDAs to the Internet to send large image files taken with 30MP SLR cameras to their news offices. According to James McLaughlin, Commercial Director at Edgbaston, the Xirrus solution provided them with the coverage, user density, and bandwidth that are required to permanently replace their temporary APs and the wired workgroup switches.

www.xirrus.com

www.tmcnet.com/7513.1

Echelon's NES System Deployed on T-Mobile's GSM Cellular Network

Echelon's Networked Energy Services system reportedly has been deployed over T-Mobile's GSM cellular network. The move follows an agreement between the companies that aims to reduce the communications cost of smart meters. Echelon and T-Mobile say they expect the lowered cost to accelerate the adoption of the smart grid in the North American market.

Specifically, Echelon will leverage an embedded T-Mobile SIM within a cellular radio module to enable all Echelon smart meters on a given low-voltage transformer to communicate back to the utility over the smart grid. Under the agreement, T-Mobile will offer users of Echelon's NES system innovative and cost-effective pricing plans for data usage.

www.echelon.com

www.tmobile.com

www.tmcnet.com/7514.1

Arch Rock Intros Wireless Energy Monitoring System

Arch Rock has released a new wireless energy monitoring system, offering facilities managers real-time visibility into electric power consumption. Arch Rock's Energy Optimizer is designed to allow managers identify the areas in which they can save money, boost efficiency and gear usage patterns.

Designed to address the key economic concerns associated with power usage in such facilities as data centers, Energy Optimizer combines Arch Rock's PhyNet IP-based enterprise-class wireless sensor network (WSN) technology, specialized circuit-mountable energy sensors, and a Web-based Energy Visibility Portal.

Once the data is gathered by the sensors, it appears on the portal in the form of actionable reports and reveals far more detail than a monthly utility bill. The new system allows the users to see exactly when and where a building is consuming energy. In addition, users can also identify energy gluttons,

find usage spikes and compare current usage against past baselines.

www.archrock.com

www.tmcnet.com/7512.1

Avocent Intros MergePoint Unity for Remote Network and Device Management



Avocent Corporation, a provider of IT operations management, has released MergePoint Unity, a robust next-generation switching appliance that supports both KVM over IP and serial console management technology. This platform is designed to help IT administrators to manage remote equipment racks in data centers and offices through a single appliance and interface. The platform helps manage devices in data center racks, including servers, storage, networking and serial appliances, helping IT administrators with cost savings and reducing the need for in-person management. MergePoint Unity is standards-based for maximum interoperability.

"The MergePoint Unity solution from Avocent represents a solid step forward in remote data center management," stated Dennis Drogseth, vice president, Enterprise Management Associates, in a release. "As a tool to complement in-band tools, this switch gives IT administrators considerable flexibility and power to manage nearly every piece of IT equipment found in their data centers and remote branch locations."

www.avocent.com

www.tmcnet.com/7515.1

Teradata Delivers Enterprise Intelligence Solutions to Alior Bank

Teradata Corporation, a company offering data warehousing and enterprise analytics solutions, said they have been

selected by Poland's Alior Bank to offer enterprise data warehousing solutions. The implementation will be guided by Teradata Professional Services.

Teradata Database helps organizations create a consolidated data environment that acts as a single source for enterprise-wide decision making. It gives them the power to integrate data from every corner of their organizations, officials said. Important features of the database include scalability through fully parallel operation, mission-critical availability and

complex and ad-hoc query performance. The database is easy to manage and is provided with complete support infrastructure and reference accounts.

www.teradata.com

www.tmcnet.com/7516.1

Cass Information Systems to Manage Telecommunications Expenses for Cumulus Media

Cumulus Media Inc., a radio broadcasting company in the United States, has selected Cass Information Systems to manage its telecommunications expenses.

"Controlling telecommunications expenses for organizations with hundreds of locations, dozens of vendors and multiple contracts requires sophisticated audit controls and highly automated processes," said Jim Dwyer, vice president and general manager, Cass Telecom Information Services, in a statement.

Dwyer said that Cass offers a complete service — combining technology, process and industry experts — to help organizations achieve greater visibility and control of all data and voice expenses — even throughout dynamic change. He said that his company was delighted to partner with Cumulus as they utilize best practices to contain telecom expenses.

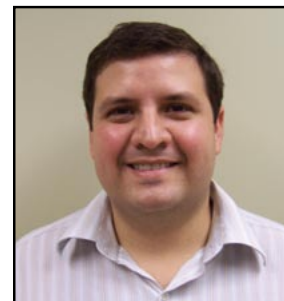
www.cassinfo.com

www.cumulus.com

Talking with Jose Luis Landivar Chavez, VP of Sales & Marketing, Elastix

By: Richard “Zippy” Grigonis

Elastix (www.elastix.org), built on Asterisk, is open source unified communications server software that brings together IP PBX, email, IM, faxing and collaboration functionality. It has a web interface and includes call center functions with predictive dialing. Elastix originated in March 2006 from PaloSanto Solutions of Ecuador. Yours Truly recently spoke with Jose Luis Landivar Chavez, Vice President of Sales and Marketing for Elastix.



JLLC: We created the Elastix software about four years ago using available components of the time. When Asterisk became famous we decided to use it as a sort of ‘underlayer’ of our software, incorporating Asterisk into our way of packaging with the RPM format. We decided to take Asterisk and integrate open source fax technology such as the client/server HylaFAX system. We’ve also integrated Openfire, the Real-Time Collaboration (RTC) server that uses the only widely-adopted open protocol for instant messaging, XMPP, also called Jabber. We also work with the open source SMTP email daemon, Postfix. So our system incorporates open source email, IM, voice and faxing, all integrated into a single platform. Asterisk’s SIP and IAX protocol support means that Elastix works with phones and equipment from Aastra, Atcom, Cisco, Linksys, Polycom, Snom, and so forth.

Unlike our competitors we emphasize two things. One is stability, the other is ease of use. We always keep these two goals in mind. Sometimes we distribute releases that are just bug fixes for software packages we use; other releases continue to enhance ease-of-use. It should be easy for customers to bring our system up-to-speed and we want all of the plug-in telephony cards in your computer to work, so everything will be okay when you pop in our software CD and install a system. Part of ease-of-use is overcoming language barriers, and we’ve translated our software

into about 22 languages now. Compared to our competitors, we’re probably the most ‘international’ of them all. Aside from the U.S. and Latin America, we also reach out to many other geographical regions. People download Elastix from remote areas in India, China and Indonesia, as well as Australia, the U.K., the U.S., and so forth. We aim for a wide range of distribution, whereas some other competing distributions tend to focus on one geographical area.

RG: Did you ever consider making more money by going closed source?

JLLC: Elastix guarantees that its software will always be open source. People should not be afraid of using our software because they’re concerned that we’ll suddenly become closed source and that everyone would then have to pay for licenses. That’s not where we’re going. Our avenues of funding are through the sales of ready-made appliance-like hardware on which we load the software for you. We also make some money via training, thus far in Spanish and our first English-based certification course will be held in July 2009 in the U.S. We also do a lot of customization for some clients. If you just want the software itself, you just download it, burn a CD, insert it into a computer CD drive, and then the CD will basically convert the computer into a PBX. You just log into the Webscreen and you can manage your system from there. In fact, you can do anything

from setting up a single email account to granting permissions for doing call center work. By the way, we’re the only distribution out there currently that has a fully-working call center module that’s open source. Many are using it around the world, because it has such advanced features as predictive dialing – which happens to be our code.

We didn’t want to reinvent the wheel. We took pieces of available software and made them work together. When they don’t work, we insert our code so the whole system does what we want it to do. One clear example is what happened with ARI [Asterisk Recording Interface], an interface that was used in previous versions of Elastix for checking voicemail and recordings from the web page. But we decided it was a bit cumbersome, so we ended up replacing it with our own version, which is now integrated with Elastix. We can overcome the shortcomings of any open source package by adding our own code. In the case of the call center modules, there wasn’t anything available, so we wrote the code from scratch.

You won’t need plug-in cards from us if you’re just going to use SIP trunks; otherwise, we work closely with Sangoma and their cards – but we interact with many of the major card makers such as Digium. We also deal with Redfone Communications for their high availability technology. **IT**

Richard Grigonis is Executive Editor of TMC’s IP Communications Group.

www.tmcnet.com/7518.1

New Economical and Asterisk-Ready WIN Pro IP PBX Platform

WIN Enterprises, Inc., a designer and manufacturer of embedded x86 motherboards and platforms for OEMs, announced today the introduction of its WIN Pro IP PBX (PL-60700), an economical desktop platform for IP PBX systems. Onboard Sangoma digital telephony technology supports FXO (1x) and FXS (2x) ports. Development and testing software based on Asterisk open source software will be available with the platform to enable fast time to market.

The platform utilizes up to 1GB of system memory and there is a choice of CompactFlash or SATA HDD storage is available. A 10/100Mbps Ethernet port is fitted with a four-port 10/100 switch. Features include an AMD Geode LX800 500MHz processor, 1x FXO and 2x FXS ports based on Sangoma Remora digital telephony technology, ability to support Asterisk open source software, compact desktop size: 12.25" (W) x 1.75" (H) x 6" (D), fanless operation, one 184-pin DDR socket supports up to 1GB memory, CF or SATA HDD storage can be specified, one 10/100Mbps; 4-Port 10/100 switch, two USB ports and 2x Mini PCI.

www.win-enterprises.com

www.tmcnet.com/7519.1

Digium Announces Fax for Asterisk

Digium recently announced the availability of Fax for Asterisk. The offering provides Asterisk users and integrators a suite of user-friendly applications and a licensed version of the industry-leading fax modem software from Commnetrex. Describing the new offering as "a complete, cost-effective platform for the development of fax solutions," Digium's vice president of product management Bill Miller said, "Asterisk users, developers and integrators now have a toolkit allowing them to integrate fax with their phone systems."

While fax solutions based on Asterisk are not new in and of themselves, direct support from Digium has not previously been available.

Fax For Asterisk interoperates with standards-compliant fax machines connected

to Asterisk 1.4 and 1.6 on x86 Linux systems. It provides low-speed PSTN faxing via DAHDI-compatible telephony interface cards as well as VoIP faxing to T.38-compatible SIP end points and service providers. Fax For Asterisk operates at speeds up to 14.4kbps and supports V.17, V.27 and V.29 fax modems.

www.digium.com

www.tmcnet.com/7520.1

Carbon Mountain Unveils Open Source Unified Computing Solution

Carbon Mountain recently unveiled a new Open Source Platform called 'inVrastructure', which is a unified computing solution that facilitates in building next-generation data center solutions ideal for implementing private clouds as well as migration of existing IT deployments.

The inVrastructure platform can run on AMD or Intel platforms supported by Linux and integrates compute, storage, network and virtualization resources into a centrally managed solution — enabling a Web-based interface that facilitates IT professional to view exactly what is happening on their network in a single glance.

Carbon Mountain said that it has the designed the open source system in such a way that multiple data centers can be managed from a single interface. A single spare server is enough to start a migration from traditional data center to a unified computing platform. The solution also makes the next-generation data center technology more accessible to businesses, even during economic slowdown.

www.carbonmountain.com

www.tmcnet.com/7521.1

Funambol Offers Innovative Open Source Cloud Sync and Push Email Services

Funambol, a provider of mobile open source cloud sync and push e-mail services, has announced that it is now offering several new innovative mobile services for users which include cloud-based address books with social networking, free text messaging, digital telephony, rich media and email hosting.

A smart self-updating address book with 13 million users is one of the new offerings as well as free unlimited text messages to any mobile phone with mjoy by Venista and a free integrated national address book with tacy by telegate. JAJAH, a next-generation telephony offering for consumers and businesses, is also available along with a number of other service offerings.

Funambol's open source-based solution offers higher levels of mobile device compatibility. The open source software is supported by the world's largest cross-platform mobile developer community and is also being tested on several smart phones.

www.funambol.com

www.tmcnet.com/7522.1

Symbian Group Targets Open Source with Mobile Development Platform

The Symbian Foundation announced that in order to encourage open source innovation among developers in the Symbian world, it's designed a new Zoom OMAP34x-II mobile development platform (MDP) built on Texas Instruments OMAP technology.

The Symbian Foundation, together with its ecosystem, says it's creating the most proven, open and complete mobile software platform, based on Symbian OS and contributed software assets from S60 and MOAP. The Symbian OS is an open mobile operating system. Texas Instruments says it is helping customers solve problems and develop new electronics that make the world smarter, healthier, safer, greener and more fun.

Texas Instruments' Zoom OMAP34x-II Mobile Development Platform (MDP) is a full-featured evaluation platform built around TI's OMAP3430 processor. The MDP addresses the essential needs of the open-source community and high-level operating system (HLOS) developers.

The Symbian foundation plans to move the platform to open source over the next two years, with the intent to use the Eclipse Public License. This will make the platform code to be available for free to everyone thereby offering broader engagement for developers. As part of the development of the platform, the foundation is fostering a community of developers, hardware manufacturers and other partners.

www.symbian.org

www.ti.com

IP Joins the Marines in Iraq

By Richard “Zippy” Grigonis

My late father was Marine back in the early 1920s, stationed in Quantico, Virginia. He marched in Warren Harding’s funeral procession. A physical fitness buff, he later defeated the amateur wrestling champion of Germany in a match staged by the Marines and the German Amateur Athletic Association. He had occasion to meet General Biddle and General Butler. (After Pearl Harbor, at the age of 40, he enlisted in the U.S. Army. Even at that age, he managed to regularly come in 2nd place on the obstacle course, but that’s another story.)

Yours Truly was thinking of him the other day when an offer came in to interview Lt. Col. Noel C. Stevens of the Marine Logistics Group, which is currently forward-deployed to Camp Al Taqaddum, Iraq. Lt. Col. Stevens is the unit’s communications officer, which overlooks the command and control assets for a large area of operations and for more than 4,000 service members. Naturally, I jumped at the chance to find out what kind of communications technology is in use over there.

RG: Lt. Col. Stevens, I must admit I’m unfamiliar with what kind of communications infrastructure is available to the U.S. military in Iraq these days. First, can you give me a general description of what duties you perform at Camp Al Taqaddum?

Lt. Col. Stevens: I’m a Lieutenant Colonel in the Marine Corps with over 21 years of service. I am the Assistant Chief of Staff, G-6, responsible for providing all the data, voice and video services to the Commanding General and his staff. The communications services I oversee enable information exchange throughout the Command. I think my civilian equivalent role would be that of Chief Technology Officer. Our network provides Unsecure Internet access, Secure network capabilities, voice (both POTS and VoIP) and video-teleconferencing services to about 5000 military and civilian users. It is a very mature network that has been maintained and operated in Iraq, and throughout the Al Anbar province, over the last five years.

RG: When members of the telecom-savvy public hear about a place such as Camp Al Taqaddum — the Army’s former “Forward Operating Base” (FOB) Ridgeway — what generally comes to mind is a tactical operations center running a large, complex, tactical combat communications system utilizing satellites and exotic wireless technologies, all employed to communicate with and coordinate the activities of observation posts, directing the movements of platoons, etc. using heavy encryption techniques and technologies. In the civilian world we now have Voice-over-IP (VoIP) and other forms of packetized communications, mobile unified communications, fixed-mobile convergence (handsets that can maintain communications despite passing from one type of network to another — e.g., cellular to WiFi), multimedia call/contact centers, and the automatic intelligent routing of phone calls and other types of media depending upon the identity of the caller and who he/she is calling. Is there much “overlap” between what the USMC does in terms of communications and what happens in the civilian world? For example, I’ve heard that your infrastructure uses both IP and other packet-based communications.

Lt. Col. Stevens: There is a tremendous amount of overlap with technologies in use in the civilian sector and with the military network that is currently deployed in Iraq. As communications professionals, the Marines here are constantly reading journal publications, taking advanced technology courses and observing what types of technology are being used and how those technologies are being used in the civilian sector, with an eye towards solving a problem we may be facing locally.

Our network recently underwent a commercialization initiative, wherein we replaced a large portion of our tactical military systems with commercial, off-the-shelf equipment. In addition to the commercialization effort which primarily targeted our transmission layer and back office equipment suites, we also use a number of commercial collaboration tools. The MLG (Fwd) staff relies upon real-time services to quickly and efficiently exchange information across the operational area. Throughout the Command we observe daily use of VoIP technology across both our secure and unclassified networks, collaboration tools such as Adobe Connect, desk-top VTC capabilities as well as studio-based VTC suites and IRC Chat applications. Of course, for any of these tools to work effectively, the



At left, Lt. Col. Noel C. Stevens, G-6, communications officer for the 2nd Marine Logistics Group, is briefed by the technical control facility chief, Gunnery Sgt. Wade T. Polodna, on the configuration of the Dell 2850 servers they are using to host Microsoft Exchange services. Stevens overlooks the command and control assets of the 2nd MLG’s area of operations and the 4,000 plus users from aboard Camp Al Taqaddum, Iraq. (Official U.S. Marine Corps photo by 2nd Lt. Michele Perez)



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Aerial view of Camp Al Taqaddum, Iraq. (Official U.S. Marine Corps photo by Cpl. M.M. Bravo)

network has to be stable and capable of providing the bandwidth required - our goal is bandwidth sufficiency and the commercialization of the infrastructure has helped us achieve that to a large degree.

As far as specific commercial technologies; to support our VoIP services we are currently using the Cisco call manager 4.2(3)sr1 in conjunction with our Cisco backbone at layers 2 and 3, and we attempt to make things run more efficiently by using Quality of Service (QoS) statements for all of our real-time services. We also use a Vocality multiplexor which allows us to extend POTS services across our IP network. This lets us push voice capabilities out to some of our more remote areas, using a Very Small Aperture Satellite Terminal (VSAT), again a commercial transmission system. Finally, we multi-cast live video feeds from the U.S. (FOX News and CNN for example), as well as from unmanned aerial surveillance platforms, such as Shadow or Predator, over our IP network. This is very similar to IPTV technology.

RG: Given the U.S. Military's increasing reliance on Commercial, off-the-shelf (COTS) hardware and software, selling advanced communications technology to the military no doubt must be subject to a lengthy approval process. And yet your infrastructure appears to be state-of-the-art. Is there some "fast track" adoption process for telecommunications equipment, or does the USMC engage in some R&D of its own, designating particular companies to manufacture telecom network elements to its specifications?

Lt. Col. Stevens: It's really a combination of both, there is a mechanism in place that allows the services to identify an emerging requirement and push it through the military procurement process a little faster. The "universal needs statement" is a requirements identification tool that the armed services can use to identify a shortfall with regard to a specific capability — whether that is a warfighting capability or a telecommunications capability. The process was used much more extensively during the early years of Operations Iraqi Freedom and Enduring Freedom (OIF/OEF) in order to procure state-of-the-art equipment that was used to build the network that we have in place now. This process took advantage of Commercial, off-the-shelf solutions, purchased them

and then delivered those solutions very quickly to the deployed forces. Of course the Marine Corps also has a systems command that is constantly looking into the future to anticipate needs and works closely with civilian industry leaders to develop technology in support of those anticipated requirements. That said, we try not to chase technology for technologies' sake. We simply don't have the time or money to throw at the latest gadgets. We have to ensure that the technology we employ is going to satisfy a validated requirement, identified by the warfighter.

But I think that the greatest source of 'R&D' is resident in the inherent creativity and ingenuity of the individual Marine. I am constantly amazed at what solutions the Marines can come up with in spite of the constraints that they face. They often do not have access to all the resources that they would like, but when given the opportunity and latitude to solve a problem, they will. Not a week goes by that I do not witness what I like to call a "comm miracle" - an event where a Marine has performed some magic to make something work - on time - when there was not a reasonable expectation that it would.

RG: What kind of non-C3 communications infrastructure exists? Are there ways for service members to communicate with their loved ones back home?

Lt. Col. Stevens: There are a number of ways that Marines can communicate with their loved ones back home. I am amazed at the amount of communications that are available in Iraq in 2009 as compared to what was available to Marines during the gulf war. I remember during the gulf war, there was an AT&T phone center a few miles away from where I was working and to make a phone call, Marines would walk to the phone center, and wait in a very long line in order to make a 15-minute phone call. Of course, the phone center was not there initially; my initial contact back home was via the Military Affiliated Radio System (MARS). MARS was a network of volunteer, amateur HF radio operators that would pass short messages, I think they were called Marsgrams, on behalf of the deployed service-members. It was almost like sending a telegraph; I think my first message home was something like 'have arrived safely'.

Things have certainly changed now. Marines at TQ have access to phone centers and Internet cafes and they even have the option of purchasing commercial Internet services for their living quarters. The speeds are not quite as fast as what they would get back at Camp Lejeune, North Carolina, but all things considered the ability to have Internet connectivity, in their rooms, while deployed is a significant achievement and goes a very long way in building and maintaining moral within the unit. Marines take advantage of the Internet access to chat, send email, surf the web, make Internet phone calls and video chat sessions using services like Skype. Without question, this is the most 'connected' deployment I've ever been on.

RG: Thank you for a great interview, Lt. Col. Stevens. Hope to see you guys back in America as soon as possible. **IT**

Richard Grigonis is Executive Editor of TMC's IP Communications Group.



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Adventure Center: A Case Study

Adventure Center organizes and implements culturally-based group adventure tours in remote, exotic destinations around the world. The company's 20 employees rely rather heavily on the company's phone system to facilitate inbound calls regarding their services, to plan trips and communicate with clientele. As the staff is highly valuable to the success of Adventure Center, it needed to ensure it could retain its employees by offering them flexible schedules and help maintain a healthy quality of life. Richard McConnell, director of IT and operation at the company, needed to find a phone system that could accommodate the staff as well as help improve and grow the organization's business.

CHALLENGE

Adventure Center's employees are a highly-trained group of people who each bring a great deal of value to the company. However, several workers were experiencing strain due to harsh commute hours, and a few needed to relocate for personal reasons but didn't want to sacrifice their relationship with the company.

In order to retain its staff and help improve their quality of life, Adventure Center sought a new phone system that could facilitate remote extensions. After evaluating 20–30 vendors over nine months, the company selected **Switchvox SMB** to best meet its needs. As Switchvox is a completely on-site solution, Richard felt comfortable in knowing that he can make alterations to the system on the spot, compared to other 'hybrid' solutions that require changes to be made remotely. Additionally, Switchvox offered Adventure Center the most extensive set of features at an affordable price.

SOLUTION

With Switchvox, Adventure Center can offer its staff flexible hours that fit their schedules. By facilitating remote extensions, employees can work from home during heavy commute

hours, escaping the stress and pressure of morning and evening traffic. In addition, staff that moved to both San Diego and Bangkok can continue working and servicing clients through the Switchvox system without incurring long distance charges or requiring a separate phone number.

Switchvox also gave Adventure Center a few additional benefits it did not anticipate when it purchased the IP PBX. The flexibility of the system allows Adventure Center to use multiple 800 numbers, enabling them to publish unique phone numbers for each advertisement they place. This helps them have a better feel for their ROI and track the effectiveness of their advertisements. Additionally, Switchvox's detailed reports give Adventure Center better visibility into their peak calling hours to better staff the office during high-traffic times of the day.

Lastly, as Switchvox is an affordable, on-premise solution, Adventure Center purchased an extra server to have ready for back-up in case something were to happen to the primary one in use. This provides the company with peace of mind knowing its business will never be impacted for an extended period of time as it has another phone system pre-configured and ready to take over at a moment's notice.



RESULT

Since deploying Switchvox, Adventure Center has increased the overall efficiency of its operations. By having the ability to offer its employees flexible hours and remote working scenarios, it has retained staff, eliminating costs associated with recruitment and training. Furthermore, because the company can track its call volume through Switchvox's detailed reporting, it can staff its office more intelligently. This has enabled Adventure Center to field a higher volume of incoming calls, also helping to increase sales by reducing the number of missed or abandoned calls.

Also, Switchvox has allowed Adventure Center to better evaluate its advertising decisions. By running each ad with a unique phone number and tagging it in the Switchvox system, the organization can track how many people respond to each placement. This, in turn, helps Adventure Center employees field the calls more effectively, as they know in advance which ad the caller is responding to and what they are interested in. **IT**



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Billing in the Service Provider World

By Richard “Zippy” Grigonis

Call them carriers, service providers or network operators, today's new age telco still seems to forget that they're really in the billing business, and that the hum-drum activity of invoicing customers and collecting payments is basically what keeps them financially afloat. The seemingly simple activity of billing has become a major challenge in recent years, as the world's networks have evolved into a complex pastiche of packet-based and TDM infrastructures running various “standard” protocols.

In such an environment, reinventing the wheel is not uncommon. Colin Orviss, Senior Vice President of Patni Computer Systems' Telecoms Consulting Division, says, “In the past, members of the industry used to know everything about what was going on and they could specify exactly what they wanted, because they knew what they wanted, and could either create what they needed themselves or else they could hire someone to come and build it for them. Now, however, with all of the changes going on with technologies, the unique demands of customers and so forth, as an industry we don't know what we want anymore. Everyone needs partners who can work with them to adapt their needs with their experiences to come up with an optimized solution, as opposed to just, ‘You're the customer. You know what you want. Tell me what to do and I'll go do it.’ One needs a more subtle approach these days. There was also a misconception in the industry, which touched the billing space in particular, involving the need and use of those ‘secret sauce’ solutions which can be extremely complex, especially in the fixed-line world, and extremely challenging in terms of getting stuff that works. In reality there's a high percentage of what I would call ‘billing failures’ around the world, which are programs that just don't deliver what's expected of them. Much of this occurs because if every operator perceives that they are unique, and what they're doing is really ultra special, then their way of doing things is what needs to be interpreted into the billing or CRM system or the way they go and decompose offerings and get them delivered. This is why billing *per se* has become an extremely complex, expensive and challenging subject area for most operators.”

Orviss' company, Patni Computer Systems Ltd. is a major global provider of Information Technology services and business solutions in selected horizontal and vertical segments. Patni doesn't really come to customers with a rigid platform that is plugged in and cannot be changed. What they do provide is a replicable model that is taken to each customer (or partner, as they call them) and is finished depending on its unique needs. With its expertise in implementing and enhancing billing systems, Patni enables its customers to



reclaim accountability via tighter integration across applications and to lower the cost of bill presentment.

Taking It All in Stride

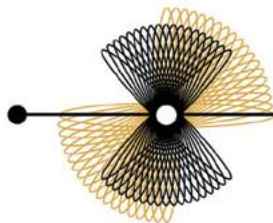
One company sufficiently nimble to handle today's wide range of billing challenges is [Profitec Billing Solutions](#). Profitec provides sophisticated billing services to local telephone companies, long distance carriers, cable providers, utilities, ISPs, wireless providers and many others. Aside from conventional service bureau processing, in-house customer service, and database administration, they also offer network provisioning, credit and collections, inbound sales and order entry, and telemarketing. They can also use components of these services to devise a custom turnkey solution if a telco so chooses.

Profitec's OmniSuite is one of the most advanced billing systems that can deal with a huge assortment of resale products. In particular, Profitec's sophisticated OMNIBILL module takes an expansive approach to resale billing, as it is imbued with Profitec's experience in supporting resellers in local and long distance, cellular and paging, multiple dwelling unit, CATV, IP telephony, broadband, campus resale and other ICPs. Overall, OmniSuite is a potent combination of web and server-based applications. Centered on the core OmniBill OSS billing system front end, the OmniSuite components all interact with a single SQL database, enabling central administration of all elements. Profitec conducts all engineering and development activities in-house so their resulting product is a truly single system rather than a disjointed collection of “best of breed” solutions that would require expensive system integration. The development of Profitec's software has been informed by the extensive work they've done with hundreds of clients, many

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of which happen to attend Profitec's semi-annual users group. OmniBill is available as a hosted or on-site OSS.

Jack of All Trades

Openet provides network-edge solutions including the Fusion-Works event-processing and transaction-management software platform, which enables service providers to both rapidly introduce new services and cost-effectively manage existing ones. Openet's solutions span multiple service provider offerings and can deliver transactional intelligence to Tier 1 customers across complex, converged network environments.

“...the real issue here is that when you make the statement that the operators are worried about being a ‘dumb pipe’, it’s not the word ‘pipe’ that’s the problem. It’s the word ‘dumb’...”

Mike Manzo, Chief Marketing Officer at Openet, says, “Our play in the billing market is that we build an OCS [Online Charging System] – a charging, rating and balance management combined system, loosely specified in the IMS [IP Multimedia Subsystem] charging standards, but our product is broader than the standards themselves in terms of supported use cases and the fact that it supports voice as well as data, which is not specifically part of the standard itself. In any case, we see those control components’ real-time billing aspects becoming more strategic to operators in the future because we see them deploying a myriad of usage scenarios that involve realtime billing transactions *versus* back office. So I guess perhaps the first trend I clearly see is a recognition that aspects of billing need to move closer to the network and need to become more real-time or dynamic in nature. That’s because the function being performed, whether it’s the management of an account structure or the management of a bundle or any type of balance for a user or even the simple process of rating and determining authorization or access to services based on subscriber profile information, those are all very much real-time functions which historically, in one capacity or another, would have been billing-related.”

“So, our view of the world is that billing systems five years from now will be radically different than they are today,” says

Manzo. “Many of the critical functions of billing, not the least of which is rating, are moving closer to the network such that the traditional billing system will lose much of its functionality to an OCS-like function, a combined charging/rating/balance management function that will be exceedingly flexible and high-scale. It will be able to do everything from managing the account structures to managing subscriber balances of any type. That could be a prepaid balance, but it could also be bundles they acquire. It could be loyalty programs or loyalty-related balances that acquire ‘points’ or usage tracked, or any type of mechanism for rewarding loyalty right down to the simple charging and rating functions themselves for everything from prepaid transactions to imposing spending limits, to dealing with tier grading plans. The trend is that billing becomes invoicing, payment and presentment. Most other billing functions move closer to the network and become transactional in nature. Insomuch as deploying what I just described enables operators to create new business models – which it tends to do – there is a clearer recognition of payback in the form of new revenue streams or increased profitability. So it’s partly about cost reduction, but it’s also partly about enabling a generation of revenue that didn’t necessarily exist previously.”

“That brings me to the other trend that we see,” says Manzo, “which is that the OCS capabilities are being deployed as a tightly integrated solution in conjunction with policy management. I should qualify what I mean by policy management, because it’s a term that has had many meanings over the years. Today’s policy management is a transactional element in the network that controls subscriber access to network resources. There are dynamic allocation of four aspects of network resources: First, the speed of the network; second, the ‘fair usage’ or volume of usage allowed by a subscriber over a period of time; third, the ability to use certain or protocols or traffic types; and fourth, the Quality of Service [QoS] and prioritization of that traffic for that user relative to other people’s traffic.”

“Stepping back for a moment,” says Manzo, “one of the big trends that’s happening with the operators right now is an increasing recognition that there’s a place they fit in the value chain in that, as they look to avoid disintermediation and grow revenue, rather than looking to expand to segments of the value chain where they are unlikely to be a leader – which is building applications and content or even serving them beyond basic access services and Voice – there’s recognition that the real issue here is that when you make the statement that the operators are worried about being a ‘dumb pipe’, it’s not the word ‘pipe’ that’s the problem. It’s the word ‘dumb’. So what they’re trying to do is to increase the ‘intelligence’ of the network, which becomes a billable asset. You can take aspects of control on the network and monetize them. Can a subscriber get access to certain network resources in certain ways? How are those network resources packaged either in service tiers and service passes, time-based access or an *à la carte* monthly recurring charge or even consumption-based billing such that

the user is paying for the amount of access or network resource that they're actually using in a fair way. That means having these real-time billing capabilities, but it also means being able to actually control on a subscriber-by-subscriber basis how those resources get allocated. The tight integration of those two capabilities – the OCS that has charging, rating and billing put together, combined with the policy manager, is where the really 'secret sauce' lies."

"So there are two trends running in tandem," says Manzo. "One is that billing is becoming more real-time and moving closer to the network and that billing is getting tightly coupled with an ability to control what's happening on the network and be able to bill for that control in the form of new pricing models or pricing plans, or business models for the operator."

Mind Your 4 P's

Highdeal is a well-known provider of service pricing and rating solutions. Their Highdeal Transactive is a modular software solution that monetizes business transactions in real-time. Highdeal solutions have dealt with billing problems in service industries such as telecom, media and entertainment, technology, transportation and logistics, and financial services.

Highdeal's David McNierney, Vice President of Market Development, says, "Our perspective on the field is based on our offering, a pricing and rating engine. We do address the broader billing capabilities, but we're very specific about one well-defined problem which concerns billing as getting invoices out the door – very much an operational problem. But the problem service providers have today is that it's not only an operational problem, it's also a front office problem involving marketing, harking back to the 4 P's of marketing [1) What is the Product? 2) What is the Price? 3) How is it Packaged? and 4) How is it Promoted?]. Historically, billing systems have done well on the operational side but have done little to nothing to support the challenge associated with next-gen networks, which relate to the definition of service, how to monetize the service, what pricing mechanisms to use, what business models to put in place and how to partner with third parties, whether it's on the supply side or distribution side. So specifically with IP communications and NGNs we see a transformation taking place around the billing topic. People understand that there are some operational things that need to be put in place, but there's also another set of challenges that broadly flow under the billing banner. I'll give you an example: in the old way of looking at things, people talked up more of a process-centric approach, which is order-to-cash, a widely used term in the industry regarding how a service is provisioned and billed correctly from the time an order is taken, to ensure that the revenue stream is accurate, given all the new capabilities put in place, through IP and the NGNs. And IMS is changing the process from order-to-cash to much more of a concept-to-cash model, which again derives from the notion of, say, a

marketing person has an idea for a new service and now must figure out how to monetize it. So it's not purely an operational problem. The billing process is drawn all the way into the service definition and is drawn into proof-of-concepts and market trials that may be performed. It also must answer questions such as, 'Here's a new service offer; what is the cannibalization effect on other services and other offers?' Which again is not so much an operational problem as it is a marketing and front-office issue."

"Services are expanding from things such as SIP trunking and conferencing services," says McNierney. "They're evolving into more cloud-like services. We've heard the discussion about software and communications as a service, and other ways of expanding offerings into the cloud. This accentuates the need to figure out, now that you can move the services to the cloud, how customers are going to pay for them, or will they even want to pay for them. Are they pure subscription in nature or pay-per-use? Are there allowances? Are there overage conditions? So, again, it leads to this new set of problems."

Here Comes Integrated Revenue Management

ECTel provides Integrated Revenue Management (IRM™) solutions for wireline, wireless, converged and next-gen network operators. ECTel has pioneered fraud prevention and revenue assurance for over 20 years. Their line of carrier-grade IRM solutions includes BillView, a rating and billing-verification solution. BillView can do a comprehensive rating and billing audit of all revenue-bearing telco events, reducing revenue leakage and financial exposure. BillView makes possible the successful independent charging and billing verification of large usage samples of all existing and future service types: voice, data, content, 3G, 3.5G, etc. BillView addresses both invoice-level and call-level charges, and it can protect revenues and improve ROI. (ECTel also offers FraudView, a fraud management solution that enables real-time detection and prevention of fraud losses, and RAP, an end-to-end Revenue Assurance solution that slashes a telco's Total Cost of Ownership.)

ECTel's Executive Vice President of Worldwide Marketing and Sales, Benny Yehezekel, says, "ECTel is not a billing vendor, but we are player in the field we call IRM, or Integrated Revenue Management. Basically, we monitor revenue-generating processes. We monitor everything in which billing is involved, including verifying the billing itself in a set of modules of what we call billing verification. IRM is all about operational efficiency and making sure that an operator is making its revenues and margins and is on top of everything that is supposed to be generating revenue, even if it's a transaction that occurs well before it gets into the billing. Still, if you don't monitor these things then data may not make it to billing anyway. In the world of convergent systems you now have VoIP and IP and all kinds of data transactions, so billing is becoming a very sophisticated issue. You're either forced to

take all of your billing systems and integrate them into one platform that is capable of handling all of these sources and all of the networks and all of the technologies, or you may want to continue to use several billing systems, one for VoIP, another conventional voice, and so forth, and then try to reconcile the invoices or send several invoices, and so forth. The actual situation in the market is not defined, because people are taking different paths. But one thing is certain: you need to verify that you will collect payment on every service you actually provide. If you don't bill correctly then you're losing a lot of money. In this world of complexity, the potential for error and therefore losing money, is huge."

"Even in the traditional world of voice, what we call revenue assurance, we know that in certain countries there is a 1 to 10 percent of loss on the topline," says Yehezkel. "So, in the complex world, billing is very important. We know from our biggest customer, AT&T in North America, that they've seen a return of 5 times their investment when they put in place a system to verify their revenue-generating processes."

"We verify the billing process on several levels," says Yehezkel. "One of them is the traditional switch-to-bill. We ensure that all of the inputs from the billing system is getting from the switches through the mediation systems are corrected and paid in full. It's not just that they see all the records, but also that they see all of the correct details of the records, such as the time, call duration, and so forth. The second aspect is specifically validating the bill process. You have many rate plans based on various customer segmentation groups, and these need to be verified. Sometimes you introduce many changes in the rating plan or have instituted a new competitive rating plan and you're not really implementing those in time in the billing system or you don't have time to verify what you've implemented in the billing system. You may end up with many errors. What we do is to get a data sample of each of the rating plans and we can verify for each billing cycle the billing of the customers according to the rate plans that you have changed or have launched into the market. The third aspect involves making sure that there is a reconciliation between order management, what service you actually provisioned for a customer in perhaps a softswitch, and with the actual item that you billed. In so many systems, you find that you gave a customer a 3-week or 3-month trial, and you actually provisioned the equipment to give him a wider bandwidth if it's an ADSL service, and at the end you aren't actually billing him because your system still 'thinks' he's still in the trial period. Those are the places where we scrutinize and adjust information. Remember, each dollar of unbilled CDR or transaction that you find goes straight to the bottom line. You've already provisioned the service and now we just need to bill it correctly."

"Then there's the marketing aspect," says Yehezkel. "The industry is very mature and the name of the game is making sure that you are actually on plan, that you are generating

the revenue that you want to – or plan to – generate, such as a new service launch that you believe will garner 100,000 customers using the service every day. You want to make sure you're on top of that. Our system gives you the ability to know over a very short period of time – it could be daily, or even less than a day, what's happening with your service. If you don't appear to have as many customers for the service as you thought, then possibly you're not providing a quality service, or there's a marketing problem, or maybe your competition is providing a better deal. It could be something simple, such as a network operating seeing that 20 percent of the international traffic is going to the U.K. and the traffic is much less than expected, or what was yesterday or a week prior. Perhaps a competitor is doing something and you must react to that. It's not all just a matter of, 'Yes, I want to make sure that I am billing correctly'. It's also a matter of ensuring that you actually have something to bill."

Billing Advertisers for Free Voice Calls

Boston-based [MetraTech](#) Corp. offers MetraNet, an advanced approach to four main functional areas: charging, billing, settlement and customer care that can automate business processes and business models, taking in stride rapidly changing, complex or radical business strategies across any industry for an unlimited number of services. MetraTech's many delivery options range from licensing to outsourcing (customers are evenly divided on the preference). Recently they released MetraNet 6, which has Dynamic Workflow Modeling (Dynamically models user interfaces to match business needs, such as capturing customer data and product/service activation via intuitive GUIs. Customer care interactions can be captured and translated into workflow, also dynamically.) It integrates well with third-party applications and has financial and auditing capabilities – it's capable of PCI-Level 1 (the payment card industry standard) compliance and can automate manual processes. No development or coding is required.

MetroTech's founder and CEO, Scott Swartz, says, "We often help customers do business model transformations or help them roll out new services. We really excel in cases where someone is looking to do something 'different', and they end up buying solutions from us. Our technology and focus is completely industry model and industry agnostic. About half our customers are non-telco-based and we're doing a fair number of deals bridging models that are transitioning into telcos as well as telco concepts that are pushed into non-telco markets. Our customers range from startups that just got VC funding up to the likes of Verizon Business, BT, Telus and Bell Canada in the telco space, and pretty much everything in between. On the non-telco side we've sold to up to the likes of Microsoft and put them in production to run all of their online services. Cisco is a customer, and we just closed our first big deal in financial



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services, the Depository Trust Clearing Corporation. So we cover the full gamut in terms of company size and type.”

“Inevitably, every company wants to do something different,” says Swartz. “It’s pretty unusual to have a billing company close large deals in so many diverse segments. Interestingly, we walk into these deals where we probably don’t have any references and by typical thinking don’t have the credibility to win a deal, and yet we’ll walk out of the first set of meetings and what we hear is that MetraTech is, ‘The only company that understands what we’re trying to do’. In the case of telcos that have built billing solutions for 10, 15 or 20 years, the reality is that their experience can get in the way if they want to innovate.”

“One of the biggest changes since the mid-to-late 1990s or early 2000s is that the market was really what I would call a ‘replicator market’,” says Swartz. “If you were to look at things like CLECs in the U.S., they were springing up left and right, and they’d say, ‘That other billing company was able to get that CLEC put into production, but all I want to do is copy his or her business, and I need a system to put me in that business’. That reasoning was great during the heyday of some of these markets, but in today’s world and economy, these markets become commoditized very quickly, and things become more a matter of how you go about selling and differentiating than what you sell. Companies are increasingly pushed to find their angle on how they want to differentiate what often constitutes a lot of commodity services. A good example of how we might help a company is Blic, a wireless provider in the U.K. and I believe you need to be between the ages of 18 to 27 or they won’t let you on their network. Domestic calls on the network are free, in that the service is 100 percent advertising-based. They’ve been quite successful and are growing. MetroTech’s system helped them with everything from SIMcard management to the activation. But where’s the billing? They have to make money somehow, and they do it via their advertisers. They needed to implement a business model where they could correlate their network delivery costs and infrastructure costs with what they needed to charge their advertisers. We were able to do that for them very quickly.”

Open Source Billing

Transverse infused open source ideas into Billing Support Systems (BSS) and Operational Support Systems (OSS). Their Business Logic Execution Environment, or blee(p) is a fully integrated set of business management services that are grouped into business domain structures that can be easily extended via a plug-in framework, which allows a limitless number of business solutions to be assembled in days, not weeks or months. Their solution is offered via an open source GPL license, with no license fees. Users wanting advanced

functionality, professional support, documentation, training and product extensions, can contact Transverse when they are ready for a commercial relationship.

Transverse CEO Jim Messer, says, “We wanted to make sure that the Total Cost of Ownership [TCO] reflected a model that operators could support and would be agile in response to the marketplace, particularly regarding the advent of Web 2.0 offerings where business plans may change on-the-fly. They might not always succeed, but that’s acceptable in the space as long as the failure occurs quickly and the operator has the ability to grab onto another business model that makes them more competitive. That wasn’t possible in the current BSS infrastructure – indeed, it was implausible without an operator changing its fundamental architecture. In terms of being able to take these risks with new business models, it really boils down to two things: The cost of being agile in the marketplace, and the time associated with that. We focused on those. We found you really couldn’t handle the cost or technology aspects without doing things on an open source foundation. And the TCO then really becomes compelling when going to the marketplace.”

“We started by looking at best-of-breed open source projects such as well-established CRM/contact center packages such as Asterisk, business intelligence packages such as Pentaho, MySQL for the database, and so forth, where there was a very large R&D investment, on which we could capitalize without having to start that effort completely on our own. We take those best-of-breed open source projects and overlay our own open source and domain expertise to optimize them for telecom environments. When we go to market with such a reduced cost of development for ourselves and TCO for our clients, it’s quite difficult for legacy providers to compete with this business model. It’s not a question of ‘if’ but ‘when’ the carrier community embraces open source.” **IT**

Richard Grigonis is Executive Editor of TMC’s IP Communications Group.

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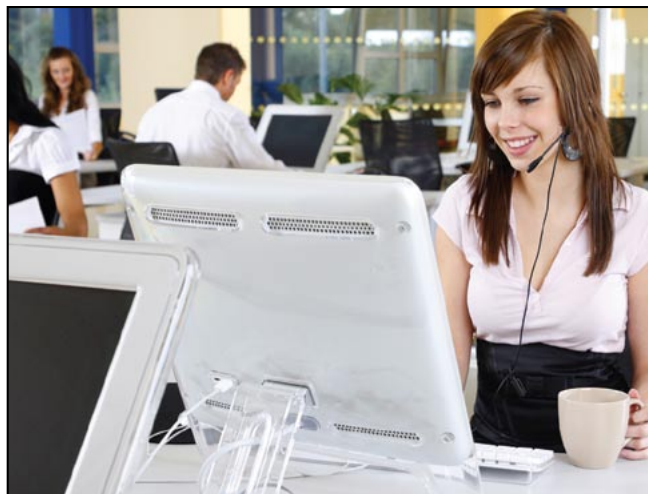
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IP-Enabled Contact Centers

By Richard “Zippy” Grigonis

Contact centers (still called “call centers” by many) have always enjoyed technological advantages over ordinary corporate or home phone systems and services. Unified messaging and unified communications originated there long ago. The transition to the software-based IP-enabled contact center was slow until standards appeared in the form of SIP (Session Initiation Protocol), popular voice codecs and compatibility with VoIP gateways. Today, such contact centers have thoroughly integrated formerly disparate means of communicating with customers, such as email, web portals, instant messaging, faxes, and of course the phone. There are better connections to the back office so that agents, armed with current customer information, can be more adept at cross-selling and up-selling. The modern contact center can even project its capabilities to outside experts and bring them into a call to resolve a customer problem and thus boost first-call resolution, even if the expert is roaming about in the field with a mobile handset. IP has opened up many possible new ways of communicating among customers, contact center agents and resources outside of the contact center.



As Alton Martin, CEO of [COPC](#), says, “IP-enabled contact centers are the fastest growing aspect of the industry. The IP-enabled contact center can support unified messaging, which offers the best opportunity to reduce costs and improve customer satisfaction at the same time.”

Martin’s company, COPC (Customer Operations Performance Center), is a world authority on customer contact center and vendor management operations and the originator of the COPC® Family of Standards for call center excellence, a set of global best practices designed to slash costs, improve efficiency, boost client satisfaction and build the bottom line.

IP has also helped make possible the growing interest in buying contact center functionality as a hosted or at least a managed service. Perhaps the most interesting leader in this field is [CosmoCom](#), the company that introduced the term Unified Customer Communications in 2000, and which has promoted the idea of Contact Center Consolidation 2.0, an all-IP contact center strategy that makes companies accessible and responsive in a cost-effective way, even those with the biggest and most complicated enterprise requirements. CosmoCom’s solutions are available as a premise-based solution within the enterprise, and as a service from some of the world’s top service providers who host it.

Recently (March 2009) CosmoCom released Version 6 of their CosmoCall Universe (CCU), a major set of enhancements and additions their unified IP contact center suite. Version 6, available without charge to existing licensed CosmoCom customers, includes new, optional capabilities that are available to customers as new licenses. CosmoCom has boosted capabilities in six areas: Unified Customer Communications, contact center mobility, real-time report and analytics, virtual outbound calling, screen recording and multimedia call recording, and better integration with Microsoft Outlook.

Stephen R. Kowarsky, co-founder and Executive Vice President of CosmoCom, says, “Our new version of CosmoCall Universe is what we think is an important advance in the state of the art. We’re claiming a leadership position and we consider each one of our six major categorical improvements to CCU to be newsworthy. Moreover, our website has a link to a movie [www.cosmocom.com/to/cgo-video] that explains how version Version 6 of CosmoCall Universe includes CosmoGo, a new smartphone technology that extends the functionality of contact center technology to mobile knowledge workers. Any employee anywhere with a smartphone and access to a mobile network can be the recipient of automatic skills-based routing that directs calls to the right person, even if they’re on the road. Additionally, screen pops can now appear to provide information about the caller and the call, there’s inquiry and transaction enablement for recurring subjects, and tracking and reporting functions are also accessible from the mobile to manage the operation.”



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Considering that it takes seven press releases just to attempt to explain CosmoCall Universe Version 6.0, Yours Truly can't detail all of its features in these pages. Suffice it to say that CosmoCom has made a tremendous technological effort in Version 6.0 of CosmoCall Universe, creating a milestone in the advancement of IP-based contact centers.

Posterity Calling...

CyberTech International's Ed Kaweck, Marketing Manager, says, "We handle the call recording piece of the puzzle. We help use those calls for improving the quality of operations, validating what's said on the phone, and such. Our solutions migrate easily from TDM over to IP, which these days is no surprise, given the growing popularity of IP-enabled contact centers. People in the industry talked about IP migration for many years, and as equipment 'times out' companies are moving to replace legacy TDM equipment and software with advanced IP-based solutions. Large installations have talked about moving their telecom infrastructure into a data center and getting some costs out of the branch offices. That hasn't changed. I am surprised, however, at the number of at-home contact center agents, and the lack of discussion concerning security for those agents. But then, that's mostly an operations issue, not a technology issue. I remember years ago when Ameritech was in business and they examined the whole idea of at-home agents. They came to the conclusion that it took two people to support one agent. Today the technology is there, but as I say, I'm surprised that companies are not more worried about security when it comes to at-home agents. Some call centers are taking pens away from agents because they don't want them taking account contact information. Bank of America had a little whiteboard they gave agents, so if they had to scribble something down, it could be erased immediately. And yet, other banks have scores of agents sitting at home, working away, with all information available to them! I'm surprised security hasn't become a big problem, but I presume some kind of policies are in place to handle it."

"Our ability to record calls has gotten a lot easier with today's technology," says Kaweck. "You won't find a tangle of wires going out to phone sets, the ability to use more commercial hardware makes things cheaper than using proprietary hardware, which nobody wants anymore. The field is quite mature and more people are 'pulling the trigger' and implementing IP-enabled contact centers and their associated applications. The technology has caught up with regulations requiring call recording, and it has progressed to the point where it's easier to manage the recordings you already have. Law firms and compliance people everywhere are worried about having boxes of tapes sitting in back room and somebody walking out with them. Now there are SANs and NASs on the network, and there are more advanced applications on the retention side, such as variable retention based on actual conversations that take place, so you can actively manage what you have in your archive. In short, you now have more 'data awareness' – you can be more aware of exactly what you have. That has invited the recording process into more areas, because now the recordings can be well-managed."

The Qwest for Flexibility

Qwest is a household name when it comes to providing voice, video and data services.

Martin Capurro, Director of Qwest Business Market Group Product Management, says, "Contact centers deal with two things: First, keeping a meaningful contact with the customer; second, efficiency. Achieving high efficiency is really a big part of contact centers. How do you touch and treat in a quality way as many customers as possible while the operation runs on the best possible cost basis? Automation is key. IP has allowed the enablement of new feature functionality, of being able to understand the flows and requests of the actual end customers and being able to change and adapt IVRs, call center routing or agent interactions regularly. It used to be very common for there to be annual reviews of business processes in order to optimize them. But now, what's happened with some of the call center environments is that you're able to modify them easier now. In the past, this would have taken a great deal of software development and process engineering and maybe even some new equipment, but now you're able to swiftly engineer either IVR or ACD-type of environment flows. I won't say that you can do this on-the-fly, but we do know some customers who do it every couple of weeks. That is a big change in the contact center environment – we can be more adaptive, things can happen quicker. The customer can have more of a direct input with respect to changes that they'd like to see. At the end of the day it's not about selling a service, it's about how you can optimize the experience for the end customer. We at Qwest ask what we can do with our direct customers in order to meet that end."

"Our IVR-related products tend to be more 'routed' type products – how a customer can direct the call to the best desired resource," says Capurro. "That's one of our buckets. ACDs are more about how to route the call to the best possible human resource. IVR involves less of a human touch, but if all else fails, the call ends up connecting to a human agent. In either realm, you're talking about using a lot of automation, intelligence and prompting to help the end customer get at the information. Taking a step back, the best way to look at it is to first ask, 'Who buys these type of environments?'. The answer is that almost every business out there has a need to interact with its customers. Even mid-sized and small businesses have access to these type of tools, whereas in the past, before IP-enablement and modern applications, companies had to invest in a real infrastructure and embedded equipment to build a top-notch system. Today, a small customer can approach Qwest and ask for an IVR environment to route calls and map them to certain sources of information, and we can have the customer up and running with basic routing services in a day. For more complex environments, we can do some very customized work resulting from our effort to understand the customer's business processes, and we can then create a custom environment for them. Setting that up would take longer, perhaps three weeks or so. And, of course, there are 'hybrid' situations situated between these two extremes, where a customer may have more involvement in actually creating the kind of environment they want; they can do this via access to web portals where they can click on a screen and can begin configure their environment."



The Voice Peering Fabric ("VPF") is a private Internet that expands to major U.S. cities and abroad, uniting domestic and international telecom providers to bring the most secure and quality experience for the exchange of voice, video and data. It is a unique environment for enterprises and carriers to buy, sell and peer communications services on their own terms. Businesses now have control over and choices about their communications needs.

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The VPF removes barriers to communications between communities and gives control over how you direct your traffic and how much you pay for it.

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"IP has made possible rather sophisticated contact center environments that can reach outside of the call center," says Capurro. "In the simplest environment, you're just allowing people to 'route through' an environment without necessarily reaching back and touching third-party data sources. The more complex ones may involve security PINs, required balances, catalog numbers, or their own accounts, and in such cases we end up ensuring that the environment can link or talk to third-party databases, or the customer's own databases, so they can go search for validation data and provide that information. Lastly, we have a notify product. Everything I've mentioned thus far concerns instances of customers calling us. Another real service involves calling the customers and letting them know something when they need to know it. It's basically an outbound call to notify them about prescription updates, alerts of suspected malicious accounts activity, appointment reminders, and so forth. In general, the trend is being able to IP-enable these services, which used to be standalone systems. By doing this, we've been able to bring down the cost and it opens them up to a wider range of customers. Whether we're talking about a state or local government, a school, system, a large business or a local real estate business, the need is there for everyone, so it's important for us to offer a wide range of services and make them available down-market. It's been a big win for both us and the customers."

Something to Call Home About

Virtual Hold Technology (VHT), founded in 1995 by Mark Williams, is known for its innovative, customer-enhancing queue management solutions. In particular, VHT originated a novel technology they call virtual queuing, which customers have described as the next best thing to being answered immediately by a contact center agent. Virtual queuing eliminates the need for a caller to wait on the phone for a customer service representative. It allows the caller to do something else while a virtual placeholder saves the caller's place in the queue (telling the caller how long the wait will be) or calls the person back later at a more convenient time. VHT has integrated its patented Virtual Hold software suite technical environments in industries ranging from utilities and telecom to healthcare and insurance.

Eric Camulli, Virtual Hold's CTO, says, "Virtual queuing has been our business for a long time. The field is definitely changing and evolving. When we started in this business, it was about educating and empowering customers with options for simply managing hold time. But now, as things evolve, it's about educating and empowering people with options for managing the way that they communicate."

"Let me explain two things about where I think the field is going," says Camulli. "People a few years ago started using the term 'contact center'. It implied using the web as well as voice, and chat was thrown into the mix. So you have these different forms of communication. But with social networking the game is changing even more, and these are channels of communication as well. There's no reason why in the future why you won't be leveraging social

networks alongside virtual queuing in IP contact centers in order to serve customers. An example might be something like this: In the future you may be interested in trying to get in touch with your cable company's customer service. The best way for you to do that may for you to twitter for customer service or perhaps even go to their [Facebook](#) page. There should be no reason why you shouldn't be able to twitter and find out what the expected wait time is for the customer queue that you're attempting to get through. Also, at the same time, you should be able to make a request and enter the virtual queue via either a twitter request or by going right to a Facebook page. By making that virtual request into the queue over the IP network, you're now using a form of communication with which you are most comfortable. In a sense it will also be what you use to keep track of all of your communications, since you've got some type of canvas or palette that has all of your social networking components in front of you, such as a tweet deck or a Facebook, or something like a Yahoo that will have some integrated tools. In fact, just recently I downloaded a new Yahoo client where I'm able to aggregate all of my social networks, be they twitter, Facebook, MySpace, etc., all into a single user interface, so I can keep track of all of these interactions. So, once again, there should be no reason why you shouldn't be able to interact in the same way, by requesting the requested wait time, requesting agent availability, finding out if a specialist is available to speak with you, and if not, then being able to insert a placeholder into the queue in order to save your place in line so that a specialist can call you back when that person is ready."

Camulli continues, "Because all of this occurs in a virtual reality world, the concept of time completely changes in that, just by a few keystrokes on your phone in making this virtual request via twitter, Facebook or whatever, you're able to put the phone right back in your pocket, secure in the knowledge that your 'place in line' is secure in the virtual queue. And when that placeholder reaches the top of the queue, you know for certain that when the time expires, a specialist with the proper skills will be reached – not some secondary agent who's just trying to answer the phone as quickly as possible, or some tertiary agent who's a trainee and who has been asked to be brought online just to be able to answer phones quickly. No indeed, the response from twitter or Facebook is that a specialist will be available for you in 5 or 10 minutes, and you can confidently put your phone back into your pocket and go about your life. And before you know it, 10 minutes goes by, your phone rings, and you're talking to the precise person you need to speak with in order to get the transaction done. So that is one major shift that I see coming down the pike." **IT**

Richard Grigonis is Executive Editor of TMC's IP Communications Group.

The following companies were mentioned in this article:

COPC Inc.
www.copc.com

CosmoCom
www.cosmocom.com

CyberTech International
www.cybertech-int.com

Qwest
www.qwest.com

Virtual Hold Technology
www.virtualhold.com

A Look at VoIP Testing Solutions

By Richard “Zippy” Grigonis

The coming of IP Communications to the world's networks means that not just service providers and enterprises, but also communications equipment manufacturers and communications software applications developers must take into account a complex, hybrid TDM / packetized network and how this impacts on Quality of Service (QoS) and Quality of Experience (QoE). Test applications must deftly handle everything from legacy analog and digital telephony to today's VoIP and IP video networks. Moreover, the number and variety of devices plugging into this “network of networks” has multiplied as well. To test the quality of real-time IP communications in such an environment, today's makers of test and measuring equipment and services have devised a multitude of software and hardware including handhelds, portables, benchtops, and rackmount test platforms for field, lab, data center and central office operation.

One interesting company in this area that's been around since 1989 is [Touchstone Technologies](#). Their test and measurement equipment and services for communications derive from a talented group of engineers who also happen to lead the sales and management teams. Unlike many competitors, Touchstone provides extensive pre- and post-sales support, taking time to help customers with their evaluation of the products; this can range from web demos to assisting with configurations and testing scenarios.

As for Touchstone's actual products, they fall into the two major categories of active and passive testing. Active testing products include those for H.323 and SIP Load Generation – in particular, WinSIP software, which turns an ordinary PC into a SIP testing station capable of handling high density loads. WinSIP generates bulk calls, performs feature and function testing, and can test advanced media capabilities. Win WinSIP (and no specialized equipment) a modern mid-tower machine can generate nearly 1,000 simultaneous calls with perfect G.711 audio streams and nearly 2,000 with the G.729 codec. WinSIP is even able to learn new codec types, and offers optional R Factor and MOS scoring for end-to-end quality assessment verification. WinSIP now includes TestML, an XML scripting engine, thus allowing WinSIP to emulate any device and call flow using easy-to-use XML scripts.

In terms of passive testing, Touchstones' Net Observer can do distributed real-time protocol and media analysis. It's a scalable carrier-class monitoring and diagnostics solution for voice and video-over-IP communications. Net Observer works by placing software



probes near the customer premise and one or more aggregators situated in the provider's Network Operations Center (NOC). Net Observer provides more than 125 metrics per call and reports call detail records in real-time. The detail records are stored in an SQL database and the results can be integrated into existing reporting systems through flat files, SNMP or the Radius protocol. Software probes scale in capacity from 4 calls to more than 1,000.

Another Touchstone passive testing solution, WinEyeQ, an extremely accurate voice and video analysis tool, gives you a real-time, top-down display of network activity (in a friendly drill-down format), and delivers up to 650 metrics per call while on-net, 325 per completed call. There are extensive watch and alarming mechanisms and you can capture and record calls and their media for further forensics. You can even import WinPCap trace files.

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Hammering Out Your Problems

Since the 1990s, Yours Truly has followed Hammer, now called Empirix, one of the best-known names in voice testing and monitoring

solutions for network equipment manufacturers, service providers and enterprises. Their expertise extends to contact center applications, unified communications, VoIP, IMS and the NGN. Indeed, back in my days at *Computer Telephony* magazine, I assembled a testing lab based in part on Empirix' Hammer equipment. You really get a huge choice of platforms with Empirix. There's the Hammer NXT for TDM and IP load testing, the Hammer FX for TDM and IP feature testing, and the Hammer UPM RAS and Modem Test for load testing. For VoIP testing, there's the Hammer Call Analyzer for protocol analysis, the Hammer PacketSphere network emulator for testing IP impairment and the Hammer VQTS to do voice quality testing. For general IP Network testing there's the Hammer ST (signaling feature and load testing) and the RealStreamer IP for media load tests. The list goes on and on.

Recently, JDSU, itself a leading provider of communications test and measurement solutions and optical products for telecom service providers, cable operators, and network equipment manufacturers, announced that JDSU's NetComplete service assurance platform now incorporates Empirix' Hammer XMS, thus creating an integrated, all-encompassing solution for content traffic and signaling-layer monitoring by those service providers wanting to deliver high quality service over broadband/IP wireline and wireless networks. This arrangement between JDSU and Empirix came about partly because service providers are starting to use Ethernet as their primary transport protocol, and such large-frame (packet) networks demand careful analysis of real-time traffic. By adding the Empirix Hammer XMS to the mix, NetComplete can now provide a wide-ranging service monitoring solution that handles both signaling and media content. It also can correlate across multiple protocols and quickly identify network problems, ultimately bringing about a satisfactory customer experience.

Be Aware with VoIP Aware

Devfoundry Software makes the VoIP Aware VoIP Management system for voice and fax-over-IP deployments. VoIP Aware can be used by VoIP novices as well as experienced administrators. VoIP Aware is a proactive diagnostics tool; a CDR generation utility; and a simple call recorder, all in one package. It identifies and solves problems with their voice and fax over IP deployments by proactively generating diagnostic data for every SIP call in real-time, and continuously monitoring and capturing all SIP calls on a network, thereby eliminating the need for reactive testing and ensuring that administrators have access to all of a call's original diagnostic data immediately after the problem appears.

Devfoundry's President Athir Nuaimi, says, "There's been a renewed interest in fax-over-IP testing. The SIP Forum has put together a task group to try and get that fast-tracked. T.38 was formulated over a decade ago, but it really never went very far. Many people put a lot of blood, sweat and tears to try to get it to work, and have had limited success in some small domains. But the biggest issue is that the large carriers really haven't supported it until the last year or two. Global Crossing now supports it, and I believe most of the other major backbone VoIP providers either have T.38 support or it's in the trial

phase. It's taken a long time, but the stuff is actually now available to customers if they want it, but there's still some compatibility issues, enough so that a number of what are basically equipment vendors as well as some service providers, have put together this 'task force'."

"We were founded about five years ago and originally did consulting work for companies," says Nuaimi, "and then about two years ago we came out with our own product. This emerged from some work we did for a fairly small ISP that was working with a large carrier and had issues with VoIP calls. The carrier thought everything was fine, and the carrier, being a well-funded organization, was supposed to have their own quality monitoring systems and have the best test tools. But the stuff just didn't work. So we created a tool for the ISP that continuously and proactively managed and monitored calls. They basically recorded every single call and anytime there was a problem from one of their corporate customers, they would be able to go back to that call and have the full stats, all the bits and bytes in the call, and be able to go back to both the equipment vendor and the carrier and challenge them on each and every call. The carrier approached the problem merely by setting up some test calls in their testing lab, but it never focused on live calls. Our customer base could have told them that it's the wrong way to do quality management. You have to do it with live traffic, and you have to do it on an entire set of calls. You can't sample a certain percentage of them. So we had a very aggressive approach, but that proactive way of dealing with it actually meant that they could tell exactly where the problems were very quickly, and there was no retesting required. I personally believe that that experience showed me that's the only way to manage quality on a VoIP network. You can't do it reactively, you can't do it in a 'testing place'. You must do it on live traffic, and all the time."

Nuaimi elaborates, "If you were to call your phone company – next-gen or otherwise – and told them that yesterday's calls were pretty bad, I'd be shocked if most of the phone companies would even be able to look at those calls and say, 'You're right, yesterday 37 percent of your calls really didn't meet our standard for the quality that we want to offer you, and as a result, we're going to give you a rebate on yesterday's calls. And we believe that, whatever the problem was, we've fixed the network and it won't happen today'. I don't know of a single carrier that offers that kind of service. But that's really what a proactive approach is all about; that the carrier should be able to look at your traffic from yesterday and say, 'You're correct, it's bad. You just called us, but I already have the stats in front of me.' And that's our approach to testing. We look at all the traffic and we do the analysis on all the calls, and we do it all day, every day. All the data goes into a database, and the stats are there for the customer as they need it. The information could be as simple as 'Was the call of good quality or not?' or it could be the entire capture for the call that can be sent to Engineering or equipment vendors to diagnose." **IT**

Richard Grigonis is Executive Editor of TMC's IP Communications Group.

The following companies were mentioned in this article:

Devfoundry Software
www.voipaware.com

Empirix
www.empirix.com

Touchstone Technologies
www.touchstone-inc.com



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Designing the Mobile Enterprise — A Look at Agito Networks

By Richard “Zippy” Grigonis

Billing itself as “the mobile enterprise experts,” Agito Networks of Santa Clara, California has done extensive work in the enterprise Fixed Mobile [Convergence](#) (eFMC) space. For example, Agito’s RoamAnywhere Mobility Router enables enterprises to extend voice and unified communications to cell phones. It’s a network appliance that brings together enterprise wireless LANs, carrier cellular networks, IP telephony and location technology to mobilize voice and data applications, while remaining agnostic to whatever carrier and equipment vendors are used by the customer. The goal here is to bring about low-cost in-building voice coverage, reduced cellular costs, improved enterprise visibility and control over cellular usage, and better accessibility and responsiveness for mobile workers.



Pejman Roshan, Agito’s Co-Founder and Vice President of Marketing, says, “Our product has two primary functions: First, our goal is to enable enterprises to mobilize voice, from deskphones and the PBX, to mobile phones, so that your mobile device effectively becomes a portable desk phone, and to be able to allow you to use it anywhere, whether you’re at home, on the road, or in the office, using any available type of wireless network, whether it’s cellular or WiFi. What makes our solution unique is a manner that extends the capabilities in which the enterprise has already invested for their wireline support. For example, if someone has invested in Cisco Call Manager and Microsoft Office Communications server for voice and unified communications, respectively, our product basically mobilizes the protocols that those systems support and offers a streamlined integration on the mobile phone. It may surprise some people, but we can make this work phenomenally well on mobile handsets.”

“It’s quite impressive to use,” says Roshan. “For example, if you start a call on WiFi in your home, and you walk outside to jump in your car and you’re still on the call, our technology can move the call from WiFi to cellular seamlessly and automatically so that you as a user on the phone are unaware that this handover has happened. Continuing with that, let’s say you return to the office. Now we can move that call from cellular back to your corporate WiFi automatically and again, seamlessly. The same thing happens in the case of data sessions. We support the notion of ‘session persistence’ so we do the same thing for unified communications. We have the fixed-mobile convergence on the back end and then we have the unified communications clients — we also provide

the client component to the UC system for the mobile devices, and for the PBX for the mobile devices.”


“As for what trends we see out there,” says Roshan, “there are some things we hoped would happen, as opposed to what is actually happening in the market. Our company was designed to provide a means for taking advantage of WiFi for better coverage when you’re in-building, because many people, such as knowledge workers and task workers in the enterprise — be they working in a general enterprise, healthcare, higher education, you name it — are starting to rely on their mobile phones as the primary device that they’re always carrying with them, that they’re using and placing calls on, and they’re accessing email and so on. So the goal of our product was to be able to simplify how people communicate on their mobile phones because now there’s this glut of different applications that you have on your phone and it makes it difficult on the non-technical end user. We set out to simplify much of the mess, enhance collaboration and communications. That’s appealing, but in the current downward state of the economy, unless you’re providing a meaningful cost savings, it’s actually very difficult for enterprises to justify the cost of implementing such a system. That is, the enterprises are not moved or motivated by soft ROI value propositions. They’re really driven by hard ROI.”

“But the good news for us and for our enterprise customers is that one of the values that we offer is that we have a policy engine,” says Roshan. “With it, administrators can create rules to provide least cost routing and significant reduction of overall cellular expense. For example, we try to use [WiFi](#) wherever possible, so you’re minimizing

the number of minutes that you burn. If you're making international calls from your mobile phone, those can be billed at a couple dollars per minute. So if you're calling the U.K. from your mobile, a 10-minute call would cost about \$20. But that same call made from your deskphone will probably cost 50 cents. So we can intelligently re-route those calls with our policy engine, so the user just dials the numbers, but they're still getting 'fixed-line rates', to use the FMC vernacular. By the same token, take international roaming. When someone from the U.S. roams to Europe or Asia, or when someone in the U.K. roams into Belgium, they pay about \$2 per minute or about 1.5 Euros per minute, for the ability to do international roaming. A [Vodafone](#) user who's now using Proximus/Belgacom Mobile pays a significant premium for that privilege. Again, however, we're able to use our least cost routing engine, and take advantage of [WiFi](#) – amongst a host of other tools – to reduce those costs by a factor of 5 to 10, depending on usage patterns. It's a significant cost savings, on average, just as a data point. You've got enterprise employees

paying \$600 to \$1,000 per week in mobile costs when they travel internationally, but we can reduce that to anywhere from \$100 to \$200 per week, given the typical 300 to 400 minutes per week of usage. These are some pretty substantial cost savings that enterprises find exciting. Now imagine combining that with the productivity benefits of being able to have one device that you can use for corporate unified communications, plus voice. You can have One Number access, a single integrated voicemail box, and you don't have to launch 15 different applications just in order to dial a phone number, which means that there's now a lot of ease-of-use for the end user. All of this is very compelling, and that's why we've been very successful over the past quarter, combining the cost savings that make the CFO happy, and the productivity benefits, which makes the line of business managers and directors very happy as well.” **IT**

Richard Grigonis is Executive Editor of TMC's IP Communications Group




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Presenting the 2009 WiMAX Distinction Awards

Defined by the [IEEE](#), the 802.16e standard for WiMAX (Worldwide Interoperability for Microwave Access), was developed to provide a common framework for wireless connectivity in fixed, portable, and mobile environments. Simply stated, [WiMAX](#) is a scalable wireless access technology designed to provide high throughput over long distances.



For the second year in a row, *Internet Telephony* magazine is proud to present the WiMAX Distinction Award, designed to honor those companies who are developing and designing the next generation of products and solutions that will define the WiMAX space for years to come.

The winners were chosen by a panel of TMC's print and Web editorial team. Applicants submitted a formal application for consideration.

The companies that received this honor represent a broad cross-section of the industry, from equipment manufacturers, to testing companies to device manufacturers to vendors offering provisioning and policy shaping services. *Internet Telephony* magazine congratulates the winners.

The Aptilo WiMAX CSN System Aptilo Networks www.aptilo.com

The Aptilo WiMAX CSN System is a pre-integrated, ready-to-deploy wireless broadband data and voice services solution for mobile WiMAX Authentication, Authorization and Accounting (AAA) and Service Control. It is a field-proven, multi-access (WiFi and WiMAX) platform that allows for management of bundled data and multimedia services over WiMAX and WiFi networks within the same platform. It delivers a highly flexible and versatile AAA, policy management and service control solution with support for pre- and post-paid data and Voice-over-IP (VoIP) services. The integrated data and voice services solution provides AAA through multiple authentication types and controls quality of service (QoS) through service flow descriptors for users, devices and services. The Aptilo WiMAX CSN System is fully interoperable with WiMAX-compliant clients and Access Service Network (ASN) nodes such as WiMAX 802.16-2005 based Base Stations and ASN Gateways through standards interfaces defined by The WiMAX Forum.

Mobile Office CommuniGate Systems www.communicgate.com

Mobile Office from CommuniGate Systems is a fixed mobile convergence solution that provides a suite of Unified Communica-

tions applications available for delivery in a SaaS model. It allows mobile operators to offer Value-Added-Services (VAS) to their small and medium business subscribers. Mobile Office delivers front end communications and ties SME subscribers to the mobile operators' brand. It increases ARPU by driving 3G data services, encouraging the purchase of add-on features, and substantially reducing subscriber churn rates. Mobile Office includes a full suite of virtual applications such as push email, push calendar, push contacts, email aggregation of external accounts, shared folders, shared calendars, a global address book and the Flash-based Web 2.0 client Pronto!.

Libra MAX EION Wireless www.eionwireless.com

The Libra MAX family provides operators with a flexible fixed WiMAX product offering ease of deployment, vendor interoperability and freedom of application. The Libra MAX family of WiMAX products is designed to provide carrier grade reliability. Be it simple broadband access, Voice-over-IP, virtual private networks or video services, a Libra MAX solution lets operators roll-out cost-effective services that meet stringent service level agreements. For operators serving the business and residential sectors, large or small enterprises, or public sector, Libra MAX has the features to meet the performance, cost and security required. Libra MAX delivers industry standard 802.16-2004 WiMAX with an architecture that ensures a seamless path to 802.16e mobility.

WiMAX USB Modem (U Series); WiMAX Indoor Modem (D Series) Green Packet www.greenpacket.com

Green Packet Solutions (GPS)'s WiMAX USB Modem, also known as the U Series is designed for users who are constantly on the move. It provides instant WiMAX connectivity anytime, anywhere, by simply plugging the modem into a USB port. With its easy to use, plug-and-play mechanism, users can start to enjoy WiMAX without having to enter any account information as their profiles will be automatically loaded from the modem. U Series is fully compliant with the 802.16e-2005 (Mobile WiMAX) Standard and tailored for the 2.3Ghz, 2.5Ghz and 3.5Ghz range of frequencies.

GPS's WiMAX Indoor Modem, also known as the D Series is designed for residential users to get connected to WiMAX. D Series is fully compliant with the 802.16e-2005 (Mobile WiMAX) Standard and tailored for the 2.3Ghz, 2.5Ghz and 3.5Ghz range of frequencies. D Series supports over-the-air configuration and software upgrades. This relieves WiMAX Operators from labor intensive maintenance and subscribers are kept up-to-date without interruption to their daily routine.

Motorola WiMAX CPEi 775 (Data+VoIP+WiFi); Motorola WiMAX IOT Program
Motorola, Inc.
www.motorola.com

Motorola WiMAX CPEi 775 is an all-in-one solution for home networking. It provides fast, easy access to Mobile WiMAX networks using the IEEE 802.16e-2005 standard via an integrated WiFi 802.11 b/g router, an Ethernet port, and two ATA ports for Voice over IP with up to 2 standard telephones. Data, voice and home WiFi communications are all integrated in one device with no interconnect cables.

Also, [Motorola](#) has launched its WiMAX interoperability testing program (IOT), which is designed to validate for its customers that a device is compatible with their WiMAX network infrastructure and helps those WiMAX infrastructure customers make decisions about which customer premises products and mobile devices they should consider.

Powerwave's WiMAX Remote Radio Head
Powerwave Technologies, Inc.
www.powerwave.com

[Powerwave's](#) portfolio of 4G infrastructure products includes antennas, tower-mounted amplifiers (TMAs), multi-carrier power amplifiers (MCPAs), and radio heads, along with service and software solutions designed to reduce deployment costs and complexity, and provide network operators with a time-to-market advantage. The company's WiMAX Remote Radio Head (RRH) leverages the technology architecture first developed for its WiMAX Digital Radio Head. Powerwave has fielded nearly 50,000 digital radio heads around the globe, supporting all manner of air interfaces and technologies. Its advanced system architecture is based on a modular platform giving the ability to quickly migrate to [LTE](#) applications or other types of modulation mostly through firmware adaptation and simple hardware changes.

SQN1210 Mobile WiMAX SOC
Sequans Communications
www.sequans.com

Sequans' SQN1210 is a single die 65nm baseband and RF Mobile WiMAX SOC. Based on state-of-the-art 65 nm technology and four years of Sequans' proven field experience, the new SQN1210 delivers reduced cost, power consumption, and size as compared to previous generation technology in a tiny 10X10 package.

Furthermore, the SQN1210 does not require external DRAM memory, and delivers maximum throughput of greater than 40 Mbps with power consumption of less than 350 mW with fully loaded MIMO traffic and less than 0.5 mW in standby. The integrated RF supports TDD and half duplex FDD and covers all three global WiMAX bands, 2.3, 2.5, and 3.5 GHz. The SQN1210 also supports 2 Tx, as specified in Release 1.5 of the WiMAX system profile, enabling uplink MIMO, a feature unique to Sequans designed to increase cell coverage.

Spirent Landslide WiMAX Performance Test System
Spirent Communications
www.spirent.com

Spirent Landslide WiMAX Performance Test System is a complete, end-to-end performance test solution that simulates real-world bearer and control traffic for WiMAX Mobile Packet Data Core Networks. Landslide WiMAX emulates millions of WiMAX mobile subscribers in various stages of activation, deactivation and handoff between cells. During the emulation, Landslide WiMAX transmits real-world application data for session loading and QoE determination. Landslide WiMAX is capable of isolating the ASN [Gateway](#) and CSN components, such as Home Agent or AAA server, in "nodal" test configurations. This configuration is ideal for benchmarking network node performance and capacity. In addition, Landslide WiMAX provides end-to-end test configurations for testing the entire WiMAX packet core network.

SyMAX Mobile Network Manager
SyChip, Inc.
www.sychip.com

SyMAX Mobile Network Manager is the latest addition to [SyChip's](#) comprehensive middleware software offerings for WiMAX-enabled devices. This fully integrated software solution offers generic WiMAX network discovery and selection, security supplicant, and Quality of Service (QoS) provisioning functionalities to original equipment manufacturers (OEM) and original design manufacturers (ODM). OEM and ODM customers now have a unified framework and no longer need several vendors to obtain these functions for their WiMAX devices. This significantly reduces network verification, testing efforts, and development costs.

TCS Xypoint Location Platform (XLP)
TeleCommunication Systems, Inc.
www.telecomsys.com

The world of WiMAX is rapidly expanding beyond mere broadband access. The TCS Xypoint Location Platform (XLP) is designed to enable precise, location-based services on WiMAX end devices. This product illustrates the use of TCS' WiMAX location solution utilizing the Secure User Plan Location (SUPL) technology in the XLP. TCS uses a SUPL-enabled laptop and the technology can easily be transferred to a wireless device such as a WiMAX-enabled personal digital assistant (PDA) or smart device. **IT**



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Time for Goodbye, Again

By Greg Galitzine

Dear Reader,

Forgive me my self-indulgence.

On December 2, 1996, I pulled into a parking lot in Norwalk, CT, stepped out of my car and into my new role as an associate editor for TMC's nascent CTI Magazine.

My first assignment was following up on a Dialogic product innovation code-named "Pyramid" that turned out to be the latest iteration of their DM3 fax board.

Shortly thereafter I booked travel to my first telecom trade show, CT EXPO in Los Angeles, when Zippy was still "the competition."

Twelve-plus years and hundreds of trade shows (and hundreds of thousands of airline miles) later the time has come for me to retire my TMC jersey. I have been granted an incredible opportunity to work outside the sphere of publishing and it's something that after much deliberation I have decided to pursue.

I'll miss the deadlines, the magazine meetings, the inevitable delays that somehow seem to be a part of print publishing no matter how well you plan... as well as the feel of a freshly printed magazine when it hits your desk, and you realize, "Hey, I helped make that." And the genuine look of excitement on my three-year-old's face when he flips to the picture of his dad staring back from the back page.

Internet Telephony magazine has been a part of my life so long I'm thinking of painting a yellow border around my passport photo.

I'll miss being on the leading edge of technology and innovation in the communications space. I think I speak for many of my journalist colleagues when I say that we have a wonderful front-row seat to watch the future of communications unfold before our eyes, and we get to interact! We get to ask the first questions, we get to see the first demos. We are among the first to cringe when the vendors' PR teams use words like "first," "leading," "unique," "flexible," "extensible," and all the rest.

I'll miss the invites, the wining, dining, and partying that often accompany a new product launch.

Chicago, Robert Cray, The Temptations, Buddy Guy, the Blues Brothers, Heart, Counting Crows, Bruce Hornsby, Buckwheat Zydeco... too many bands to list... Kareem Abdul Jabbar, Pete Rose, Mike Eruzione... You get the picture — companies spend lots of money on this kind of stuff.

And yet sometimes, in some strange way a flying monkey can be viewed as a better investment.

I'll miss the people with whom I developed great relationships — working and personal. All too often, the relationship begins and ends with a press release, or a story pitch, or a briefing invite. I'll miss those people who took the time to bring something of themselves to the relationship. For example, the shared misery of being Mets fans,

or a shared flight delay in an exotic locale like Boise... or the ability to spontaneously break into a magic trick or a Mel Brooks quote-a-thon... or sharing stories about the kids feeding reindeer at Christmas time, while enjoying a beer and a Las Vegas 51's game.

There sure are a lot of characters in our industry.

Most of all, of course, I will miss my team here at TMC. I wish to thank the Tehrani family — Nadji and Rich in particular — for inviting me to be a part of this great journey, for giving me the opportunity to work in an exciting industry, with such a great group of people over these past 12 years.

Again dear reader, I beg your indulgence as I run out a list of names that you may or may not know or remember. These people are the cream of the crop and they deserve mention, and at the very least it's my small way of saying thanks. Thanks for the opportunity to work alongside you. Thanks for the chance to learn something from you. Thanks for just being there as I went through the trials of life from the birth of my children, through illness and the passing of key people in my life. Thank you. Thank you. Thank you.

The entire team of talented editors and designers who are currently charged with bringing you the best magazines and Web site in the industry: Erik, Stefania, Zippy, Brendan, Michael, Patrick, Jessica, Tim, Max, Scott, Jean, Thapa...

Lisa, who makes our magazines look so good.

The twin towers of Tim: Zacc and Goins

Stephanie and Jaime and "Tash without whom I would be woefully unprepared... and most likely lost.

Heidi — the glue that keeps the ITEXPO Conference together

Tom and Vahid and Shirley, who still remember TMC before GG.

My awesome team from TMC 1.0: Dara, Laura, Kevin, Erik, Linda, Tracey, Chris, Mike (who rightly believes that objects are nouns), MaryBeth, Ann...

Hilary, Jaime, and Frank — may you rest peacefully.

Johnny Eyeballs.

Frankie Show.

Joe Fabiano.

Alan Urkawich.

Mike Genaro.

Dave Rodriguez.

With apologies to Billy Joel and Michael Kay, "Life is a series of hellos and goodbyes, I'm afraid it's time for goodbye again."

Just remember, I'm still the Commissioner — and all trades go through me. **IT**

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