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TMCnet.com Traffic vs. Technology/IT Web Sites

Web Site	Alexa Site Rank
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eWeek.com	2,826
Computerworld	4,671
InfoWorld	6,618
Network World	8,394
Light Reading	14,655
Pulver.com	36,063
Wireless Week	40,701
Destination CRM	48,598
Telephony Online	58,251
VoIP News	76,801
Telephony World	121,573
Call Center Magazine	183,448
America's Network	185,033
Telecomweb	204,159
CommWeb	249,258
Wireless Review	317,334
Communications News	984,904

TMCnet.com Traffic vs. Business Magazine Web Sites

Web Site	Alexa Site Rank
TMCnet.com	2,459
Fortune Magazine	2,484
Smart Money	2,980
Inc. Magazine	4,984
Fast Company	5,259
Business 2.0	5,986
Barron's Online	6,560
Weekly Standard	8,996
Technology Review	9,624
CIO Magazine	11,330
BtoB Online	23,419
Worth Magazine Online	174,723

TMCnet.com Traffic vs. Prominent Web Sites

Web Site	Alexa Site Rank
TMCnet.com	2,459
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Volkswagen	4,258
Nokia USA	4,351
Coca-Cola	7,670
Brookstone	10,045
GE Appliances	11,058
Brooks Brothers	14,899
JVC	15,692
Black & Decker	32,061

Source: Alexa.com 11/14/05

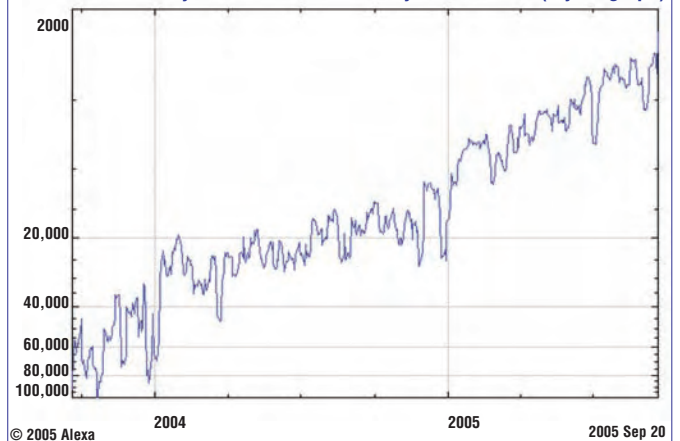


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*Source: Web Trends October, 2005

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TMCnet.com's Daily Traffic Rank Provided By Alexa.com** (2 year graph)



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**Source: Alexa.com ranks Web sites by traffic. The number indicates a site's proximity to being the number one most visited Web site. Date: 11/15/05
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The VoIP Authority Since 1998™

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

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The VoIP Authority

By Greg Galitzine



The Year That Was: 2005

It's been quite a year, both at home as well as in the extended Galitzine universe — that fun-filled world I like to call the VoIP industry. There are so many ways to mark the year that is about to pass into the stacks of history. Ticket stubs, photographs, collector cups from baseball stadiums across the country, perhaps a review of the year's big news...

What were the big events that defined VoIP in 2005? Who were some of the more interesting players in the space? What were some of the more compelling storylines?

In January everyone was excited about the year to come. 2004 was a banner year for our industry, people were starting to forget the lean years that we had recently endured, and the future was bright. In retrospect 2005 did not disappoint.

The year began with Vonage announcing it had passed 400,000 subscriptions. Chairman Michael Powell announced that he would shortly be stepping down as head of the FCC, and the industry was awash with speculation: Who would take over from Powell, who had proven himself a champion of VoIP? Turned out to be Kevin Martin, who if recent history is any judge, is not nearly the friend of the industry that his predecessor was. Inter-Tel announced it was buying Lake Communications, which was very well received; Level 3 announced they were halting their (3)Tone wholesale hosted VoIP business, which was not as well received. Of course, folks like Volo Communications were only too happy to step in and service Level 3's erstwhile customers.

February: My birthday, my twins' birthday, Lance Armstrong announces he will attempt to win his seventh Tour de France, Internet Telephony Conference & EXPO was mobbed, prompting a move to a larger facility in 2006, Verizon announces it will acquire MCI, the VoIP Security Alliance launches, and a new player named Teleo hits the scene.

March: The session border controller market frenzy began with Juniper purchasing Kagoor, pre-saging Data Connection's announcement in April that it would offer SBC functionality in software as well as Ditech's acquisition of Jasomi in June. This month also saw the FCC rush to the defense of Vonage by slapping a fine on Madison River for blocking the VoIP provider's ports.

April: IP telephony became legalized (sort of) in Russia, and Linksys, itself acquired by Cisco, in turn acquired Sipura. That acquisition is just now beginning to yield some pretty significant fruit.

May: Where's Michael Powell when you need him? The FCC ruled that VoIP service providers would have to comply with an order demanding that they offer subscribers full 911 service by November. Meanwhile, the wireless industry is still working on that issue several years on.

June: Anyone who attended the final Supercomm came away thinking that IMS and IPTV were the only two subjects worth talking about. Unless of course you were at the TMC party at the top of the Sears Tower; in which case the sunset was spectacular!

July: Former Earthlink CTO David Beckmeyer launched PhoneGnome, which is quietly one of the cooler products to hit the market this year. Lance won his seventh Tour de France. Vonage went cordless with VTech. North of the border, Canada's federal CRTC made the decision to regulate VoIP services.

August: The VoIP Developer Conference visited San Francisco. Google launched GoogleTalk. Now we know why they bought up all that dark fiber. Vonage's IPO talk reached new heights of hype. (We're still waiting.) Microsoft acquired Teleo, fueling their further reach into the VoIP space.

September: Arguably one of the most significant developments in the VoIP space occurred in September: eBay's purchase of Skype. One can argue about the price paid, and I certainly took a very negative approach when I heard the numbers, but the idea grew on me and grew on me. It seemed like a lot of money at the time, but even now, just a few months removed, it looks like it was a bargain for everyone involved. Much has been written on the subject, and much remains to be said, but suffice it to say this was huge.

October: The giants of the consumer Internet are making their presence felt every day now. AOL launches their VoIP offering. Microsoft and Yahoo team up on IM. Sprint cuts deals with a bunch of major cable companies. Lucent announces a bunch of big wins in the IMS space. Internet Telephony Conference & EXPO draws its largest crowd ever, pulling in over 7,000 people to hear the likes of Carly Fiorina, Michael Powell, and Niklas Zennstrom speaking on the subject of VoIP. Unfortunately I was unable to attend the event as I was by my wife's side as she delivered a baby boy. I am now thrice blessed.

November: TMC (our parent) announces the launch of two new magazines: SIP Magazine and IMS Magazine. The United Nations agreed to lay their hands off the Internet's root servers, instead electing to let control remain in the hands of ICANN. Bill Gates issued another memo that will be reviewed in business history classes for years to come. (All depends how things work out, I guess.) Essentially Gates issued a call to Microsoft to heed the sea change and move headlong into the hosted services space. Back when we thought this was a good idea the first time, we called it the ASP market. The U.S. Senate Commerce Committee voted to approve legislation that would among other things, prevent the shutting off of VoIP service for providers who failed or were unable to comply with the FCC's November 28 deadline. S. 1063, or The IP-Enabled Voice Communications and Public Safety Act of 2005, passed Committee unanimously. Rich Tehrani announced that 2006 would be heretofore known as the Year of VoIP Peering.

I can't wait to see what next year has in store.

Here's wishing you all a safe and prosperous 2006!

INTERNET TELEPHONY® December 2005 1

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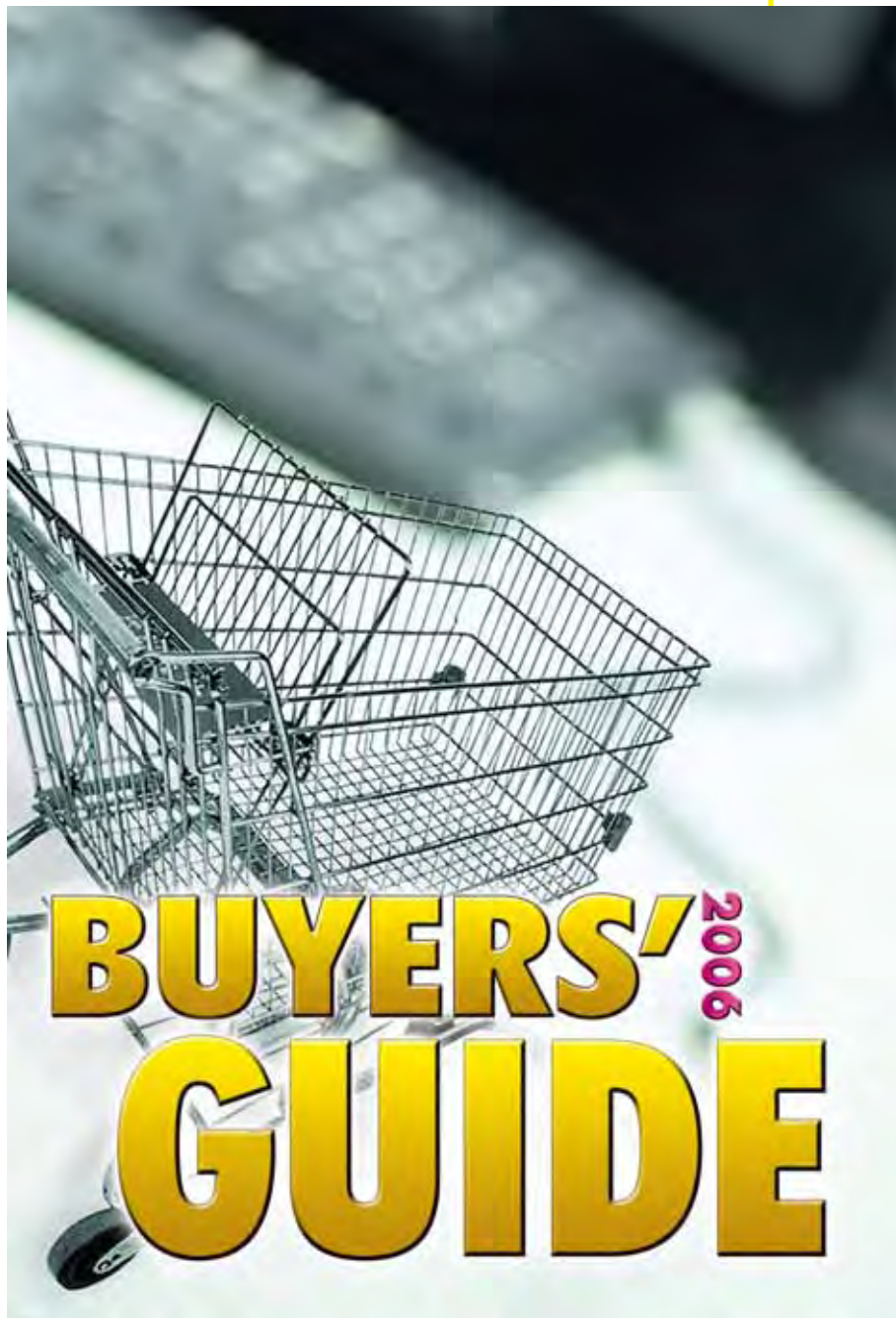
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|-------------------|--------------|
| 1. United States | 6. India |
| 2. Australia | 7. Singapore |
| 3. Canada | 8. Japan |
| 4. Europe | 9. Germany |
| 5. United Kingdom | 10. China |

QUOTE OF THE MONTH:

VoIP changes everything. It revolutionizes communication as we know it. It liberates consumers by freeing every medium — whether it's copper, cable, fiber or radiowave — from the silos in which communication is limited, trapped and then fed to consumers by those who own the network. And it is shifting control of the consumer experience away from the central office and out to the edges — irreversibly placing market power into the hands of consumers. VoIP also erases everything we know about regulation.

— Susan Kennedy (page 76)

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 <http://www.tmcnet.com> for all the latest news and analysis. With over 5.9 million unique page views per month, translating into over 617,000 visitors, TMCnet.com is where you need to be if you want to know what's happening in VoIP.

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

Advocacy Group Proposes Tax For Consumers Using VoIP

In response to FCC Chairman Kevin J. Martin's proposal to change the way federal phone taxes are collected for the Universal Service Fund by implementing a monthly flat fee based on telephone numbers, the Keep US Fair Coalition, a telecommunications fair practice advocacy group, is proposing an alternative plan which would expand the USF contribution base to include all revenues derived from telecommunications, including services using VoIP. <http://tmcnet.com/199.1>

Analyst: Skype Poses Risk, Should Be Banned in Enterprise

Skype, the pioneering peer-to-peer Voice over Internet Protocol (VoIP) phone service, poses a serious security threat to millions of corporate enterprises and should in fact be banned, new research from technology industry analyst firm Info-Tech Research Group showed.

<http://tmcnet.com/200.1>

AOL and Warner Bros. to Bring Back Favorite Television Series

Television viewers with a soft spot for the shows of yesterday may soon be trading in their big screen TVs for their computer monitor. America Online Inc. (AOL) and Warner Bros. recently announced a collaborative effort, creating In2TV. This new service will enable customers to stream full-length episodes of all time favorites like Welcome Back Kotter, Perfect Strangers and the New Adventures of Batman free and on the Web.

<http://tmcnet.com/201.1>

Special Report: Voice over WLAN Adoption to Triple by 2007

The number of North American businesses deploying voice over wireless LANs (WLANs) is poised to triple over by 2007. According to a research study conducted by , the amount of businesses implementing the newer technology in the enterprise market will grow from ten percent to 31 percent in the next two years. <http://tmcnet.com/202.1>

Intel NetStructure HMP Platform Gains Traction With VoIP Solutions Vendors

Pronexus, Edify and Paraxip Technologies have all integrated their respective Internet Protocol (IP)-based technologies into Intel's NetStructure Host Media Processing (HMP) architecture to enable voice and speech solutions, the three companies announced separately on Tuesday.

<http://tmcnet.com/203.1>

TMC's IP PBX Channel

The IP-PBX Channel on TMCnet.com features the latest news and original bylined articles on IP-PBX. To visit TMCnet.com's IP PBX channel, just point your browser to <http://www.tmcnet.com/channels/ip-pbx/>. Sponsored by Sphere Communications Inc.

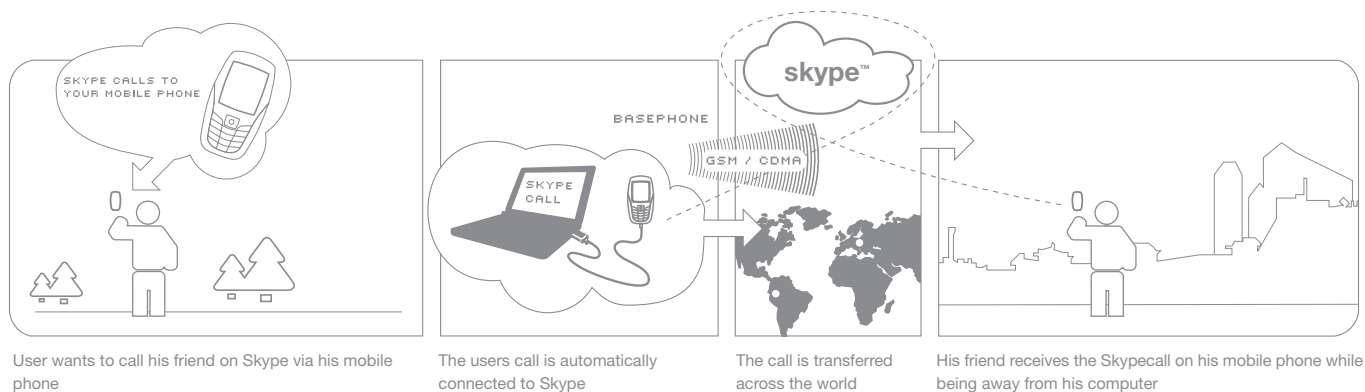
TMC's Triple Play Channel

The Triple Play Channel on TMCnet.com features the latest news, articles, and case studies in the booming Triple Play space. To visit TMCnet.com's voice channel just point your browser to: <http://www.tmcnet.com/channels/triple-play/>. Sponsored by NetCentrex.



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By Rich Tehrani

You Say VoIP, I Say Stolichnaya

I am often asked — and wonder myself — where the eleventh year will take us. There are conflicting accounts of where VoIP is as an industry. On one hand, the term “VoIP” is everywhere from newspaper covers to television ads; on the other, market researchers are intent on telling us no one knows what the term VoIP means. They suggest perhaps VoIP is a type of vodka or one of those inexpensive cars China will be sending over to the U.S. by the boatload.

My take? Who cares? Does everyone need to know what VoIP is? No. Certainly information technology departments and telecom managers need to know, but the general consumer may not need to know right away. Each year, I speak in front of thousands of telecom and datacom professionals in the U.S. and Canada, and they all know what VoIP is.

I was reminded of this controversy recently when a young relative of mine (details omitted to ensure a Happy Thanksgiving dinner), who is about as tech-savvy as a typical grandparent, asked me: “Rich, what is an iPod?” Upon hearing my response, my relative then added, “Oh, I would like one for my next birthday.” The truth is that my relative neither really wanted, nor really needed an iPod. But, because it had become the “in thing,” it made sense to have one.

Before the term “iPod” was born, we called these high-tech music playing devices MP3 players. In fact, MP3 players have been around for as long as VoIP, but until Apple performed its magic on the industry, sales were relatively slow. iPod seems to have replaced the term MP3 player in our vocabulary. If a market research company were to conduct a survey regarding the term MP3, how many iPod owners would not even realize what an MP3 is? After all, they purchased an iPod, not an MP3 player, right?

More specifically, can most people define MP3? I would guess researchers would find the average consumer would think MP3 was a new video game or a late model car from Mazda.

The point is: Do you really need to know how to define MP3 or VoIP to use the service? Probably not.

Consumers are not likely to universally understand the word VoIP any time soon. This is largely due to the division in the market between companies using the term VoIP and those using other terms, such as digi-

tal voice, Internet telephony (thank you), broadband phone service, Internet calling, and PC calling. So, if the term VoIP is not fully understood now, does it really matter? It doesn't seem to. Industry initiatives to educate the market on what the term VoIP means are nice but, in my opinion, really don't do anything to help an industry that is growing at such rapid rates. If anything, it will likely be a waste of money that can be spent on service differentiation.

Let's look at some numbers that support my argument. Skype has over 200 million downloads and, between Vonage and cable companies alone, more than five million people are using [VoIP \(define - news - alert\)](#) service in the U.S.

The last year has just seen such a rapid explosion in VoIP service that I find it tough to imagine higher growth rates in 2006. Yet, if you start to think about it, 2006 may just set new growth records.

CallVantage Reborn?

For some reason, I keep thinking [AT&T \(quote - news - alert\)](#) will be a wildcard in 2006, meaning the company could come out swinging with its CallVantage VoIP service now that the [SBC \(quote - news - alert\)](#) merger is wrapped up. The CallVantage service went dark, for the most part, after the merger was announced and, in my opinion, if the company doesn't spend \$50 million on promoting CallVantage in 2006, the future may be pretty bleak for the company's VoIP offering. Where do I come up with such numbers? This amount will be good enough to compete with current Vonage spend levels and, if you are indeed competing with Vonage, you need to spend on par with them. The whole concept of AT&T being outspent by a new entrant to the telecom market was unfathomable just a few

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Vonage and cable companies
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years ago. VoIP is, indeed, changing telecom. Oh, and the cable companies have free advertising on their own networks and are unlikely to spend equivalent amounts.

What's Next?

I am also frequently asked where I see the next business opportunity. I hear lots of great ideas. A few that I have heard more than once recently are hosted PBX offerings that are free for up to five users and then paid, or mobile devices with Wildfire-type functionality built in. But there are two areas that have been coming up over and over lately... They are SIP and IMS. You may have learned about these topics at past Internet Telephony conferences or in this magazine. Sessions focusing on either topic tend to be standing room only at all TMC events, in fact, and I wouldn't be surprised to see either of these technologies outshine VoIP at some point.

You probably know that, here at TMC, we do our best to be innovators. We launched the first magazine in the call center space in 1982 — about seven years before the term call center was even invented! Furthermore, we launched the first magazine in the VoIP space in 1998.

The SIP Opportunity

In the tradition of being on the leading, sometimes bleeding, edge, we are once again throwing our hat into the ring — in this case, two hats. We are launching, in January of 2006, a publication simply called *SIP Magazine*, which will be devoted exclusively to the concept of session initiation protocol. It will break SIP news and educate decision-makers on the tremendous opportunities the market offers. The target audience for the publication is developers, enterprise IT and telecom departments, and service providers of all kinds.

The IMS Opportunity

Of course, [SIP](#) ([define](#) - [news](#) - [alert](#)) is mature enough that it has spawned new industries of its own. IMS, or IP Multimedia Subsystems, is a market that uses SIP as a protocol to connect wired and wireless networks. Furthermore, it allows rapid provisioning and delivery of new and exciting services. But this market is confusing. There is too much hype and not enough facts, which is exactly why we need *IMS Magazine* to help sort through what is fact and what is fiction.

SOA COA — Service-Oriented Architectures Come of Age

Another major trend in the market is the move towards Service-Oriented Architectures (SOA). Wikipedia describes it as a software architectural concept that defines the use of services to support the requirements of software users. In a SOA environment, nodes on a network make resources available to other participants in the network as independent services that the participants access in a standardized way. Most definitions of SOA identify the use of Web services (i.e., using SOAP or REST) in its implementation. However, one can implement SOA using any service-based technology.

Stellar Keynoters To Focus on Security, Finance

As we were planning our upcoming Internet Telephony conference program, a number of general themes that our industry should be focusing on came to mind. Two of the more prominent themes that emerged were Security and the financial aspects of VoIP.

It is crucial that we as an industry realize how important the issue of security is. For this reason I am happy to announce that Tom Ridge the first Secretary of Homeland Security will deliver a keynote speech at the event.

And as for the financial aspects of VoIP who better than Ron Insana from CNBC to deliver a keynote?

I figured these speakers — one a security expert and another a financial expert are the perfect people to address our audience. If there was one thing I learned when listening to Carly Fiorina speak at the last ITEXPO it is that VoIP is now really mainstream. Carly spoke about VoIP not as an outsider but as someone who seemed to live the industry's challenges on a daily basis. This is probably why I heard so many good things about her speech from show attendees.

The technology, the ability to change markets, and the struggles of VoIP are all things we need to better understand. The different points of view that speakers the caliber of Tom Ridge and Ron Insana will bring to ITEXPO will work wonders to further that understanding.

As telephony becomes an application in an enterprise, IT departments will expect IP PBX vendors to allow open access to their core functions. Sphere Communications, for example, is a company focusing extensively on its ability to allow an enterprise to access call control, stored media, presence, and other features.

MVNOs

Another idea worth exploring is the MVNO opportunity. If you have an affinity group or a unique content offering, you can resell phone service and make good money while doing it. ESPN, Disney, and perhaps eBay are companies we can expect as likely suspects to do well. Imagine if eBay links its Skype acquisition with an MVNO play...

SVNOs

Speaking of MVNOs and VoIP, TelTel announced a new concept called SVNO, which stands for SIP Virtual Network Operator, allowing others to resell their VoIP service.

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Publisher's Outlook

JiTC

I also expect the Just in Time Communications market to do well in 2006. I am fielding a number of calls from companies such as Iotum, Orative, and others touting their growth in the JiTC market and it is pretty exciting. Others, too, play in this space, of course — companies like Avaya, Microsoft, and Vonexus.

What is Next...Really

I routinely get calls from VCs who ask me what the future holds for VoIP and I can be nothing but optimistic. Barring unforeseen geopolitical events, it looks like smooth sailing. Indeed, the biggest threat is from free calling eroding business models faster than we imagine.

In the end, if you are in the telecom business selling minutes, you need to find ways to sell more services customers will be willing to pay for. There are going to be many ideas for new services — some will do exceedingly well, while others won't make it. But the bottom line is that telephony providers have to continue to look for new ways to generate revenue.

Speaking of the future of VoIP, the first show of the new year will be Internet Telephony Conference & EXPO East, which has grown out of its previous venue and is now in the Ft. Lauderdale Convention Center. It will be held from January 24-27, 2006.

If you haven't previously attended ITEXPO conference, you should (and, if you have, you should come back). We have offered a guarantee on our conferences now for four consecutive shows and have had no one take us up on it. As we have been saying for years, TMC conferences are the most educational in the industry. Hopefully, you'll come check the show out for yourself. I look forward to seeing you at the show! IT

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Sprint/Cable Joint Venture: Who Wins? Who Loses?

News Analysis By Robert Liu

NEW YORK — Imagine the day when you can watch live television as it happens ... on your cell phone. Well, that day may not be very far off. In fact, if Gary Forsee has his way with the cable industry, it's closer than you think.

Last month, the president and CEO of Sprint Nextel ([news - alert](#)) finally hammered out a long-awaited deal to partner up with some of the biggest cable operators in the U.S. The newly formed joint venture with Comcast, Time Warner Cable, Cox Communications, and Advance/Newhouse Communications gives the cable operators the wireless leg of a quadruple play offering. Of greater significance, it puts Sprint in the unique position to access to cable's valuable TV content.

"This agreement puts us well on the road to deliver a new Sprint," Forsee said during a press luncheon to detail the joint venture to media and analysts.

But despite his enthusiasm, the new venture has still been characterized as "an important but modest first step" by some industry observers. The biggest obstacle remains the fact that Sprint's new partners will need to re-negotiate with content providers for the wireless rights to carry their TV signals.

"It seems highly uncertain to us that the cable operators will be able to develop a meaningful model relating to delivering content to wireless phones, since Hollywood will be trying to create such businesses directly with wireless operators," Doug Mitchelson, analyst at Deutsche Bank, wrote in a recent report.

In exchange for a \$100-million investment, Sprint will jointly develop new consumer convergence services with the cable partners, which have also

agreed to collectively invest \$100 million. Whether the initial capitalization will actually be used to fund R&D or a bulk of the marketing, billing, and back office expenses remains to be seen, but the hope is it will eventually lead to more than simply "stapling wireless" — as cable CEOs put it — onto a Triple Play offering of video, voice, and data services.

The goal, as Forsee explained, is to introduce consumers to "the third screen" beyond the living room TV and the iridescent glow of a PC monitor. Sprint and cable executives demonstrated the power of convergence firsthand at a press conference last month. Using Sprint's new Power Vision phones, attendees were able to watch a live stream of a Comcast video feed, access phone and e-mail mailboxes, and even remotely program a DVR.

"The real value is creating compelling new services," said John Garcia, Senior Vice President of Strategic Partner Programs at Sprint Nextel.

And not a moment too soon! While Forsee spent the last three years on a plan to reposition Sprint Nextel (shedding its eroding landline business and transforming it into a next-generation wireless services provider), the venture is said to have taken as long as 18 months to iron out. During that time, Verizon made significant progress deploying its IPTV service called FiOS and, more importantly, striking deals with content providers to carry TV programming. In



addition, Verizon ([quote - news - alert](#)) Wireless (the Baby Bell's own venture with Vodafone) launched an EV-DO-based cellular network a year before Sprint and now offers video clips through a partnership with VCAST.

Garcia told *INTERNET TELEPHONY* the new venture not only enables Sprint to catch up to but surpass Verizon. The software to enable the phones to receive the TV signal will be available in six to nine months — right around the time that Verizon and SBC Communications with its Project Lightspeed initiative will roll out IPTV.

Sprint's new joint venture could further deflate the Baby Bells' business.

Cell phones and voice over IP (VoIP) already account for most, if not all, of their landline erosion. Next year, the venture is considering integrated service packages, such as enabling Sprint Nextel customers to make free, unlimited calls to any phone served by the cable partners. That's because VoIP customers will be able to interconnect directly with Sprint's wireless network, bypassing the Public Switched Telephone Network and any related fees, Garcia said.

If Sprint and its new cable partners do succeed, other cable companies that are initially excluded from the venture — namely, Cablevision and Charter Communications — could end up losing out to any Baby Bell's IPTV bundling that encroaches in their footprint. Although Forsee said any cable operators are welcome to join the venture, Sprint's 20-years deal is mutually exclusive for the first three years. Sprint's mobile virtual network operator (MVNO) partners are also placed at a disadvantage because MVNO won't be provisioned to offer the higher capabilities to prospective customers.

On the other hand, IP equipment providers represent one constituency that stands to greatly benefit from the new venture. Cable executives acknowledge that they still need to build out the IP backhaul of their networks to support next-generation platforms. In addition, handset vendors like Motorola could win big as the joint venture helps to establish a set of standards for future deployment. Sprint said the venture has the potential to reach approximately 75 million homes currently passed by the cable companies.

But, if Sprint and the cable industry can succeed in executing on their convergence strategy, the biggest winner will be the consumer. In fact, consumers could even see lower prices for new baskets of services. "Customers still tend to make decisions on wireless and video decisions independently," explained Mitchelson, "and actually gaining customers through this co-marketing initiative without aggressive dis-

counting will be challenging." **IT** Robert Liu is the Executive Editor of TMCnet, the news and information portal of Technology Marketing Corporation, and is a frequent contributor to INTERNET TELEPHONY magazine.

Robert's 15-year communications career

spans from the print world to television and to the Internet. He has covered business and technology writing for Dow Jones, Bloomberg Business News, CNN, and Jupitermedia's internetnews.com. He has served as a producer at CNN, Headline News and A&E Television Networks. You may contact Robert at rlu@tmcnet.com.



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VoIPshield Intros VoIP Vulnerability Assessor

By Johanne Torres

VoIP ([define](#) - [news](#) - [alert](#)) security product provider VoIPshield Systems Inc. ([news](#) - [alert](#)) introduced VoIPaudit, a vulnerability assessment system for VoIP-based services, the company announced at Internet Telephony Conference and EXPO in Los Angeles.

With VoIPaudit in place, VoIP service providers will be able to automatically identify and eliminate possible VoIP-specific attacks before they impact IP telephone services.

"Ours is the first security solution which can not only address the complexity of voice deployments, but secure the VoIP network at the systems level," noted Paul Slaby, co-founder and CEO of VoIPshield Systems. "VoIPaudit is designed to meet the unique requirements of enterprises and service providers deploying VoIP. Voice communications are critical and VoIPaudit offers an unprecedented level of intelligence and security assessment for all the equipment and devices in the VoIP network."

Cinnabar Networks and MKC Networks have been beta testing VoIPaudit. They "have been able to identify security issues and take corrective actions before voice systems are impacted," noted the company's news release.

VoIPaudit scans all VoIP-specific devices and applications, related components such as directory servers, routers, firewalls, and the underlying operating system. It also provides multi-vendor support for VoIP protocols including SIP, H323, Cisco Skinny, Nortel Unistim, and other proprietary protocols.

The system is currently available, starting at US \$10,000.

<http://www.voipshield.com>

Toshiba Announces New Video Communications Solution

By Erik Linask

Video communication brings a new level of productivity to the workplace by allowing remote workers, field staff, and employees in various physical offices to see as well as hear each other as they interact in daily business. What's more, the ability to replace in-person engagements with virtual meetings (e.g., video conferencing) can significantly reduce travel costs as well as mitigate the loss of work time due to transit.

Irvine, CA-based Toshiba America Information Systems Inc., ([quote](#) - [news](#) - [alert](#)) Digital Solutions Division (TAIS-DSD) announced Tuesday its new Video Communications Solution (VCS) for its Strata CIX family of IP business communication systems.

For customers already using Toshiba's VoIP systems, video communication is a natural extension; with its VCS product, Toshiba has endeavored to make IP video as easy to use as traditional telephony, while providing an affordable point of entry into video communications. VCS is an integrated video communications system that delivers video functionality into existing telephony capabilities.

Toshiba has undertaken to fulfill its promise to provide its customers with continued investment protection—the new VCS is not only compatible with Toshiba's Strata CIX IP platform, but also with its older Strata CDX TDM systems, provided they have been upgraded with IP capabilities. VCS will seamlessly add video to telephone conversations using pre-existing voice extensions.

"Toshiba is leveraging its leadership position in broadcasting and video technologies to deliver its telecommunications dealers and SMB users an affordable and easy-to-use video communications solution that matches the quality and reliability of Toshiba's family of Strata CIX business communication systems," said Larry Meyer, vice president, sales and marketing, TAIS DSD.

Toshiba has made every effort to provide today's cost-conscious customer base with an effective, cost-efficient solution. In addition to already existing equipment (i.e., Strata CIX or updated Strata CTX system and a compatible endpoint, such as a Toshiba digital phone, IP phone, or softphone), customers need only update their software and add a USB camera, which can be purchased from any number of retailers at minimal cost.

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Packet8 Enhances Virtual Office for Small Businesses

By Johanne Torres

8x8 Inc., ([news - alert](#)) a VoIP and videophone service provider, announced the release of a set of new call management features for its Packet8 ([news - alert](#)) Virtual Office, the company's VoIP-hosted PBX service for small businesses.

Virtual Office is a VoIP-hosted virtual phone system comprised of auto attendants, conference bridges, extension-to-extension dialing, business class voicemail, and ring groups, in addition to other business-class PBX features found on legacy PBX systems.

The newly released Virtual Office feature enhancements include Extension Manager, One Number Access, Caller ID blocking on/off (*67/*68), Full Time Caller ID Blocking, Call Return (*69), Call Waiting Disable (*70), Full Time Call Waiting Disable, Voicemail Call Return, and Internet Outage Handling.

"Our suite of new features continues to expand while reducing administrator bottlenecks and costs typically associated with traditional business communication systems," said 8x8 director of marketing Dave Immethun.

The Virtual Office system consists of a broadband phone adapter and hands-free business-class telephone priced at \$99.95. Monthly Packet8 Virtual Office costs range from \$9.95-\$39.95 per extension, including a host of advanced PBX functions and business features. A minimum of three unlimited Virtual Office extensions is required for the system to function.

<http://www.8x8.com>

<http://www.packet8.com>



Juniper Secures VoIP with Dynamic Threat Mitigation

By Johanne Torres

While at the [Internet Telephony Conference and EXPO](#) in Los Angeles ([news - alert](#)), Juniper Networks Inc. ([quote - news - alert](#)) announced its Dynamic Threat Mitigation system. The new system enables service providers to offer enterprise and residential customers enhanced security and assurance of network services, including VoIP communications.

The offering bundles the company's routers and intrusion detection and prevention (IDP) systems with its service deployment system (SDX) software to prevent SIP attacks, worms and DoS attacks from impacting SIP-based voice communications and network services.

Juniper Networks' Dynamic Threat Mitigation allows service providers to identify attacks on a per user or per application basis in order to prevent them quickly and effectively using a combination of policy enforcement, dynamic policy control, and intrusion detection and prevention techniques.

"With more services being pushed across the IP network, it is essential to also maintain increased levels of security and control to ensure services delivered to the enterprise or residential customer are not compromised," said Scott Heinlein, senior marketing manager of voice solutions for Juniper Networks. "Juniper's combined use of intrusion detection and prevention with our service deployment system is a natural and very useful progression that provides threat protection to the edge without disrupting the customer's environment or installing new equipment at the customer location."

In a DoS scenario, Juniper's IDP product would detect the offending traffic and notify the IDP Manager. The IDP manager would then generate a request to the company's SDX system, which would call upon the appropriate procedure to control subscriber and traffic flows as defined by the service provider. "The SDX policy server can signal Juniper's routing platform to rate limit or filter the subscriber's traffic to protect assets and help prevent additional subscriber infection," noted the company's news release.

The Juniper Networks Dynamic Threat Mitigation system is currently available and requires the Juniper M-series or E-series router, IDP and SDX products. Existing customers using the M or E-series router, IDP or SDX products can implement the Dynamic Threat Mitigation solution by adding the additional required components.

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Samsung Means Business

SBC Intros IP-Based Surveillance

By Johanne Torres

SBC Communications Inc. ([quote](#) - [news](#) - [alert](#)) introduced its new IP-based system for remote monitoring of business network equipment and other critical info technology infrastructure. The system enables enterprises to monitor equipment at multiple sites from a centralized location, enabling customers to ensure that network issues are rapidly detected and rectified by video at remote locations without the need of regular IT staffing.

"Asset protection is a high priority for many organizations today, as businesses increasingly depend on networks and IT infrastructure to maintain day-to-day operations," said Mark P. Fishler, vice president, SBC Product Management. "At the same time, network and IT equipment is often spread out among multiple locations, and it is often impractical to have on-site staff to monitor and manage equipment at every site. The SBC IP Surveillance solution is designed to provide a highly efficient and cost-effective alternative for these types of businesses."

SBC is the first telecom to deliver an IP-based monitoring system, which bundles NetBotz technology and is currently available today for customers in 19 U.S. states and the District of Columbia. NetBotz Inc. is a Web-based monitoring system provider.

The IP-based monitoring system comprises IP cameras with motion detectors, temperature sensors, power surge detectors, humidity sensors, fluid detectors, particle sensors, door sensors, and other detection equipment based on specialized customer requirements for larger spaces, such as data centers or manufacturing floors, or small spaces, such as equipment closets and server rooms.

Additionally, the system automatically alerts cleared individuals of potential problems through e-mail, SNMP (simple network management protocol), HTTP POST, telephone, or pager notices.

<http://www.sbc.com>

Siemens Intros IPTV Products

By Johanne Torres

Siemens Communications, Inc. ([quote](#) - [news](#) - [alert](#)) introduced its SURPASS Home Entertainment portfolio of broadcast server provider systems on Monday, enabling IPTV services for operators in the U.S. and abroad.

The SURPASS Home Entertainment system comprises centralized back-office management platforms for service providers, branding control, and tools for tailoring the look and feel of all user interfaces, including program guides and Web-based portals.

IPTV services are part of technologies seen in today's smart homes. Siemens has been developing smart home networks that can be managed by users from anywhere and from

any device. The company has teamed up with health care and security industry players in order to video conferencing products and services to connect patients and doctors as well as remote home control and surveillance capabilities. "For example, Siemens' smart home vision includes the use of a mobile device, from a remote location, to activate and set a DVR to record a show or even to turn off a stove or operate other home appliances," noted the company's news release.

User-friendly gateways of IPTV and smart home solutions are key components of the Siemens LifeWorks philosophy, a vision for anytime, anywhere digital media delivery without barriers. "Consumers will want to do everything, everywhere," Coles said. "With IPTV and home networks in place, we're ready for a quantum leap forward."

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NetZero Claims Dial-Up VoIP

By David Sims

Saying "consumers should not have to have broadband Internet access in order to enjoy the price savings and feature content of Internet phone calling," Mark R. Goldston, chairman, CEO and president of United Online has announced NetZero Voice, a Voice-over Internet Protocol phone service that provides local and long distance calling over dial-up and broadband Internet connections.

In time for the heavy Thanksgiving and Christmas calling season, the [NetZero \(news - alert\)](#) Voice Internet phone service works with virtually any ISP service, dial-up or broadband, and allows global dial-up users, including the estimated 45 million U.S. users, Internet phone calling. Usually such services require broadband connections.

The full-featured NetZero Voice does not require an adaptor, a router, or any other high tech hardware and there are no start-up fees, Goldston says: "All you do is download and install the free software in a matter of minutes, plug in a microphone and speakers or a headset, and start making Internet phone calls."

NetZero is offering five calling plans, ranging from free to \$14.95 per month. To sign up for a pay service a U.S. billing address is required. The calling plans available range from NetZero FreeVoice, offering unlimited worldwide computer-to-computer calling between NetZero Voice users, to NetZero Voice Unlimited, where in addition to free unlimited worldwide computer-to-computer calling and a personal phone number, purchasers get unlimited computer-to-phone (landline or cell phone) and phone-to-computer calling to the continental United States, Canada and Puerto Rico and unlimited inbound calls from any landline or mobile phone for \$14.95 per month. International call rates vary.

Unlike most VoIP services, company officials claim, "NetZero Voice is designed to work well over both broadband and dial-up Internet connections." Using proprietary technology, NetZero Voice claims to reduce echo, latency and other problems with VoIP connections.

<http://www.netzero.com>

TMC and VoX Communications Team Up to offer VoIP Services

[VoX Communications, Inc.](#), [eLEC Communications Corp.'s \(news - alert\)](#) wholesale and retail provider of Voice over Internet Protocol (VoIP) services, and [Technology Marketing Corporation \(TMC\(R\)\)](#), [\(news - alert\)](#) one of the world's foremost publishers of magazines and Websites covering communications technology, have teamed up to offer VoIP services to consumers and businesses worldwide.

Under terms of the agreement, TMC has chosen VoX's advanced wholesale VoIP services in order to immediately begin offering private-labeled VoIP services to residential and small-business customers.

TMC's President Rich Tehrani stated, "We're excited about offering VoX's VoIP services under our 'TMC VoIP' brand to give consumers and businesses around the world the highest voice quality service at incredible cost savings." Tehrani has been at the forefront of VoIP technology since its inception, and is regarded as a leading authority on VoIP. He is also a member of eLEC's advisory board for VoX Communications.

Tehrani added, "We selected VoX because of its strong management team and leading-edge VoIP server-cluster technology. Mark Richards and Michael Khalilian are two of the greatest engineering minds in this business and the reason why VoX's services are leading this industry in terms of quality and cost savings. By working with VoX, we can give our customers access to VoX's nationwide VoIP network and flat-rate calling with the latest telephone features - at a fraction of the cost of traditional, landline telephone services. VoIP is the wave of the future, and we're pleased to be working with VoIP experts like VoX Communications to bring this exciting next-generation phone service to our customers."

VoX's President Mark Richards said, "TMC and Rich Tehrani are authorities on the business and technology of VoIP, and we're thrilled to have been selected to enable TMC to become a provider of VoIP services. With TMC's knowledge of the industry and the incredible branding power of TMC's marketing vehicles we are sure TMC VoIP will be a great success. TMC's flagship print magazine INTERNET TELEPHONY reaches more than 200,000 readers worldwide each month, and their website TMCnet receives between 500,000 and a million unique visitors per month. These readers and visitors are looking to learn more about communications and technology and having access to this vast audience TMC is uniquely positioned to sell VoIP services to residential customers and small companies who are anxiously awaiting the right VoIP solution."

"This relationship exemplifies the value of partnerships that bring together the best possible combination of technology and marketing," he added.

<http://www.tmcnet.com/voip-service>



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VoIP 411: INFONXX Offers Call Completion Services

By Johanne Torres

INFONXX ([news - alert](#)) will now connect VoIP callers using its directory assistance services to their requested listings completely over the Internet. The announcement was made at the Internet Telephony Conference & EXPO at the Los Angeles Convention Center.

VoIP call completion eliminates the need for the caller to remember, write down, hang up, and then dial the requested number. Instead, the caller remains on the line as the directory assistance operator connects the call to the requested party automatically. The call passes from the carrier's VoIP network to INFONXX's IP architecture, where an operator locates the listing, before passing the call back into the carrier's network.

"It is now possible to connect VoIP callers to their desired listing from end-to-end, off route, without ever passing through the legacy telephone network—and that provides our carrier customers with a huge technological advantage and cost savings," said Michael Bates, INFONXX Vice President of Global Technology. "VoIP call completion provides these forward-thinking carriers with a customer-focused solution that further enhances the caller experience."

INFONXX's 411 Plus offering comprises "very cool" tools such as Text Direct & SMS Directory Assistance and Speech Recognition 411. With Text Direct & SMS Directory Assistance, a requested name, phone number, and address can be sent directly to a mobile caller's handheld device. Additionally, the company is working on making maps, driving directions, and other graphical information available for forwarding directly to the handset, giving even more freedom and control to the wireless user.

<http://www.infonxx.com>

VoIP Connecting Hurricane Stricken Gulf Area

By Johanne Torres

Internet phone service providers Net2Phone ([news - alert](#)) and CMA Cablevision ([news - alert](#)) announced a partnership in order to provide free broadband telephony service to displaced families in the city of Belle Chasse, Louisiana, stricken by both Hurricanes Katrina and Rita.

Gulf Coast and Plaquemines Parish's residents are currently unable to communicate due to the heavy damages sustained by the Public Switched Telephone Network (PSTN). "After post-hurricane cable plant inspections revealed an area of CMA's cable system was intact and operating, CMA representatives contacted Plaquemines Parish officials," noted the companies' news communiqué. This is why CMA and Net2Phone decided to install VoiceLine VoIP telephone lines in the Belle Chasse Community Center.

"Cable television has always been about the communities it serves," John Helmers, CMA General Manager said. "Being able to help contribute in a small way to people resuming their lives is helping all of us look toward the future and our continued recovery from this disaster."

"The whole world has seen the devastation that Katrina has caused," said Liore Alroy, CEO of Net2Phone. "As individuals, we look for ways we can have an impact in helping the recovery. As a corporation, Net2Phone is grateful to have a partner and the resources that allowed us to contribute this valuable service."

VoIP-based telecommunications have been very helpful during natural disaster relief efforts. Indeed, VoIP industry leaders made news when they provided their services to connect families with their relatives during and after Hurricane Emily and Katrina this hurricane season.

3Com Corp. donated VoIP equipment to emergency and government organizations to support their communications needs in the aftermath of Hurricane Katrina. Each kit included a VoIP phone system with voicemail and auto attendant, which enabled DHH providing all callers with recorded info on recovery efforts and to the ability to route calls to the appropriate emergency personnel.

VoIP telephone service provider Proactive Communications Inc. of Texas announced last month it would provide PingTone, a VoIP over ground-based satellite system, to first responders working in the Hurricane Katrina relief effort. Proactive is a government contractor with experience deploying portable satellite-based data and telephone networks to most remote, rural regions of the world.

"High quality communications are a must have in a disaster relief effort," noted Hector Salazar, CEO of Proactive Communications. "And just when those affected need telephone and data lines most, they're down or destroyed."

<http://www.net2phone.com>

<http://www.cmaaccess.com>

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VoIP Providers Win Major Victory

By Rich Tehrani

The FCC may have been a bit too hasty in requiring VoIP ([define](#) - [news](#) - [alert](#)) providers a short window to provide nationwide E-911 compliance. The original deadline was in August of this year. Not only did the FCC have to subsequently push back the deadline for compliance, but the Senate Commerce Committee pushed back the deadline for full 911 compliance for up to four years. The deadline will be moved in one year increments based on waivers granted by the FCC. These waivers will be granted if compliance is not technically or operationally feasible at the time.

The legislation, S. 1063, waives the current November deadline and requires revised FCC rules within 120 days from the date the bill is enacted. Providers still have to warn subscribers that 911 and E-911 service is unavailable and receive confirmation from subscribers that this message is understood. The bill goes on to waive E-911 rules for up to four years if the service provider meets a specific set of tests.

One of the more important parts of this bill is the requirement that our public safety 911 system be modernized. The bill also treats VoIP providers like wireless and wireline carriers in another vital area: public safety officials are now immune from lawsuits when they accept VoIP calls.

The bill also does wonders for providers who were afraid they would have to cut off customers. As long as these customers subscribe before the end of 2005 and acknowledge certain 911 limitations, they cannot be disconnected.

<http://www.fcc.gov/911/enhanced>



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EarthLink, Ambient, Level3 Deploy trueVoice VoIP

By Johanne Torres

Broadband over Power Lines (BPL) provider Ambient Corp. ([news](#) - [alert](#)) announced that it will deploy EarthLink's ([news](#) - [alert](#)) new VoIP-based calling service, trueVoice, to its Manhattan, NY pilot. As a third partner, Level3 Communications ([news](#) - [alert](#)) announced it joined the duo to deliver the voice communications service over Ambient's BPL network.

EarthLink's NYC pilot, activated earlier this year, is currently providing broadband Internet services to condominium owners of a 16 floor, 213-unit building.

"Making phone calls over the Internet is revolutionizing the way consumers use their communication tools and changing the way our customers view EarthLink," said Steve Howe, vice president of voice services at EarthLink. "By incorporating trueVoice into this BPL pilot, we are further demonstrating our commitment to advancing new technologies that can serve as competitive broadband alternatives into the home."

Even though EarthLink is still a few months away from officially launching this VoIP offering, the bulk of the Internet service provider's telephony portfolio has already become apparent.

EarthLink's trueVoice is powered by Ensium's telephone provisioning software built on top of Sonus Networks' Voice over Broadband platform, Acme Packet's Net-Net session border controllers, and Level3 for connectivity and E911 services. The service would complement EarthLink's line-powered voice service, which the ISP plans to trial in San Francisco, Seattle, and Dallas through a partnership with Covad Communications, and its Vling softphone, which is powered by Pingtel and is currently in the beta-testing phase.

<http://www.ambientcorp.com>

<http://www.earthlink.com/voice/truevoice>

<http://www.level3.com>

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Spano Proposes Law to Counter Risks of Wireless Networks

Wireless Internet connections are becoming more popular as “hot spots” are popping up at Starbucks and countless cafes, businesses, and even parks, but many users don’t realize the risks they take every time they sign on. Even shopping at a retail store that uses a wireless network can put your personal information at risk.

That’s why Westchester County Executive Andy Spano is proposing a new law—the first of its kind in the U.S.—to protect the public from crimes such as identity theft and other consumer fraud. The law, which was recently submitted to the Board of Legislators, would require Internet cafes as well as commercial businesses that use wireless networks to take basic security precautions to protect private customer information from potential data thieves and hackers.

“People don’t realize how easily their personal information can be stolen. All it takes is one unsecured wireless network,” Spano said. “Your credit card number, social security number, bank account information—it’s all vulnerable if a business that collects that information hasn’t taken the proper steps to protect it. Somebody parked in the street or sitting in a neighboring building could hack into the network and steal your most confidential data.”

To illustrate how easy it is to get into an unprotected network, Spano and Norman Jacknis, the county’s chief information officer, took a laptop computer equipped with easily available software and drove around downtown White Plains today in search of vulnerable networks. Last week, a team from the Department of Information Technology performed the same survey and came across 248 wireless hot spots in less than a half an hour of driving. Out of those, 120 lacked any visible security at all. Many users marked themselves as easy targets by failing to change the network’s default name from “default” to something unique.

Various studies have estimated that about one-third of businesses using this hot new technology commonly known as “Wi-Fi” in the U.S. remain unprotected from any type of attack.

“Identity and data theft is clearly a local threat here in Westchester,” Spano said. “We need to take steps to address this problem.”

Because of the very nature of wireless communications—that they occur in the open air and can be easily intercepted—Wi-Fi networks have always been more vulnerable to security problems than more traditional wired forms of networking. Still, Wi-Fi’s low cost and flexibility continue to drive its growth throughout the country.

“Wi-Fi is a wonderful technology if used wisely,” said Jacknis. “Protecting your computer involves little to no cost. Setting up a Wi-Fi network with basic security takes just a few minutes and there are available free or low-cost personal firewalls to stop intruders from gaining access to your personal computer.”

The proposed law would address many of these risks. The way the law reads, all commercial businesses that use wireless networks and maintain personal information would be required to have “secure networks that protect the public from potential identity theft and other potential threats such as computer viruses and data corruption.” They would also have to file a note of compliance with the county.

Businesses that offer public Internet access would be required to post a sign stating that the network has been secured with firewall protection and stressing the need to use discretion.

As part of the proposed legislation, the County will provide ongoing public education outlining steps that residents should take to help protect themselves from the threat of identity theft through the use of computers and other electronic devices. This effort will track the latest technological advances in order to provide up-to-date and meaningful assistance to all county residents.

<http://www.westchestergov.com/>



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MIT Wireless Network Tracks Info on Users

In another time and place, college students wondering whether the campus cafe has any free seats or if their favorite corner of the library is occupied would have to risk hoofing it over there. But for today's student at the Massachusetts Institute of Technology, that kind of information is all just a click away.

MIT's newly upgraded wireless network—extended in October to cover the entire school—doesn't merely get you online in study halls, stairwells, or any other spot on the 9.4 million square foot campus. It also provides information on exactly how many people are logged on at any given location at any given time.

It even reveals a user's identity if the individual has opted to make that data public.

MIT researchers did this by developing electronic maps that track across campus, day and night, the devices people use to connect to the network, whether they're laptops, wireless PDAs, or even WiFi equipped cell phones.



Red splotches on one map show the highest concentration of wireless users on campus. On another map, yellow dots with names written above them identify individual users, who pop up in different places depending where they're logged in.

"With these maps, you can see down to the room on campus how many people are logged on," said Carlo Ratti, director of the school's SENSEable City Laboratory, which created the maps. "You can even watch someone go from room to room if they have a handheld device that's connected."

Researchers use log files from the university's Internet service provider to construct the maps. The files indicate the number of users connected to each of MIT's

more than 2,800 access points. The map that can pinpoint locations in rooms is 3-D, so researchers can even distinguish connectivity in multistoried buildings.

"Laptops and WiFi are creating a revolutionary change in the way people work," Ratti said. The maps aim to "visualize these changes by monitoring the traffic on the wireless network and showing how people move around campus."

Researchers say this data can be used to better understand how wireless technology is changing campus life, and what that means for planning spaces and administering services.

"Many cities, including Philadelphia, are planning to go wireless. Something like our study will help them understand usage patterns and where best to invest," said researcher Andres Sevtsuk.

Sevtsuk likened the mapping project to a real-time census. "Instead of waiting every year or every 10 years for data, you have new information every 15 minutes or so about the population of the campus," he said.

<http://www.mit.edu>

Merriam-Webster Adds 'Wi-Fi®' to Newest Edition of Prestigious Collegiate® Dictionary

Wi-Fi® is everywhere these days, and now, you can even find it in Merriam-Webster. The dictionary is one more location to add to the millions—airports, coffee shops, schools, offices, and homes—where Wi-Fi can already be found. The definition of Wi-Fi is included in the new 2005 Copyright of Merriam-Webster's Collegiate® Dictionary, Eleventh Edition.

"You know you've truly made it when you're in Webster's dictionary," said Frank Hanzlik, Managing Director of the Wi-Fi Alliance. "Wi-Fi is not only a way of life for thousands and thousands but also is now a bona fide part of the English language."

Webster's defines "Wi-Fi" as follows: "Wi-Fi (certification mark)—used to certify the interoperability of wireless computer networking devices."

"We couldn't have hoped for a better way to highlight the importance of interoperability, and this also reinforces our message that 'it's not Wi-Fi unless it's Wi-Fi CERTIFIED™,'" Hanzlik said. "Webster's is a highly respected source for word definitions, so appearing in the dictionary lends real credibility to everything the Wi-Fi Alliance has been working toward."

"When you look at how long it took some of the new entries to make it into the dictionary, we feel honored to have been included so soon after Wi-Fi first came on the scene," Hanzlik said. "Webster's dates the newly included 'chick flick' back to 1985, but it only took 'Wi-Fi' a few years of use to make it, which is a testament to the fast-growing popularity of this technology."

<http://www.webster.com>

Wi-Fi TV Virtual Living Room™ Allows Video Phone Calls With File Sharing and Text Messaging

The Wi-Fi TV Virtual Living Room™ is a new kind of interactive chat being introduced in a Beta version for members of the [Wi-Fi TV Inc.](#) Web site. ([news](#) - [alert](#)) Live video, voice, and text chat and sharing of documents with invited guests from anywhere in the world can occur when a Wi-Fi TV member opens the doors to their own private Wi-Fi TV Virtual Living Room™.

Every Wi-Fi TV member will have a unique address for their own Virtual Living Room™. When a Wi-Fi TV member opens their Virtual Living Room there is a live interactive box which is webcast. Other Wi-Fi TV members can enter the room by invitation only. Once in the room, participants can see and hear each other, can send text messages, and can share and review documents in a similar manner to two people meeting in person. The participants can share and discuss information as if they had a desk, computer, and video presentation screen all at their fingertips.

"Wi-Fi TV Inc. is making the world smaller by bringing the world to the desktop. We provide our members with links to over 200 live TV channels from 50 countries included in the 99 cent a month subscription fee. We provide our members with local and long-distance phone calls all included in the 99 cent a month fee. Now, for a reasonable premium charge, we will offer our members the chance to see and interact with each other live from anywhere in the world," said Rachelle Kuzma, a spokesperson for Wi-Fi TV Inc.

"We are building the Wi-Fi TV community one piece at a time, bringing more value to our members who wish to take the world with them on their laptop computer and keep in live interactive content through phone, chat and Virtual Living Room™ meetings," Kuzma added.

The Beta version will be free to members. The full launch version, when introduced in several weeks, will add additional functionality and will be offered at a premium charge to be determined.

Wi-Fi TV has already made PC-to-phone, PC-to-cellular, and PC-to-PC phone calls available to members at no additional charge. It is adding messaging and chat boards to all the country and category pages on its Web site with suggested topics of conversation. The Wi-Fi TV Virtual Living Room combines elements of the Voice over IP phone service with the video and interactivity which are hallmarks of the web site.

<http://www.wi-fitv.com>

Performance Technologies Enhances WAN Protocol Support in its NexusWare™ Linux-based Software Suite

Performance Technologies, ([news](#) - [alert](#)) a leading developer of systems, platforms, components and software, announced NexusWare™ WAN, an enhanced offering of its WAN communications protocol environment. NexusWare WAN offers installable protocol support coupled with a flexible development environment for the company's popular packet-based network access products.

By offering added WAN protocol development flexibility and leveraging the company's Linux-based NexusWare Core development, integration and management environment, developers can add a wide range of protocol packages to NexusWare Core. This allows for the creation of powerful and flexible sub-systems that address multiple communications applications.

"Traditionally our WAN protocols have been sold as individual software packages. While we will continue to offer this format, we will also have NexusWare WAN, which furthers our commitment to provide tightly integrated, installable software packages for NexusWare Core," said Steve Wigent, product manager for Performance Technologies. "This approach to software allows developers to easily add and remove software packages to NexusWare Core as their requirements change, and represents a significant reduction in development efforts, system integration costs and time-to-market."

NexusWare WAN provides WAN connectivity, multi-protocol processing, and a well-defined, easy-to-use application programming interface (API) that allows interoperability with WAN stacks such as HDLC, X.25 and Frame Relay. Performance Technologies' WAN protocols, powerful integrated development environment and high performance CompactPCI® controllers provide a complete WAN development solution for OEMs.

NexusWare WAN marks the latest addition to the growing NexusWare Linux-based software suite. The base product, NexusWare Core, enables users of Performance Technologies' Advanced Managed Platforms™ and stand-alone embedded hardware to rapidly develop and deploy value-added capabilities with their solutions. Other products in this software line include NexusWare C7, an MTP-2 starting point for SS7 development, NexusWare ISM, programming and control tools for intelligent shelf management, and NexusWare MG, protocols and tools for media gateway control, IP call control and PSTN signaling.

<http://www.pt.com>

Broadcom's Software Now Featured in WiFi Routers, Notebooks and Printers

By Johanne Torres

Semiconductor provider [Broadcom Corporation](#) ([news](#) - [alert](#)) announced that its SecureEasySetup software will now be featured in Brother, Gateway, HP, and Linksys WiFi products, enabling consumers to install and secure a wireless network with the push of a button and the click of a mouse.

"SecureEasySetup software is the first WiFi ease-of-use initiative to garner support from leading vendors across multiple segments, including notebooks, printers and networking equipment," noted David Cohen, senior product line manager for Broadcom's Home & Wireless Networking Business Unit. "By delivering wireless solutions that are truly easy-to-use, Broadcom is enabling equipment manufacturers to improve customer satisfaction and to facilitate the integration of WiFi technology in many different types of high volume consumer products."

Broadcom's SecureEasySetup software automates the configuration of new wireless networks and adds devices to existing networks. A user can simply push the SecureEasySetup button on their wireless router and then on each client device they want to attach on the network. The software establishes a private connection between the devices and automatically configures the network's Service Set Identifier (SSID) and WPA pass phrases (also known as keys).

"Simplifying wireless networking setup in the home with SecureEasySetup software and extending it beyond PCs enables consumers to easily and quickly connect and share a variety of WiFi peripherals and consumer electronics," said Gregg Patterson, vice president of solutions and technology for the consumer imaging and printing organization at HP.

<http://www.broadcom.com>

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Intervoice's Omvia Media Server Passes VoiceXML 2.0 Tests

By Robert Liu

Intervoice ([news](#) - [alert](#)) announced its Omvia Media Server, a component of its Omvia Solutions Framework, has passed all the scrutiny needed to achieve VoiceXML 2.0 Certification.

To get there, Intervoice said Omvia Media Server passed more than 580 independently tested assertions as part of VoiceXML Forum's VoiceXML 2.0 test suite. With its certification program diploma in hand, Intervoice can now work with its own systems integrators and resellers to get Omvia Media Server to SMBs and enterprises interested in creating, deploying and hosting standards-based speech-enabled services.

The Omvia Media Server is a modular and scalable platform that integrates Web- and enterprise-based data systems into speech-enabled automated solutions and allows enterprises to develop and deploy voice applications efficiently. The Omvia Media Server provides a standard Media Resource Control Protocol (MRCP) interface for Automatic Speech Recognition (ASR) and Text To Speech (TTS) integration.

In a press release, Intervoice said it believes the Omvia Media Server is the first VoiceXML browser to achieve VoiceXML 2.0 certification using MRCP for ASR and TTS integration. The Omvia Media Server is available in both TDM and VoIP configurations and also supports the less popular Microsoft SALT specification.

"Intervoice maintains a strong commitment to compliance with open standards like VoiceXML 2.0 because we recognize that customers and partners need to protect their communications development investments as their IT infrastructures grow and evolve," said Mike Polcyn, CTO and Senior Vice President of Research and Development at Intervoice.

VoiceXML 2.0 Certification means Omvia Media Server is compatible with the VoiceXML standard as defined by the World Wide Web Consortium (W3C). The certification program is managed and developed by VoiceXML Forum members and utilizes independent third-party test laboratories to ensure impartiality.

<http://www.intervoice.com>

Brooktrout Expands Leadership in Voice Platforms with New Media Processing Board and Software

Brooktrout Technology, Inc., ([news](#) - [alert](#)) a leading supplier of media processing and call control products, announced new products that can enable OEM and ISV developers to enhance their voice solutions without costly development.

Brooktrout's TR1000™ family now includes new quad-density T1/E1 versions, along with existing analog, ISDN basic rate interface (BRI), and single/dual T1/E1 versions that allow application vendors to streamline development, deploy broadly, and support their products more cost-effectively than with competing platforms.

Software for the TR1000 has been enhanced with new features for call control and voice recording that provide broader integration with call centers and hosted services. The new quad span TR1000 board is the industry's first telephony platform to meet the Restriction of Hazardous Substances (RoHS) directive.

With the addition of this new product, Brooktrout delivers a comprehensive voice processing product line that scales from 2 to 120 channels per board, and up to 480 channels per system for use with Windows and Unix/Linux operating systems. The TR1000 family is designed around a unified API and Windows certified drivers that allow developers to expand their systems with the new quad span board without needing to make any software changes.

Competing products require driver changes when upgrading or multiple boards to achieve the same port density that Brooktrout offers with the TR1000. In addition, Brooktrout has enhanced its Software Development Kit (SDK) for all TR1000 products with version 4.1 that adds new features for PBX integration with Q.SIG, voice recording with channel summation, and voice compression/decompression with GSM and linear CODECs.

"Application developers want to reduce downtime and ensure their systems meet regulatory requirements. Brooktrout recognizes the challenges that companies face as they deploy new systems. By extending our enterprise family products, upgrading our software and leading the effort to quickly meet the RoHS directives we are offering our customers a complete range of full-featured TDM platforms," said Peter Vescuso, vice president of market development for Brooktrout Technology.

<http://www.brooktrout.com>

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SIP-Serv from FEC Provides Plug & Play Solution for IP Telephony with Outlook Integration

SIP-Serv is the new software-only telephone system from Funkwerk Enterprise Communications that can be installed on a standard PC. Using TCP/IP and ISDN connections, SIP-Serv offers seamless integration of VoIP technology, providing an ideal plug and play telephone system for small to medium sized businesses.

SIP-Serv ([define](#) - [news](#) - [alert](#)) provides users with the same functions available on conventional telephone systems including a 'busy' display, forwarding, and an easy-to-use voice mail system. Conference calls are integrated and can be used in combination with FEC's SIP-ServClient, which is included in the package. With seamless integration into Microsoft Outlook each call is automatically displayed on the screen with the caller's entry and customer data.

The software comes with five client licenses, one of which can act as a switchboard, and additional licenses can be purchased to support up to 500 users. SIP-Serv can connect to the phone network via VoIP providers, such as Call UK and Sipgate, but can also connect users directly to the telephone network using one or more installed ISDN cards, with up to 60 channels.

In the local network, communication is based entirely on the SIP standard, allowing every SIP-compatible end-device to be connected to the FEC SIP-Serv. Users can choose between pure IP phones, such as the elmeg IP290 other SIP-enabled end-devices, or the PC-based SIP-ServClient.

With Outlook as the central GUI, the system is easy to grasp and, as Outlook contact details are maintained, there is no need for additional phone books. The ability for SIP-ServClient to transform Outlook's integrated voice mail system to combine messages, emails and telephony into a single user environment is an added benefit.

For large-scale installations, SIP-Serv can be clustered with other SIP-Serv or ICT systems with multilingual user interfaces and detailed help facilities for simple, quick configuration. SIP-Serv systems in branch offices can be interconnected allowing phone calls between these locations to be routed automatically and free of charge across the existing IP infrastructure. Using encryption technology, the IP phone systems are protected against eavesdropping, and virtual private networks (VPN) are switched for data transmission between the various locations.

A suitably configured PC with Windows 2000 or Windows XP Professional is needed to install the FEC SIP-Serv software-based telephone system.

"SIP-Serv is an exciting new addition to the elmeg range of VoIP products that already includes hardware VoIP PBXs and feature-rich SIP phones," says Richard Jones, managing director of FEC distributor nXgear. "VoIP ([define](#) - [news](#) - [alert](#)) offers more flexible and lower cost working for businesses new opportunities for the channel. But this also puts pressure on traditional PBX dealers to improve their IT skills to support the rise in IP based telecom products."

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Voxeo Launches VoipCenter 6.0 SIP Application, SIP Media and SIP Fusion Products for Voice Over IP Application Delivery

Voxeo Corporation ([news](#) - [alert](#)) announced its VoipCenter 6.0 SIP platform, delivering standards-based Voice over IP (VoIP) application creation, integration, and deployment capabilities to any enterprise or service provider.

Unlike VoIP application platforms that combine open SIP telephony with proprietary application development interfaces, the VoipCenter SIP platform enables rapid, open SIP application delivery via the Call Control XML (CCXML) and VoiceXML standards.

"VoiceXML and CCXML come from the World Wide Web Consortium (W3C), the same standards body that delivered HTTP and HTML, perhaps the two most successful application development standards ever created," said Jonathan Taylor, President and CEO of Voxeo. "To date, Voxeo's CCXML and VoiceXML engines have been used by more than 14,000 companies to deliver over 25,000 feature-rich, highly-reliable, future-proof SIP-based telephony applications."

The VoipCenter SIP Application Server software is built on Voxeo's proven Call Control XML (CCXML) engine and has routed over one billion calls since its first production deployment in early 2002. CCXML lets any company create intelligent, dynamic SIP applications that can screen, route, transfer, and initiate SIP VOIP calls — including SIP redirect, proxy, and Back-to-Back User Agent (B2BUA) applications. The VoipCenter SIP Application Server also supports least-cost and multi-network call routing with the ENUM route directory standard.

The VoipCenter SIP Media Server software delivers a resume even more impressive than that of its SIP call control sibling. Built on Voxeo's carrier-grade Host Media Processing (HMP) engine, the VoipCenter SIP Media Server has played, recorded, and conferenced its way through over three trillion VOIP packets since 1999.

The VoipCenter SIP Media Server is driven by Voxeo's certified-compliant VoiceXML IVR and speech media application engine. VoiceXML delivers features to play prompts and speak synthesized text, record audio, and receive input via touch-tone entry or comfortable speech recognition. Voxeo extensions add everything developers need to record calls and to connect callers in high-quality multi-party audio conferences.

The VoipCenter SIP Media Server also bundles highly intelligent English language speech recognition and speech synthesis engines at no additional charge, and supports a wide variety of additional speech engines via support for the IETF Media Resource Control Protocol (MRCP) standard. In fact, the VoipCenter Media Server is itself a powerful MRCP compliant media server and media proxy.

Voxeo's SIP Fusion Server is the first turnkey telephony platform to offer VoiceXML IVR, CCXML call control, speech recognition, speech synthesis, call conferencing, call recording and an optional built-in PSTN-to-SIP VOIP gateway in one integrated, rack-mount device. The VoipCenter Fusion Server integrates with both existing and new PSTN, PBX, and VOIP deployments, and is available in both 120/240 volt AC or 48 volt DC telecom power models.

VoipCenter SIP products are available immediately from Voxeo as either a hosted service, software install, or turnkey server. VoipCenter SIP is compatible with a wide variety of SIP vendors, devices and services, including Avaya, BroadVoice, Cisco/Linksys, Delta3, Digium/Asterisk, Global Crossing, Level(3), Lucent, Nortel, SIP Express Router (SER), Sipura, Sonus, Televolution and more. <http://www.voxeo.com>

Global Crossing Now Avaya SIP-Compliant

By David Sims

Global Crossing ([quote](#) - [news](#) - [alert](#)) announced that its enterprise Voice over Internet Protocol portfolio is fully compliant with Avaya's Session Initiation Protocol (SIP) telephony products.

SIP is an open signaling standard that allows carrier and enterprise voice equipment to interoperate over an IP network via SIP trunks. SIP trunk services are an enterprise networking category that uses new efficiencies in network design and capabilities via SIP-enabled applications.

"We're proud to be the first global service provider to receive SIP interoperability compliance certification from Avaya," said Anthony Christie, Global Crossing's chief marketing officer.

Global Crossing is a member of the Avaya DeveloperConnection Program, which develops, markets and sells third-party products that interoperate with Avaya technology.

Eric Rossman, vice president, developer relations and technical alliances, Avaya called the announcement "a big step towards establishing SIP as an open standard for call signaling across both enterprise and service provider networks."

Global Crossing currently runs more than two billion minutes per month of VoIP traffic over its private, global backbone. Avaya's Converged Communications Server 3.0 and its SIP Enablement Services module works with Communication Manager software, the company's flagship IP telephony software, supported by Avaya media servers, gateways and SIP telephones.

<http://www.globalcrossing.com>



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FrontRange Solutions Acquired by Private Equity Fund Francisco Partners

FrontRange Solutions Inc. ([quote](#) - [news](#) - [alert](#)) issued a rather surprising announcement that Francisco Partners, self-described as "one of the world's largest technology-focused private equity funds," has entered an agreement to acquire all of FrontRange's outstanding shares in a transaction valued at approximately \$200M.

FrontRange CEO Michael McCloskey initiated the announcement by stating that "FrontRange Solutions has out-performed the industry for the last two years, growing at a rate that far exceeds our competition. During this period, we have invested heavily in both R&D and sales expansion, while continuing to increase our profitability. With several new products coming to market, we are well-positioned for continued growth, and plan to increase our market share."

CEO Michael McCloskey is noted in the industry for taking several high tech firms into their IPOs (Kana Communications, Genesys Telecom and Network Appliance), which makes this privatization move somewhat (though not altogether) mysterious.

Neil Garfinkel, a Managing Director of Francisco Partners, added, "We are pleased to become an investor in FrontRange and look forward to working with Michael and the rest of the management team in the coming years. FrontRange has a strong market position, great product franchises that are being improved by advanced technology, over 140,000 customers, and a global partner channel that provides broad market coverage. We believe the company is poised to deliver significant growth over the next several years."

McCloskey also stated, "This investment by Francisco Partners will enable FrontRange Solutions to continue to pursue our aggressive growth strategy. We are committed to providing our customers and partners with market leading products and superior service and support. This investment further strengthens that commitment."

Ease of integration is another key to success in CRM for mid-tier companies. Any CRM solutions provider that can provide a full-featured and customizable product that is easily integrated and administered is likely to score a big hit. Clearly, FrontRange is planning on being that company. Additionally, they have thus far demonstrated that they understand the value of being a b-to-b solutions provider that understands the vertical markets it serves, to the point of planning vertical-market-specific versions of some of its products.

Obviously, though, CRM is not the only enterprise business category FrontRange operates in. The company's product families, designed specifically for small-to-medium-sized enterprises and distributed enterprise organizations, include its GoldMine solution for business relationship management, contact management and sales force automation; its IT Service Management with HEAT and ITIL standards-based modules for service management; Communication Management including IP Contact Center for reduced telephony costs and integrated contact center operations; and Infrastructure Management, which provides the ability to optimize the full lifecycle of a company's assets.

<http://www.frontrange.com>

Salesforce.com Charges into Call Center Space

By Robert Liu

Salesforce.com ([news](#) - [alert](#)) has charged into the call center marketplace with the release of its newest version of its Supportforce product, which has been re-branded Salesforce Services & Support, as well as a handful of new strategic alliances with industry heavyweights, like Genesys Telecommunications Laboratories and Sitel.

At a marketing event in Midtown Manhattan, the on-demand customer relationship management (CRM) innovator announced that its customer service and support offerings, Salesforce Service & Support 2.0 and AppExchange Service & Support 1.0, represent two components of its four-pronged strategy.

Service & Support represents the successor to Supportforce, which was launched with an equal amount of fanfare a year ago. Since then, Salesforce.com has pushed the call center technology into the hands of 1,700 customers. Benioff said its solution has managed approximately 12 million customer interaction cases.

But while the solution has been on the market for some time, there are signs Supportforce has failed to gain traction in the all-important large-scale segment of the market, even though the company has been making inroads with enterprise-wide deployments of its sales force automation and opportunity management platforms.

In order to help secure some footing in the call center market, Salesforce.com has not only enlisted Genesys to help deploy voice-enabled inbound call center solutions, but also has hired Bonnie Crater from the Alcatel company in February 2005 to assume the newly created position of vice president and general manager, Salesforce Service & Support. According to the eight-month-old Salesforce.com executive, the company's strategy to approach the contact center market remains the same.

"We're leveraging partners," Crater said.

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FTD Florists Get Avaya IP Telephony Contact Center

By Johanne Torres

Business communications applications provider [Avaya Inc. \(quote - news - alert\)](#) it was chosen by FTD florists to integrate Internet telephony into its contact center operations.

"We needed a communications solution that delivered on two important business requirements," said Larry Johnson, FTD technology executive vice president. "Since a significant segment of our consumer business is based on phone and Internet sales, reliability was a must. We were also seeking new efficiencies to improve our bottom line, including greater flexibility in meeting the seasonal demands of this business. Avaya delivered on both those fronts with a new converged voice and data network and IP contact center applications."

The new agreement calls for Avaya to provide its Customer Interaction Suite of contact center applications powered by the company's Communication Manager IP telephony software. These two components will enable FTD's contact center support up to 500 agents who serve as customer service reps answering the phone and receiving orders from customers across the U.S. The new system will also allow Avaya media servers and gateways host the apps at the new contact center and support FTD's business continuity plans for its operations.

Avaya's Global Services will monitor FTD's Arkansas operation around the clock using Avaya Remote Managed Services for IP telephony. This automated service operates behind the scenes to monitor and manage the Avaya system and the Extreme Networks' data infrastructure.

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Mercom Systems Introduces Audiolog 3.3, its Most Versatile, Feature-Rich Recording Solution

[Mercom Systems \(news - alert\)](#)

announced its Audiolog Call Recording Server Release 3.3. Version 3.3 emphasizes security and reporting enhancements that lead the industry. With this release, Mercom continues to secure customer investments in call recording and quality monitoring solutions by sustaining upward compatibility and seamless scalability since its platform was first offered in 1996. Mercom's stable-platform development philosophy guarantees customers a versatile, fully featured audio recording system with low total cost of ownership.

New Operating System Support

[Audiolog 3.3 \(news - alert\)](#) which has been enhanced to run on Windows XP Professional SP2 and 2003 Server operating systems, leverages inherent Windows security and Windows Groups in login. Mercom is committed to a straightforward upgrade path for its customers. With version 3.3, Audiolog continues to be cross-compatible regardless of application and customers benefit from a seamless upgrade on an established platform.

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Even in non-CTI environments, true searches by agent ID can be performed, and free-seating for any size enterprise is simplified and manageable. Selective archiving and deletion can be based upon agent name. For added security, recordings can be automatically deleted via Department of Defense-compliant standards.

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"In today's world of HIPAA and related security and privacy concerns, we believe one of the strongest features of Audiolog 3.3 is the ability to positively guard access to sensitive data and to document a chain of custody for every call recording," said Bob Jagendorf, Audiolog Sales & Marketing Director, Americas & Europe. "This access tracking applies to everyone who touches the call, not simply the last person in the line, creating a valuable and reliable record that can then be printed or otherwise used to document the history of the call recording."

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T-Systems Selects Sonus Networks for Worldwide Expansion of Business Voip Network



T-Systems, ([news - alert](#)) the business customer division of the Deutsche Telekom Group and one of Europe's leading providers of information and communications technology (ICT), and Sonus Networks, ([news - alert](#)) a leading supplier of service provider Voice over IP (VoIP) infrastructure solutions, announced that T-Systems has awarded Sonus Networks a multi-million dollar contract for the worldwide expansion of its business VoIP network. The agreement marks the development of one of the world's largest and most sophisticated business VoIP services networks designed for large to medium enterprise customers globally. The Sonus solution is also enabling T-Systems to deliver a new global peering service.

"We launched our business VoIP ([define - news - alert](#)) service targeting multi-national corporations with Sonus three years ago and, due to the good performance of the network, we have been able to grow our business with enterprise customers," said Bjoern Claassen, Member of the T-Systems Executive Committee. "This new network expansion gives T-Systems the flexibility to extend our service around the globe and continue to expand our portfolio of next-generation services."

T-Systems plans initially to expand the network throughout Europe and North America, with other regions to follow. With its extended reach, T-Systems will deliver enhanced services, such as their global voice virtual private network service (VPN), iST (International Service Telephony), VIP (Voice Interactive Portal), and VNS (IP Voicenet Services). With the new global peering service, T-Systems will allow service providers to securely connect via IP to the T-Systems IP-based network.

"Sonus is committed to helping our customers stay at the forefront of new technology and services," said Hassan Ahmed, chairman and CEO, Sonus Networks. "By initiating a significant expansion of their Sonus-based VoIP network, T-Systems will be able to deliver unified next-generation services to enterprise customers around the globe that meet the requirements for scalability and reliability that business

customers demand. We are pleased to be working with T-Systems to support their strategic vision for business services."

The contract includes Sonus' latest technology introduction, the GSX4000 Open Services Switch, which will enable T-Systems to cost-effectively expand their VoIP network to less densely populated regions around the world. T-Systems has also selected Sonus to supply and deploy a fully integrated VoIP solution, including applications from partners in its Open Services Partner Alliance (OSPA). OSPA is the industry's largest interoperability program and is deployed in customer networks around the globe. Sonus' OSPA includes over 150 leading independent vendors that enable the seamless deployment of feature rich services. As a foundation for the network, T-Systems is utilizing key components in the Sonus architecture, including the GSX9000™ Open Services Switch, the NBS Network Border Switch, the PSX™ Call Routing Server and the Sonus Insight™ Management System.

<http://www.sonusnetworks.com>

<http://www.t-systems.com>

CTC Communications Continues Northeast Expansion

By Erik Linask

Waltham, MA-based [CTC Communications](#) ([news](#) - [alert](#)) is rapidly becoming one of the fastest growing providers of converged voice, data, and Internet services in the U.S. Following on the heels of its merger with Lightship Telecom in May, CTC today completed its acquisition of North Haven, CT-based Connecticut Broadband as it continues to grow its already expansive network.

Its newest acquisition firmly underscores CTC's "strategy of making investments in local markets to deliver new services and features to local businesses, while allowing those businesses to take advantage of CTC's broad network across New England and the Mid-Atlantic," says Ray Allieri, president and CEO of CTC Communications.

Not only does CTC's purchase of Connecticut Broadband bring to the state a financially viable, customer-centric telecom provider, it also allows Connecticut businesses to receive first-rate service from local offices—they will reap the benefits of CTC's success in VoIP services in conjunction with the data networking experience of Connecticut Broadband.

CTC is a proven leader among VoIP providers. Indeed, while many companies are just now invading the IP telephony space, the first call from CTC's IP network to the public network was logged back in December of 2000. Since then, CTC has continued to innovate and expand its service capabilities. Its PowerPath network was created in 1998 and the firm completed construction of its 8,200-mile fiber optic network in 2002.

With branch offices in nine states on the East Coast, CTC has positioned itself as a premier provider of converged telecommunications services in the New England and Mid-Atlantic regions. It currently provides mid- to large-sized businesses from Maine to Maryland with an integrated package of communications services, including local and long distance voice service, high-speed data service, Internet service, and a variety of hosting services.

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FCC Clears Telecom Mega-mergers

By Robert Liu

After a few delays, the Federal Communications Commission has conditionally approved the mega-mergers of SBC Communications with AT&T and Verizon's bid to acquire MCI Communications, clearing the final federal regulatory hurdle that would allow the two regional Bell operating companies (RBOCs) to complete their respective deals.

However, in order to clear the FCC, the RBOCs made major concessions including opening up their networks to offer so-called "naked DSL" — that is, DSL broadband service without forcing customers to use incumbent phone service. In addition, regulators want to prevent Verizon and SBC from blocking consumers to access competing VoIP services.

"Let me say that I do not believe that all of the conditions imposed today are necessary. I believe that the affected markets would remain vibrantly competitive absent these conditions. Nevertheless, the parties involved have chosen to make these commitments now in order to obtain the certainty of immediate Commission approval for their mergers. I understand their desire to move forward, and agree that the public interest will be well served by providing certainty sooner rather than later," FCC Chairman Kevin Martin said in his statement.

The concessions are a stark contrast to last week's decision by the Justice Department to approve the deals without any significant conditions, such as the divestiture of key assets. On Thursday, Justice Department officials filed a consent decree with a federal court that stipulates Verizon and SBC must lease dark (unused) fiber connections to certain buildings within their respective footprints.

"The Commission found, however, that the Consent Decrees entered into on Oct. 27 between the U.S. Department of Justice and the applicants adequately address this potential harm," the FCC said in its statement.

Without going into details in its own press statement, SBC characterized the conditions as "limited" — conditions that "will still allow the combined company to realize the benefits of the merger." But in a more detailed release, Verizon explained, as part of the FCC approval, Verizon and MCI committed to continue the rollout of Verizon's stand-alone DSL service, continue to adhere to "network neutrality" principles adopted by the FCC earlier this year, cap temporarily certain special access and UNE rates, and maintain for a period of time the current number of settlement-free Internet peering arrangements.

Ironically, while Verizon had, without a doubt, many more bumps in the proverbial road, today's FCC actions pose a greater challenge to SBC than to Verizon. SBC currently does not allow naked DSL service within its network while Verizon has already opened its doors. In fact, the vote was originally scheduled for last week but contentious, behind-the-scenes wrangling were interfering with the approval process.

"That [delay] doesn't usually happen unless there is some maneuvering going on behind the scenes. They're certainly not going to stop either of the mergers but someone must be talking about concessions," a source close to the FCC told TMCnet.

In a sense, VoIP may becoming a victim of its own success. In the midst of its examination, the commission found that "facilities-based intermodal competition, including cable VoIP and wireless services, is growing rapidly and will play an increasingly important role with respect to future mass market competition."

The developments also help to explain the comments by SBC CEO Edward Whitacre that have sparked widespread controversy within the telecom and blogging communities. In an interview with BusinessWeek, Whitacre reasoned that any Internet start-up should be paying fees for the use of the pipes it has invested to install.

Since SBC ([news - alert](#)) and AT&T ([news - alert](#)) announced plans to merge in January, approvals have been received from 33 of 36 states with clearance processes and from the District of Columbia. Reviews are pending in Arizona, California and Ohio. SBC said it will adopt the AT&T name following completion of the merger.

For its part, Verizon first had to fend off Qwest Communications in a bidding war for the assets of MCI. And since Qwest has backed off, competitors such as telecom carrier services company XO Communications and others have been hoping to force Verizon into key concessions in order for them to complete the deal.

Shareholders and European regulators have already cleared the Verizon/MCI deal.

"After two federal reviews and strong approvals by shareholders and the international community, it is clear that this combination is undeniably in the public interest," said Tom Tauke, Verizon executive vice president of public affairs, policy and communications. "The Department of Justice and FCC approvals put us on firm footing as we seek the remaining few state approvals."

<http://www.fcc.gov>

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By Marc Robins

Government Answers The VoIP Call... And Discovers Some Interesting Challenges

The convergence of voice, video, and data occurring on communications networks today — and the IP-enabling of communications and computing equipment designed to connect to these networks — is creating a host of new opportunities and challenges for today's government enterprises and agencies. As the speed of VoIP implementation increases, new challenges are before them in terms of determining how to implement the technology properly, including how to simultaneously provide for optimal performance and essential security measures.

Securing the "Line"

Not surprisingly, security is usually the primary concern that government managers voice when it comes to the deployment of VoIP ([define](#) - [news](#) - [alert](#)) and IP telephony solutions. Indeed, the opportunities that VoIP introduces to a government enterprise come at a price, in terms of added complexity in securing voice and data communications.

Indeed, there are a number of potential familiar threats to be aware of, including eavesdropping and malicious replay, as well as a number of new threats, such as toll fraud, service theft, voice spam (SPIT), and identity theft.

Other security issues revolve around the use of certain types of VoIP hardware and software products. Softphone use, for example, can pose a major security risk. New technologies, such as WiFi telephony, WiMAX ([define](#) - [news](#) - [alert](#)), and IMS ([define](#) - [news](#) - [alert](#)), create another area of security concerns. Presently, WiFi telephony implementations generally do not provide strong encryption and authentication and, as such, they are much more accessible to potential attackers. While wireline networks require a physical access to the wires, wireless technology allows remote attackers to tap into VoIP networks without any physical access to the network.

Security's Impact on Quality of Service

Latency in the transmission of packet data from one end of the network to the other, while hardly noticeable with e-mail or file downloads, can introduce unacceptable quality issues with voice communication and, in some cases, render effective communication impossible. If video communication is required on the same network, this will add additional QoS requirements. Other QoS impairments can result from packet loss, jitter, and echo.

The implementation of various security measures can, itself, cause a marked deterioration in QoS. Data security is based on the deployment of a number of security devices and appli-

cations to protect and observe networks, such as firewalls, Intrusion Detection Systems (IDS), Intrusion Prevention Systems (IPS), Virtual Private Networks (VPN), authentication services, anti-virus software, and gateways. Since VoIP is highly sensitive to delay, packet loss, and jitter, many of these data security measures are inadequate and must be specialized for VoIP. For example, current firewall/NAT devices can delay or block call setups, encryption engines can introduce additional jitter, and inline IDS/IPS devices can add delay to inspected packets.

Interoperability Concerns

Another issue that requires careful review is interoperability between the various components and devices that comprise a government VoIP implementation. In fact, for government operations, interoperability considerations not only involve the ability to interoperate with equipment on the commercial side, but on the government side of the network as well. This generally involves compliance with the specifications related to the security protocols that all Type 1-Top Secret communications products must meet.

Latency in the transmission of packet data from one end of the network to the other, while hardly noticeable with e-mail or file downloads, can introduce unacceptable quality issues with voice communication and, in some cases, render effective communication impossible.

The extent to which a government manager should familiarize himself with industry developments depends on the types of solution he is implementing as well as the level of interoperability promised by the vendors selling him their equipment. Whatever type of deployment is being planned, it's essential to ensure that data and voice equipment are interoperable

with each other, as well as with any legacy equipment an agency may be keeping in the mix.

Providing 911 Emergency Services (E911)

Yet another area that requires careful review is the requirement to be able to provide E911 service on the communications system. Because of the inherent differences in the architec-

ture of VoIP technology compared to circuit-switched systems, the type of emergency services currently being offered via VoIP is not the same as traditional 911 service. This currently is an issue that has instigated FCC action that requires VoIP service providers to conform to new regulations governing the provision of emergency services.

Ensuring Priority Services

Finally, a critical issue for some government applications is the ability to have vital priority services — including those that are critical to national security — carry over from the traditional, circuit-switched world.

For example, the National Communications System division in the Department of Homeland Security (NCS/DHS) is responsible for tapping into the vast commercial telecom infrastructure in the event of a manmade or natural emergency. By leveraging industrial and commercial resources, the NCS is responsible for protecting the telecom infrastructure, as well as managing the interdependencies among the 13 critical national infrastructures, such as transportation, energy, and water.

One such vital service that NCS/DHS has responsibility for is GETS (Government Emergency Telecom Service). GETS is

Since VoIP is highly sensitive to delay, packet loss, and jitter, many of these data security measures are inadequate and must be specialized for VoIP.

an emergency service built on top of the commercial wireline infrastructure, which can be invoked when certain people — such as first responders and other critical government employees — enter a special code on a phone's keypad for priority call completions. In certain emergencies, such as earthquakes, hurricanes, or terror attacks, the phone network can come to a standstill. With GETS, even in situations where a network is overloaded by as much as 800 percent, calls can still get through. IT

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By Tony Rybczynski

Security Checks on Users

According to the FBI, the majority of security breaches are inside jobs. So how does the firewall you deployed at the edge of the Internet help you protect your network? It doesn't! What you need is end point security.

End point security, whether local or remote, wired or wireless, ensures that only authenticated users and compliant devices can connect to the network and that they are authorized to access only certain applications and networking resources, based on the enterprise security policy. This will allow better and greater control over who has access and to which applications; it will protect people's productivity against the worm du jour; and it will ensure security audits associated with regulatory requirements can be met.

End Point Security and Layered Defense

Security needs to be implemented similarly to how we have built highly reliable networks—by removing single points of failure. This philosophy lends itself to a layered defense approach to security, which places different forms of security at different places, or layers, in the network. Overall security is increased because threats that may slip through one layer can be caught by the next. A layered defense approach provides four basic functions: end point security, perimeter security, communications security, and core network security, incorporating many different approaches to enforcement, ranging from access lists to behavior anomaly detection.

The first step in providing end point security is authenticating the user. While device-based authentication may be adequate in certain environments, user authentication enables role-based policy management that restricts user access to applications and network resources, and creates an environment in which users and devices are managed separately—an important factor in virtualization for increased mobility. User authentication consists of secure exchange of one, two, or three identifiers (who you are, what you know, and what you have) using hardware and software tokens, smartcards, and/or biometrics. User authentication can be done in a number of ways, including: port-based authentication controls based on IEEE802.1x and the Extended Authentication Protocol (EAP); IPsec VPN authentication; and submission of username and credentials via a SSL VPN. Regardless of the authentication method, inline gateways are required for the authentication and authorization session.

After user authentication, proactive checks are needed to allow network access only by compliant devices, and reactive

checks are needed to detect and isolate non-compliant devices. End point security ensures that individual end points are secured at the operating system, network, Web browser, and application levels.

End Point Security—Under the Covers

End point security verifies that current security software (e.g., antivirus and personal firewalls) is running and totally reflects current security policies. It also detects device configuration errors that may compromise security, missing operating system patches, and expired intrusion detection and prevention signature files that may make security mechanisms ineffective. Operating system security settings can also be checked via scans launched from the server or portal at the time the end point device comes online. Custom checks, which allow for monitoring of registry keys, files, and processes, can also be defined.

Once users are authenticated and the devices they are using have been checked against the security policy, centralized access controls kick in. This way, only authenticated users connect to the network and, when connected, have access only to authorized applications. Management can issue, revoke, and change user access privileges. A number of remediation or enforcement policies can be instigated based on status, such as authenticated user, unauthenticated user, vulnerabilities in scan results, and failed compliance checks. If a user is not authenticated to the network, this can result in limited access to specific areas of the network, while authenticated users can undergo more strenuous checks and be granted

wider access to network resources. If a problem is identified, the out-of-compliance device can be sent an alert message and/or an installation file, or it can be directed to a URL for resolution.

Client-based vs. Clientless Approaches

Both client-based and clientless end point security approaches check five parameters for assigning network context and granting role-based access: Who is the user? Where is the user? What is the time of day? What is the level of compliance? Where can the user go?

Client-based approaches have been available for some time for remote access policy enforcement integrated into IPsec VPN clients. The evolution of SSL VPNs and the recognition

While device-based authentication may be adequate in certain environments, user authentication enables role-based policy management that restricts user access to applications and network resources.

that end point security is equally important on wired and wireless LANs has resulted in both client-based and clientless end point security solutions being made available to enterprises.

A client-based approach requires client-side code that monitors the user device for malicious activity under control of an end point security server. In contrast, a clientless approach relies on the device being able to support common browser functionality with all monitoring being performed by an end point security portal.

The major disadvantage of client-based approaches is that software has to be available for every wired and wireless, fixed or mobile device in the network, including a growing list of non-traditional networked devices, such as smart phones, PDAs, and security cameras. Client software has to be downloaded to each device and upgraded periodically. This translates into higher life cycle costs compared to clientless approaches. It also has the propensity to cause holes in the end point security device coverage or restrictions on device connectivity pending availability of client software for a particular type of device.

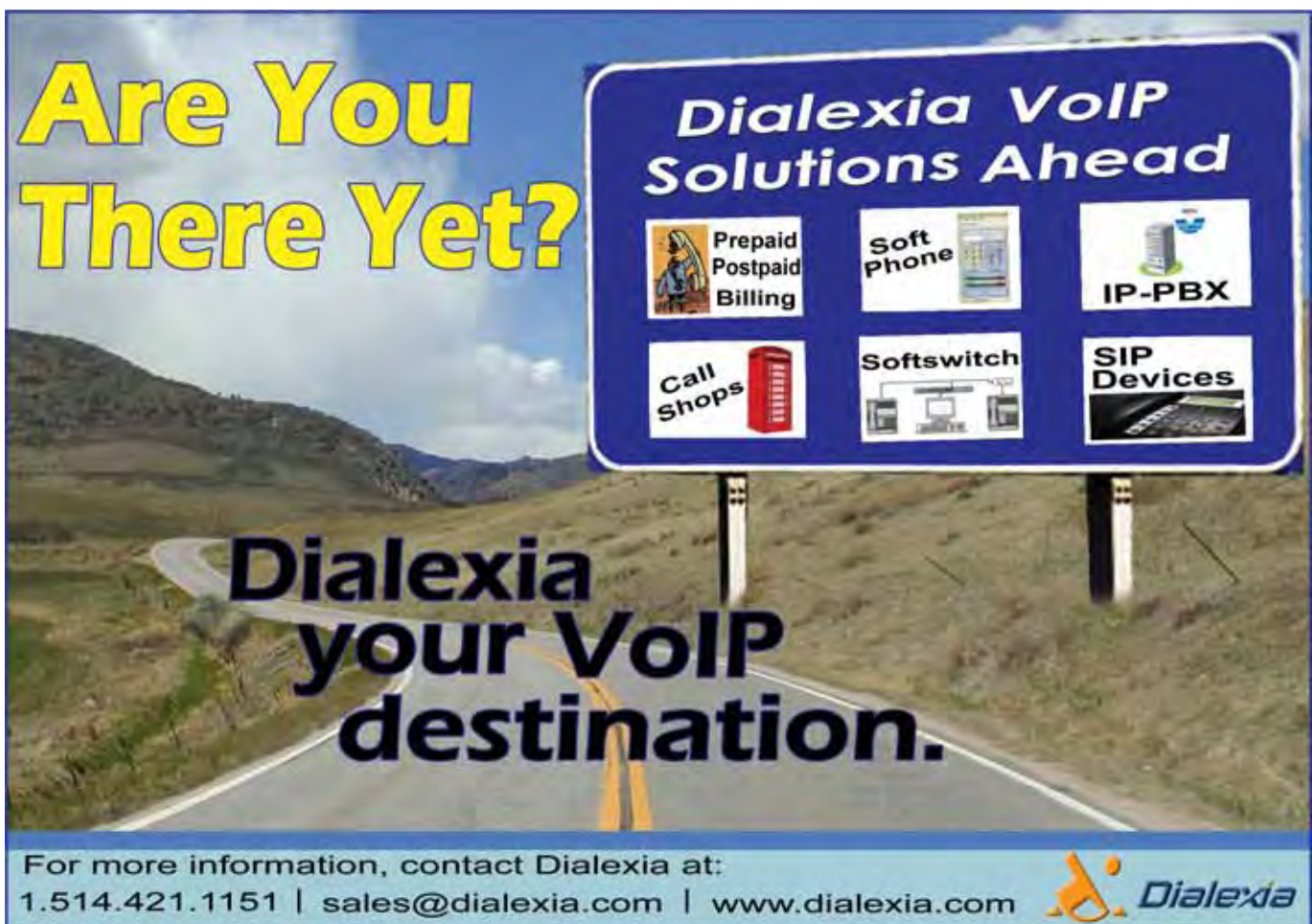
A clientless end point security framework avoids these operational requirements and costs, while securing the network from end point vulnerability in the most effective manner. A security portal is central to such an approach and needs to be highly reliable, scalable, and have the flexibility to work into a broad variety of back-end authentication and security policy

management systems in determining policy compliance, policy-based routing, and policy definition for network optimization. It also interacts with the network to control application and network accessibility. Clientless endpoint security provides a simple end point security solution for local LAN/desktop users, for mobile campus workers, as well as remote users and teleworkers (whether using IPsec or SSL-based VPNs), using either fixed or wireless options.

Going forward, a combination of client-based and clientless approaches may be used to address the variety of devices that need to be supported. However, approaches that require that all packets be inspected by an inline gateway are clearly less scalable than those in which the gateway makes the admission decision and then is out of the data path until re-authentication is required. Regardless of the approach—client-based or clientless—what is certain is that reliable internal security measures are a necessity for safely protecting networks from external threats. **IT**




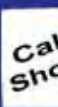

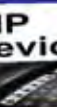
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By William B. Wilhelm, Jr., Esq. and Ronald W. Del Sesto, Jr.

What a Long Strange Trip It's Been

What a difference a year makes! In November, 2004, the FCC released its *Order* preempting state regulation of computer-to-phone VoIP services. At the time, many providers mistakenly presumed they would avoid regulation entirely. While many in the industry rightly believed it was important to aggressively address so-called "social obligations" on a voluntary basis, others wondered if voluntary initiatives would suffice.

Fast forward to the present — [VoIP \(define - news - alert\)](#) providers are now required to offer enhanced 911 services throughout the entire United States according to an "aggressive timeframe" and must comply with the Communications Assistance for Law Enforcement Act (CALEA).

What the next year holds for VoIP services is anyone's guess. A number of VoIP providers have asked the United States Court of Appeals for the District of Columbia Circuit to partially stay the FCC's VoIP enhanced 911 Order. These VoIP providers highlight that while new technologies, such as wireless services, have had more than a decade to deploy enhanced 911 systems, VoIP providers are subject to a 120-day implementation timeframe for the entire United States. Separately the U.S. Senate is considering legislation that would provide VoIP providers with more time to implement enhanced 911 services, would allow for waiver of enhanced 911 obligations for a limited period time, and would require incumbent providers of telecommunications services to make the emergency services network available to VoIP providers in order to ease enhanced 911 deployment by VoIP providers.

Likewise, the FCC's order extending CALEA requirements to VoIP providers, including one-way VoIP services that are connected to the public telephone network, like Skype, has been appealed by a coalition of associations and companies. While no substantive filings have been made, these parties are likely to argue that CALEA was never intended to apply to VoIP services when it was passed by Congress.

Aside from the ongoing litigation, there are still a number of FCC proceedings that could dramatically impact VoIP service providers. In March, 2004, the FCC opened a broad rule-making proceeding to consider all aspects of VoIP services. Among the issues it is still considering are the appropriate classification of VoIP services under federal law, the appropriate compensation mechanism for VoIP traffic, and whether

VoIP providers should directly contribute to the Universal Service Fund.

The classification of VoIP services as either *telecommunications* or *information* impacts programs like the Universal Service Fund. The Universal Service Fund is system designed to support network operators in high-cost areas. The Fund has been under increasing pressure for years due to decreasing revenue from interstate long-distance services. The classification of VoIP services as either a *telecommunications* or *information* service under federal law has not been formally resolved by the FCC. While VoIP providers contribute on an indirect basis as purchasers of telecommunications services, they are not formally subject to direct contribution and reporting requirements. Depending on the outcome of the FCC's pending rulemaking, this may change.

Similarly, the FCC has been grappling with the issue of what the appropriate methodology is to preserve the complex system of payments between carriers for use of local networks. Currently, telecommunications carriers exchange payments for the origination and termination of local traffic based on a number of variables. One critical element in determining the appropriate payment is the jurisdictional nature of the call — determining whether it is local, intrastate long distance, or interstate. Traditionally, carriers

relied on telephone numbers as a geographic proxy. Because VoIP services are mobile and can utilize "virtual" numbers, they are essentially separated from the traditional geographic proxies. In this regard, VoIP and other mobile technologies are creating unique challenges to the anachronistic intercarrier compensation system.

Network neutrality — the idea that consumers should be able to access the content of their choice and use any device

they desire in connection with their broadband Internet connection — will continue to be a hot topic in 2006. In September, 2005, the FCC released a policy statement reaffirming that consumers should continue to reap the benefits

While no substantive filings have been made, these parties are likely to argue that CALEA was never intended to apply to VoIP services when it was passed by Congress.

of competition among network, content, and application providers. At the time of its release, it was important, but unenforceable. In announcing the approval of the mergers of SBC ([quote - news - alert](#)) with AT&T ([quote - news - alert](#)) and Verizon ([quote - news - alert](#)) with MCI ([quote - news - alert](#)), the FCC turned the network neutrality policy statement into an enforceable merger condition. With the advent of new IP-enabled services, like video over the Internet, and the continued growth of VoIP services, network neutrality promises to gain ever increasing relevance in world where all communications are migrating to data networks.

The VoIP enhanced 911 Order also included a notice of proposed rulemaking seeking comment on a number of issues. Perhaps most importantly, the FCC is seeking comment on whether it should require VoIP providers to implement a system that would allow for the automatic provision of location data. Under the existing rules, VoIP providers are

allowed to rely on customers to provide location information. Next year may be the year that the FCC mandates that VoIP providers develop systems to generate location information automatically.

Next year may be the year that the FCC mandates that VoIP providers develop systems to generate location information automatically.

In short, there is no scarcity of interesting and significant issues in the year that lies ahead. VoIP services are predicted to continue their impressive growth and the VoIP industry could mature a great deal in 2006 both in terms of in total subscribers and regulatory obligations. IT

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By Hunter Newby

SS7: S-S-See You Later

Say goodbye, not only to the circuit-switched minute, but also to the legacy transportation methods of the underlying signaling network, and say hello to IP-enabled telco databases, such as LNP, CNAM, LIDB, 411, 911, 8xx, and others, via a nationally distributed Ethernet fabric. By marrying the best of the packet world and the ever important legacy call data, this new combination is sure to effect positive changes in the engineering and bottom lines of many networks.

Signaling has always been near-synonymous with the data that was being retrieved, because there was only one way it was ever really delivered—via Signaling Systems 7. The idea for a top-level signaling network was first introduced after World War II to handle an increasing demand for telephone service. SS7 was defined by the ITU (with versions dating back to 1976) to provide a set of rules on how disparate networks would communicate with each other to send and receive data via dedicated transport to telecom carrier switches from the database managers. In some instances, the database managers were carriers themselves, but others are stand-alone database operators. The key is that the data, or information about the calls, was not the call itself and it was meant to operate on a separate network from its creation.

The databases house a variety of information about callers—their numbers, their location, and more—that is essential to smoothly running a telephone “system” of disparate pieces. The system of pieces only works when there is a central repository of information in order for the call to be properly routed. This also is necessary for the proper deployment of emergency procedures. There are other uses as well, such as caller ID, which subsequently enables call-blocking, call screening, and other functions. SS7 is actually broken out into layers, which are very similar to the 7 layers of the OSI model. In a sense, they have been parallel worlds until now. Technically, SS7 is defined as a protocol, but it can probably be better explained as a guideline for how to interconnect various database elements.

There are many SS7 database providers, including SNET DG and VeriSign, which collectively own a major share of the market. But what neither of them has is a nationwide transport network to deliver these services in any way other than over the legacy DDS 56k and PRI networks consisting of A (Access), B (Bridge), C (Cross-Over), D (Diagonal), E (Extended), and F (Fully Associated) links. These links are how the databases actually interconnect and, for the most part, are controlled by the RBOCs and AT&T because they have the largest copper

plants in the country. None of the users of the signaling networks have been able to take advantage of the benefits IP can bring to the databases, since the underlying access networks have been strictly TDM—until now.

The Voice Peering Fabric (VPF) is a distributed Layer 2 Ethernet switch fabric specifically built to carry voice calls. Since it is a distributed peering fabric, it has nodes in many major cities via the dominant carrier hotel facilities there, all of which are interconnected. This makes it an excellent distribution network for not only the voice call as VoIP, but also the necessary call set-up functions of SS7 databases via IP across the Ethernet WAN. The benefits of such a system are in both operational cost reduction and operational efficiency. The VPF follows the OSI model rather than the SS7 model, but the data being transferred remains the same.

Legacy DDS circuits for SS7 are expensive when overall cost per bit and the number of links needed per switch is factored in. In most cases, a single voice switch takes one or two SS7 links, but it is not uncommon to see four links per switch. The reasons range from diversity and redundancy to different services from different providers. Considering that the SS7 link is usually only 56k and the average price per month is around \$1,500, the cost can add up quickly. If the SS7 link is a PRI DS1, the overall capacity for signaling only increases to 1.544 mbps, but the cost can increase substantially.

There is no doubt that the data accessed via SS7 is critical, so there is no chance of eliminating the need for it and, given the legacy architecture of SS7, not much chance of eliminating the TDM loop between the switch and the database—if the switch and the database keep speaking the same old language in between. Recently, SNET DG and

VeriSign became the first two telco database managers to enable IP access to their data for look-ups. This solved half of the problem. By IP-enabling access to the data, they can speak (and be spoken to) in the most universally applied programming language in the world. That left the small issue of how to actually get the database connected to the

With IP everywhere, nearly all information has the potential to be interoperable, but without the network, that capability is of little use.



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switches, which is where the “Fabric” part of the VPF comes in.

With Ethernet switching nodes in most of the major carrier hotels in the United States, the VPF is essentially a neutral, packet-based, Layer 2 edge network at a PoP near you. This makes it very economical for carriers to reach and plays right in to the model of Ethernet-enabling metro and regional dark fiber and wavelengths. Since the VPF is an existing, non-public Internet, IP distribution network SNET DG and VeriSign decided to use it to act as a delivery network for their database services. They interconnect their IP-enabled databases to the VPF and the carriers and other members of the VPF can establish VLAN's to the database providers across the Fabric from any VPF node. With the monthly cost of a 10meg VPF port at \$1,500, there is much more bit per buck to utilize than a 56k DDS for the same price. In addition, the legacy DDS network call set-up time ranges in the 100s of milliseconds, whereas the Ethernet environment exponentially improves that time to the 10s of milliseconds.

The combination of these two steps—IP-enabling the data and a distributed Ethernet network—has started a much-needed reshaping of the networking landscape of voice communications. With IP everywhere, nearly all information has the potential to be interoperable, but without the network, that capability is of little use. The public Internet was a good starting point and a nice model to follow, but today it is quite possible, and more practical, to create application-specific Internets that have specific users with precisely defined rules. This brings the level of comfort and reliability that major carriers and, ultimately enterprises, demand. There is a great deal of promise surrounding VoIP Peering and its potential to improve the way networks interconnect and people and

Acronyms Defined

CNAM — Caller Name

DDS — Digital Data Service

ITU — International Telecommunications Union

LIDB — Line Information Database

LNP — Local Number Portability

OSI — Open System Interconnection

PRI — Primary Rate Interface

SNET DG — Southern New England Telephone Design Group

SS7 — Signaling Systems 7

TDM — Time Division Multiplexing

VPF — Voice Peering Fabric

devices communicate. The migration of SS7 functions to an IP-based delivery method is an integral component of that potential success.

For a complete overview of the SS7 Layers and definitions of terms check out <http://www.ss7.com>. IT

Hunter Newby is chief strategy officer at telx. ([news](#) - [alert](#)) For more information, please visit <http://www.telx.com>.

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By Karl Erik Ståhl

VoIP Does Not Have To Be POTS Over IP!

It's Time to Take IP Telephony Beyond Simple Replication of Traditional Telephony Service

Most of today's [VoIP](#) ([define](#) - [news](#) - [alert](#)) services merely offer conventional telephony at lower prices. That market is very volatile, since more and more players must share a decreasing revenue stream. On the other hand, IP technology and Session Initiation Protocol (SIP) allow for much more than replication of old telephony. Soon, live person-to-person IP communication, including new and extended services and global IP-to-IP connectivity must be offered. The success of Skype has killed several myths in this area, but future global telephony systems must be based on open standards (SIP), allow for a wide range of applications, and be extendable.

Lowering Cost, but Thereafter...

The driving factor for most of today's VoIP offerings is lower cost for a conventional telephony service. However, using new, advanced technology for simply reducing prices, in a market that already is covered by existing services, will not allow stable and healthy market players. Instead, the total amount of money earned will decrease and will have to be shared by a growing number of market players. Costs *do* need to be reduced, but customers should also expect innovative new products and features.

While IP telephony technology and the SIP standard have the capacity for new functionality and applications, current VoIP deployments seldom offer more than plain voice communication with telephony quality. VoIP service providers even boost quality "as good as POTS (Plain Old Telephony Service) or PSTN (Public Switched Telephone Network)," without considering that voice limited to 3kHz has been around for 50-100 years and is far from today's technological capabilities. Compared to radio and TV, today's VoIP is like introducing AM quality digital radio, disregarding that technology long ago enabled both full bandwidth sound and TV.

Stranger still is that VoIP providers do not connect to other VoIP providers' customers over IP; instead, they squeeze the traffic through PSTN lines. This not only increases cost, but it limits the functionality for the IP user as well. Features like better sound quality through higher bandwidth, video, presence, and instant messaging—all supported by the SIP standard—are made unavailable to the users because the calls are being routed through the PSTN.

Comparing VoIP to the development of the wireless phone

services (e.g., GSM and 3G) there is wide contrast. Wireless phones have not only given us mobility, but also text messaging, pictures, and video. Wireless handsets also have become more and more versatile, with the introduction of various multimedia capabilities and products, including PDAs and cameras. This has caused the wireless telephony market to grow rapidly and experience a healthy revenue stream.

The huge, but inflexible, PSTN infrastructure built over the years has prohibited substantial developments in call quality and functionality for the traditional telephone service. When VoIP services are being built, it is, therefore, important to not merely replicate POTS. Instead, the flexibility, capabilities, and advantages of IP, the Internet, and the SIP standard must be maximized and offered to the customers. This will allow users—anyone with an Internet connection—to communicate globally, person-to-person, using a variety of media and new functions and applications.

SIP-based live person-to-person communication has the potential to become the next commonly used application on the Internet, after email and the Web, and to create a healthy and growing market. In other words, VoIP technology must be feature-rich and cost-efficient, so as to outshine both PSTN and the wireless industry.

**Why isn't global SIP-based
person-to-person communication
already as commonly used as e-mail?**

Why Replicate PSTN and POTS?

It is unfortunate to only offer POTS-like telephony, replicating both the old telephony service

and the old telephone network, when VoIP services are being built. Operators actually invest in soft switches and Session Border Controllers (SBCs) that, most often, are used to do just that. VoIP is being built as closed islands and traffic is

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both limited to 3kHz voice and fed into the PSTN. So, even if both endpoints are SIP clients, but belong to different islands, they will unnecessarily connect via the PSTN, rather than directly via IP.

Recently, VoIP providers have begun to consider the potential advantages of peering with one another via IP. However, that is an artificially introduced need emanating from the VoIP islands being built. SIP servers following the standard *do* talk directly to each other and to their clients over the Internet, just like email does! Today, no one would even consider sending email via the telefax service, limiting it to only pixel transmission and getting the old slow delivery time and higher cost. That was the method used in the early '90s, before we started using the SMTP Internet standard. But that is often how VoIP is deployed today, even though we have the common Internet and SIP Internet standard!

Skype Has Killed Some Myths

Reasons abound for building VoIP islands connected to the old PSTN, instead of building an open global VoIP service over the Internet. The most common are to guarantee quality of service (QoS) and that VoIP cannot scale without the structure of the PSTN. The success of Skype has certainly aided in killing those myths! The Internet is actually capable of much higher quality than the PSTN and, using the SIP standard, scaling is done via DNS, the Domain Name Services that has allowed unlimited expansion of both email and the Web.

Skype also has shown that it is possible to get extremely rapid acceptance and penetration without using telephone numbers or hardware phones. VoIP providers that currently do not give users a proper SIP address (in addition to a telephone number), should consider what email would have been if we had been forced to use fax numbers for addressing.

The NAT and Firewall Problem

Today, more and more people have good broadband Internet connections both at home and in the office. There is also the presence of good SIP servers and SIP clients—in the form of SIP hardware phones and soft PC clients. Considering that, why isn't global SIP-based person-to-person communication already as commonly used as e-mail?

One major obstacle is the NAT (Network Address Translation) and firewall problem—all too frequently, protocols for connecting directly to individual users simply do not pass firewalls. NAT ultimately means that users on a LAN cannot be reached via IP addresses and firewalls are used to block unknown traffic. The real problem lies in that many firewalls still lack proper support for SIP, the standardized Internet protocol for live person-to-person communication. Additionally there is a large installed base of totally SIP unaware firewalls.

Skype can handle the firewall problem in most cases, but unfortunately does it using, at best, underhanded methods. Skype uses a closed unpublished protocol and runs an application on each PC, over which only Skype has full control. That application helps penetrate firewalls from inside private LANs. If Skype cannot punch holes in a tight firewall for its signaling and media, it masks itself as HTTP, for which firewalls are open to allow surfing. These methods remove the control from the firewall and the firewall manager and are not acceptable to security-aware enterprises.

To allow global SIP usage before all firewalls have proper SIP support, several workarounds have been proposed. STUN, TURN, and ICE are methods where the SIP client, together with the servers on the Internet, try to punch holes in NAT and firewalls. However, these methods rely on guesswork of the firewall and NAT behavior and won't work in all cases and certainly will not be particularly effective or reliable. They also move control of what should pass the firewall from the firewall manager to the clients on the network in the same unacceptable way that [Skype \(news - alert\)](#) does.

Another method, which seems to have a higher success rate, is far-end NAT traversal, where the operator equipment tries to punch holes in the customer firewall. In this case, firewall control is moved to the operator and only helps in accessing that operator's services, not SIP services in general. For this to work, however, the firewall has to be sufficiently open.

The most general solution is, of course, to solve the problem at its source—in the NAT/firewall itself. Firewalls with good, general SIP support today exist from a few vendors, for both residential and enterprise usage.

For those unwilling to replace an existing firewall, a secondary SIP-enabling device, such as the SIPerator or an SBC, can be paralleled with the existing resource to create the same functionality as a good SIP-aware firewall.

The lack of functional SIP support in the many popular firewalls sold today is a ticking time bomb; most of these firewalls will not even be upgradeable to handle SIP.

To be part of the accelerating SIP user community, which now includes many IP PBXs, it is important for networks to be prepared. To have universal connectivity across the Internet, NATs and Firewalls need to be SIP-capable, which, unfortunately, is presently uncommon. IT

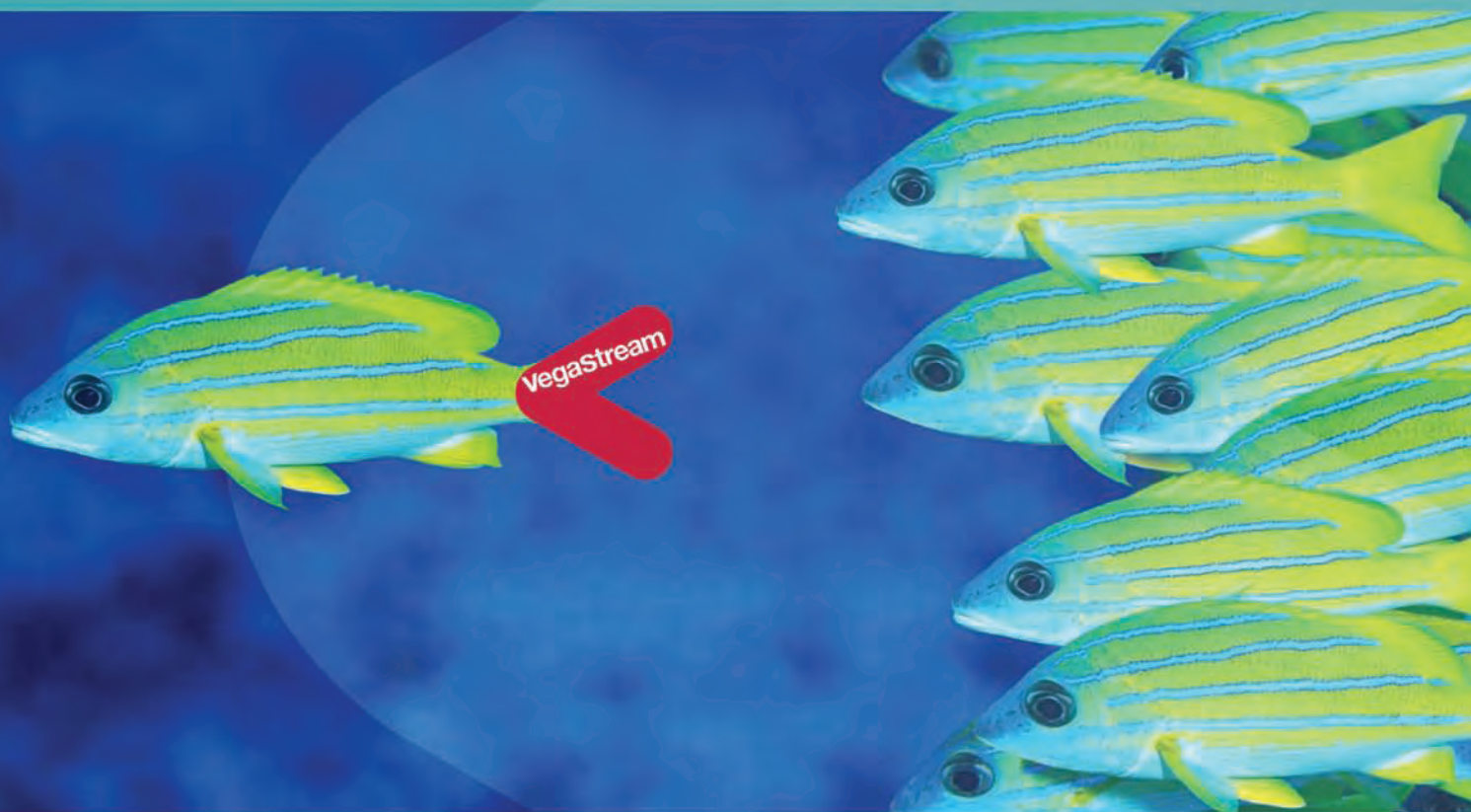
Karl Erik Ståhl, is President of [Intertex Data AB, Sweden](#). ([news - alert](#)) For more information, please visit <http://www.intertex.se>.

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VoIP technology must be feature-rich and cost-efficient, so as to outshine both PSTN and the wireless industry.

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NEC's Charles Langdon

Rich Tehrani's "Executive Suite" is a monthly feature in which leading executives in the Voice over IP/IP communications industry discuss their company's latest developments with TMC president Rich Tehrani as well providing analysis on industry news and trends.

Charles Langdon was recently promoted to President of NEC Unified. Until then, Langdon had been the senior vice president of Sales. He succeeds Thomas J. Burger, a 16-year NEC veteran executive, who retired at the end of October. More information on the company can be found at <http://www.necunified.com>.

I recently had a chance to speak with NEC's ([quote](#) - [news](#) - [alert](#)) Charlie Langdon who took over from Tom Burger as president of NEC Unified Solutions. Burger was an industry icon and very well-known to the TMC editorial team as someone with vision and a deep understanding of the telecom market.

Langdon did a great job keynoting at Internet Telephony Conference & EXPO a few weeks back and I wanted to spend some time with him to hear his ideas fleshed out a bit more. I asked NEC's new president about his vision of enterprise communications and I got more than I bargained for as Langdon has a very compete vision of where things are going — and where we've been.

He cited references to how the computer industry went from mainframes to client/server-based architecture and how, over time, applications become less and less centralized. A good portion of our talk was devoted to how customers have become more empowered in the information technology world looking back twenty years.

There was a time when a company leaving an established vendor to purchase from a start-up was considered a black-eye for the big vendor and quite often such stories ended up in places like *The Wall Street Journal*.

This led us to the current state of communications where Langdon proclaimed, "VoIP is an open operating system for communications applications. It is like what UNIX was to operating systems." This was where he got excited about the subject. The conversation went on with the concept of communications becoming a business tool, something that enhances value. "This is the natural evolution of VoIP," said Langdon.

In his view, VoIP ([define](#) - [news](#) - [alert](#)) isn't just about saving money, but increasing corporate revenues through

better communications as well.

The conversation started to go towards applications and I asked what he thought about the concept of VoIP 2.0 and he responded that NEC aligns with this concept. A few of the areas where the company is rolling out advanced applications, in fact, are healthcare and government markets. The company also is distributing specific packages for universities and other markets. Interestingly, NEC really places a great deal of value on its resellers — he even referred to this channel as a division of the company. This is fairly unusual in my experience.

I wondered what NEC thought of what some of the big names in VoIP, such as Google ([quote](#) - [news](#) - [alert](#)), Skype ([news](#) - [alert](#)), Microsoft ([quote](#) - [news](#) - [alert](#)), and others have been up

to lately. The reply wasn't exactly what I expected, as I learned that NEC is in NDA discussion with one of the vendors on this list. He also mentioned that these companies are primarily focused on the consumer market — perhaps implying there isn't much of a need to work with or fear

some of these players. He made it clear to me that NEC wants to provide services where possible and allow other companies to provide applications.

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If I had to guess, I would say that Microsoft would be a natural partner for the company and, indeed, is the least consumer-focused of the above companies.

With all this talk of integration, I had to learn more about how NEC's communications division works with

other divisions in their company. I was told they do work with other divisions whenever possible; the display and biometrics divisions are just two of the areas that collaborate with NEC Unified to provide cohesive solutions. For example, the company is supplying a hospital with a solution that com-

bines tablet computers with biometrics to allow doctors and nurses to have instantaneous access to potentially life-saving health information. This is coupled with communications that allows real-time dissemination of time-sensitive data. In this case, doctors reduce the risk of using the wrong chart. Eliminating paper means the wrong eyes can't snoop around in data they aren't supposed to view.

I was interested, too, in learning more about what the company thinks about hosting, as this is a very hot buzzword at VoIP shows I frequent. NEC's view is that resellers become disenfranchised when service providers supply such solutions. In selling their hosted solutions, NEC works closely with resellers to ensure the integration is done correctly and, of course, that the resellers share in the revenue.

I wrapped up our conversation with a question about the biggest impediment to the company's growth and was told the company comes from a shy culture and Langdon's challenge is getting the information about NEC's benefits into the market. I was pretty amazed at this final, candid response. I must admit that, in my experience, companies with parents outside the U.S. often have a terrible time marketing here. I really think the final marketing decision-maker and person who allocates the American marketing budget needs to live and breathe in the U.S. to truly understand how to do well here. This is especially true if the company is a household name in their home country.

So what do I think of Langdon? He knows his history and he understands that repeating mistakes is something that can hurt you, whether running a country or running a company. With both eyes on the future and a casual glance at the past, I think NEC Unified could have smooth sailing for the foreseeable future. **IT**

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Why Use SIP for IP Communications?

What the Session Initiation Protocol can Mean for Your Business

By Peggy Gritt

Any business thinking about implementing IP telephony should ask one question before anything else: Why use a network architecture based on the Session Initiation Protocol (SIP) to support IP communications? Businesses should at least take a look at the SIP open communications standard and do their homework on it.

Objectively, it isn't that an organization's IP telephony initiatives are destined to fail if they don't incorporate a SIP-based network for any required migration up-front and for long-term use thereafter. However, leaving SIP out of the mix can definitely diminish the level of IP success, as can an IP PBX phone system that stems from traditional proprietary PBX hardware architecture not made for SIP-driven IP communications.

Here's a look at why many proprietary IP PBX solutions don't even accommodate SIP, some of the pitfalls of not using it, and why the SIP standard really is your business's best choice for supporting Internet Protocol communications.

Hardware Simply Isn't Designed for SIP
One reason most vendors in proprietary circles have yet to adopt [SIP \(define - news - alert\)](#) for their IP PBX hardware offerings is the SIP standard itself. In short, SIP is software-based, open and lightweight, and is designed to direct IP telephony calls to application servers on a data network the same way e-mails, Web chats, and other media are. Moreover, SIP's inherent simplicity makes application interoperability much easier than do hardware systems and older voice protocols, such as ISDN — which are well-known for system compatibility problems, and which is why IP technologies have been developed primarily as software applications.

According to a recent Gartner report, *The IP*

PBX Is A Potential Architectural 'Dead End' (April 2005), many current IP PBX hardware products rely on centralized proprietary IP architecture to replicate the digital model their PBX forefathers used a decade ago. Go back further in time, and the '90s digital model actually evolved from the proprietary PBX architecture model first introduced in the 1950s. With such a lineage of legacy thinking behind proprietary IP PBXs, it's just as the analysts at Gartner so succinctly stated: proprietary approaches to IP communications "fail to leverage emerging Internet telephony standards, and will not support a distributed and open telephony architecture."

The result? Choose proprietary IP PBX hardware that can't accommodate open standards such as SIP, and your choice of voice applications is limited to those offered solely by the proprietary vendor — or an approved affiliated vendor — effectively locking your organization in to that vendor's IP "solutions." Same thing if your business wants to integrate third-party communications applications, which the same vendor is only more than happy to do through a high-priced computer telephony integration (CTI) interface. Besides, in an industry that generates billions of dollars annually from hardware sales, there's little room for cost-effective software and future-proof open standards.

Given the software nature of SIP, then, the majority of new IP PBX systems now on the market are designed as standards-based software applications to fit SIP networks for IP telephony. Being software-oriented also aligns many of these IP PBX solutions more closely with the SIP model to support cost-reducing third-party IP phones and soft phones as well as mobile devices, desktop PCs, and traditional analog telephones.

No Business Value

Say your business takes the hardware path to

IP telephony anyway and implements an antiquated proprietary IP PBX and closed hardware architecture that doesn't utilize the SIP communications standard. Along with your IP PBX not connecting to other voice and data systems, it won't let you add business value to your overall communications solution beyond what a traditional PBX would.

Particularly in this age of IP PBX software, one of the beauties of SIP is the ability it gives your organization to integrate an IP PBX application server alongside data servers on a single network — and to administer them all from that same converged network

Don't use SIP architecture, however, and your business is left staring at the "Great Voice and Data Divide."

environment. Don't use SIP architecture, however, and your business is left staring at the "Great Voice and Data Divide" from disjointed phone equipment and data systems and their equally disjointed administration.

Worse still, if your enterprise maintains multiple offices, bypassing SIP inhibits your ability to standardize technology across sites for users, desktops, and customer features, which can lead to business process disparity from site to site, business continuity management issues, and inconsistent service levels for customers, not to mention the expense of maintaining lines between remote

office locations.

What SIP Brings to the Table

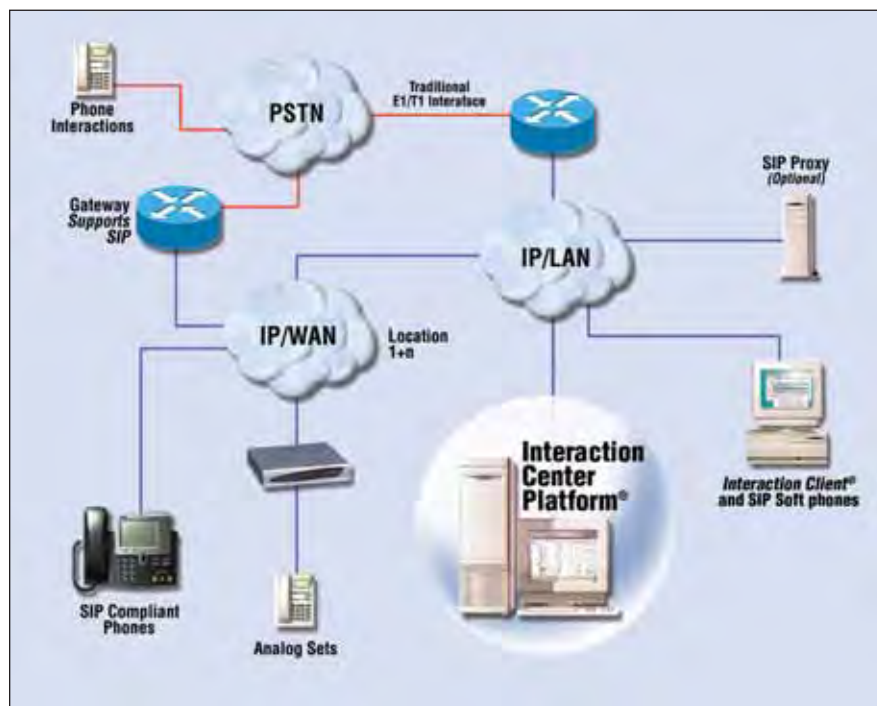
A SIP-based architecture for IP telephony offers voice and data business communications functionality that is, in a word, practical. Imagine using a single IP PBX software server and SIP-supported network to drive a mix of voice applications, such as live conferencing, instant messaging, and other media. Also imagine pre-integrating business applications that embed open standards for interactions generated from those same applications.

For instance, use a SIP network to implement the IP telephony software from Interactive Intelligence or the Microsoft-based IP PBX software from Interactive Intelligence subsidiary Vonexis, and you can easily:

- Pre-integrate Microsoft Windows Server System products, like Exchange Server, SQL Server, and Live Communications Server — all out of the box.
- Implement a server for the Microsoft Business Solutions applications your business uses most and get Interactive Intelligence/Vonexis innovations like IVR data access, integrated CTI screen pop, and embedded Client call controls for Microsoft CRM, Great Plains, and other applications from Microsoft Business Solutions suite.

The open architecture and application interoperability your business gets with SIP and IP telephony also lets you:

- Reduce equipment costs. Easily replace up to 10 hardware “boxes” with bundled software applications for features like ACD, IVR, fax, voicemail, and choose from third-party IP phone sets that often sell for less than \$100 per device to save over proprietary ones that often cost four times as much or more.
- Streamline system administration. Integrate an IP PBX application with systems for conferencing, unified messaging, and other media on the same



SIP network, and eliminate multiple admin interfaces as well as the need for separate IT voice teams and data teams. Using SIP with a standard operating system and troubleshooting tools also simplifies desktop and endpoint management enterprise-wide.

- Reduce costs for lines. Realize tangible savings from SIP-based carriers that use bandwidth for voice communications, rather than more expensive traditional TDM lines. Toll bypass cost reductions also lend to long-distance savings.

More so for a mobile workforce, SIP-based IP communications allow remote and mobile employees to stay connected full-time to your enterprise and customers alike. Workers can hot-desk from virtually any office location, access the corporate communications system and mission-critical data at any time from wherever they are, and utilize multiple devices such as laptops, cell phones, and hand-held devices based on their mobile login choice. SIP networks for IP even let your multi-site business route calls to the specific location from which a mobile user logs in.

SIP for Your Bottom Line

Recapping the question your business should ask about why SIP is the best choice for supporting IP telephony, it's safe to say the answer is a multi-benefit response that goes

something like this:

- Virtual company communications applications.
- User and endpoint applications based on user type.
- Increased workforce accessibility and more efficient use of employee time.
- Faster, more consistent service for customers.
- Lower investment and maintenance costs for software over hardware.
- Easier administration from a single voice and data network that fits an organization's Microsoft strategy.
- Processing per office location and or department based on specific application requirements.
- No more business continuity concerns.
- And that all-important future-proof technology approach to SIP-based IP telephony applications that proprietary IP PBX hardware simply can't provide.

Peggy Gritt is Senior Director, Product Marketing for Interactive Intelligence Inc., (news - alert) a global developer of software for contact centers and the enterprise since 1994. Interactive Intelligence integrated out-of-the-box IP functionality into its lineup of business communications software solutions in 2002, and along with its Vonexis subsidiary is a leader in the SIP movement for VoIP. Contact Interactive Intelligence at 317.872.3000 voice and fax, or visit <http://www.inin.com> for more on the company's complete suite of IP communications solutions.

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Criminal Activity Through VoIP:

Addressing the Misuse of your Network

By Richard Koch

Voice over Internet Protocol (VoIP) is an innovative and evolving technology that is transforming the telecommunications world. H.323, SIP, and other protocol-based networks can be established quickly and easily, allowing exponential growth opportunities for VoIP entrepreneurs. Further, VoIP offers consumers the benefit of a less expensive alternative to a traditional telephone line, with exciting new features. Because VoIP is not inherently tied to a particular location and often provides access to multiple phone numbers, it provides a level of anonymity that allows subscribers to mask their identities as well as the physical locations. Combine that with free VoIP service offerings, which forego customer screening requirements or established internal controls in lieu of quick profits, and the result is fertile ground for criminal activity. The relative ease of access to and the ability to veil location and identity through VoIP networks provides ample opportunity for misuse and furtherance of illegitimate goals.

VoIP ([define](#) - [news](#) - [alert](#)) as a means of communication for criminals has, naturally, drawn the attention of law enforcement. In her June 2004 testimony before the U.S. Senate Committee on Commerce, Science, and Transportation related to a pending VoIP bill, Laura Parsky, Deputy Assistant Attorney General, Criminal Division, at the U.S. Department of Justice stated, "I am here to underscore how very important it is that this type of telephone service not become a haven for criminals, terrorists, and spies." She added that "any criminal conspiracy requires communication in order to operate," and reminded Congress that how it treats VoIP "will profoundly

impact the Department of Justice's ability to protect communities across the nation from the harms inflicted by drug trafficking, organized crime, and terrorism, and to fundamentally protect the national security of the United States."

An example that underscores the potential for misuse of a VoIP network is the ability of end users wishing to remain anonymous to use a proxy service to communicate covertly. To the outside world, because the call likely will never hit the public switched telephone network, it will appear that the callers are not talking to each other. Perhaps more importantly, it will appear as though no call was ever placed. In an effort to thwart this misuse, the federal

government recently provided a research grant to George Mason University to develop an application that allows law enforcement to track these calls and identify the participants.

Law enforcement officials also will soon be able to turn to the 1994 Communications Assistance for Law Enforcement Act (CALEA), which requires telecommunications carriers and manufacturers of telecommunications equipment to ensure that their equipment, facilities, and services allow law enforcement agencies to conduct necessary surveillance. On September 23, 2005, the Federal Communications Commission released a *First Report and Order*, in which it concluded that interconnected VoIP service providers are, in fact, "telecommunications carriers" and, as such, are subject to regulations and terms of CALEA. By Spring 2007, law enforcement agencies will be able to enforce CALEA and require interconnected VoIP service providers to assist them with the intercept and delivery of communications and call identifying information transmitted via VoIP.

Until that time, however, there are additional proactive steps that VoIP providers can—and should—take to remain vigilant about detecting illegal uses of VoIP. Network security is a good place to start. In fact, many VOIP



might raise a red flag?

- *The easy sale*—Regardless of the obstacles that might be presented during negotiations, the prospective customer raises no issues and presses forward, wising to complete the transactions as quickly as possible. This customer may have no problem with large upfront payments (sometimes in cash) or same-day wires.

- *No follow up communication from the customer*—If you offer a pre-paid VoIP service, you might sell multiple

providers offer encryption as a selling

feature to their customers. IP PBXs and IP Networks themselves, if not properly protected, can be hacked, allowing individuals to make calls purporting to originate from the hacked customer's location. In addition to encryption, other options

include prohibiting connections in your network from hosts other than those attributed to your customers and implementing an authorization process that requires an IP address or username/password combination to permit access to the network.

Familiarity with customers and their intended use of your network is also advisable. Simple prudence and observation can go a long way in helping to defeat, or at least discourage, individuals engaging in terrorism or other forms of criminal activity.

What "customer behavior" scenarios

accounts to customers that have no need to follow up with you once they have used up all of the minutes and have disposed of their service related equipment.

- *Usage patterns*—VoIP providers should be aware of typical traffic termination patterns originating from their networks through the review of call detail records (CDRs) pursuant to general business practices. A sharp traffic boost to an international destination—particularly one recognized by the U.S. Department of State as a one that has repeatedly provided support for terrorist activity—may, in conjunction with other factors, be a telling sign. CDRs likely served as a valuable tool for federal

investigators when determining, post-9/11, that the hijackers used hundreds of payphones, cell phones, and pre-paid calling cards to conceal their communications.

What should you do if you are suspicious? This question raises several issues of personal and corporate responsibility, and is fraught with privacy and legal considerations. Until CALEA compliance is upon us, retaining records pursuant to your company's data retention policy is worth exploring with your legal counsel, along with cooperation with law enforcement. While VOIP providers are not policemen, they do share a common sense obligation to do what they can to assist in curbing the misuse of VoIP networks in an effort to keep our country safe. IT

Richard Koch is president of *RNK Telecom*. ([news - alert](mailto:news-alert)) For information visit <http://www.rnktel.com>.

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VoIP: A Consumer's Dream; A Regulator's Nightmare

Commissioner Susan P. Kennedy of the California Public Utilities Commission, gave a presentation at the recent Internet Telephony Conference & EXPO in Los Angeles, CA (ITEXPO West). By all accounts, the Commissioner's speech was one of the more compelling keynotes of the event, providing an interesting look at how a member of the regulatory community views VoIP and the threats, challenges, and opportunities presented by this disruptive technology.

The following is a transcript of Commissioner Kennedy's speech.

Good morning. I'm sure that many of you looked at the program and wondered why on Earth you're being asked to listen to a member of the Public Utilities Commission before your coffee has kicked in. At 7:30 in the morning, believe me, I'm wondering what I'm doing here myself.

Most of you in this room don't know me, and if you have good karma in this life, you never will. I'm a regulator. That means: I'm from the government and I'm here to help. I regulate electric utilities, gas companies, water utilities and telephone companies. In fact, public utility commissioners are among the most powerful regulators in any state, and depending on your position in the regulatory food chain, you either love me, hate me, need me, or fear me.

If you are a company that offers traditional phone service like [SBC](#) ([quote](#)

[- news - alert](#)) or [Verizon](#) ([quote](#) - [news - alert](#)) you *love* me — because I strongly believe that the 130-year-old web of legacy regulations attached to voice telephony should be dismantled in favor of competition. Not tinkered with; Not updated — taken out and burned.

If you are a traditional consumer advocate you *hate* me for the same reason — because I strongly believe that the power of choice in the hands of a consumer is a much more effective way to protect consumers than regulation. I believe most traditional regulation today actually hurts innovative competitors and hurts consumers.

If you are a competitive voice service provider that relies on interconnection with the legacy network you *need* me — because for the foreseeable future you need regulation to ensure access to the



PSTN, non-discriminatory interconnection rates, and fair arbitration of disputes with network owners.

And if you are a VoIP provider, you should *fear* me — because you are the single biggest threat to the regulatory regime upon which my whole world is based.

[VoIP](#) ([define](#) - [news - alert](#)) changes everything. It revolutionizes communication as we know it. It liberates consumers by freeing every medium — whether it's copper, cable, fiber or radiowave — from the silos in which communication is limited, trapped and then fed to consumers by those who own the network. And it is shifting control of the consumer experience away from the central office and out to the edges — irreversibly placing market



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power into the hands of consumers.

VoIP also erases everything we know about regulation.

For the last 100 years, the entire regulatory world has been organized around the length of a pair of copper wires, the location of a central office, where a call originates or terminates, and whether a signal was in the form of an analog wave carrying a human voice or a digitized packet carrying data.

Our jurisdiction is based on the physical lines that tell us where a local call ends and a long-distance call begins — the technical definition that separates telecommunication services from information services. These lines serve as our operating manual — they tell us who to regulate, who pays taxes and fees, who pays access charges or reciprocal compensation, who provides 911 emergency services, 411 information, and who's subject to the Commission's service quality standards, financial auditing, and customer protection rules.

These lines are the *source of our power*. And VoIP erases them all. With a few strings of computer code — you've upended 130 years of regulatory certainty. And what you have to fear from this uncertainty is fear itself. Because nothing motivates people quite the way fear does:

- Regulators fear losing jurisdiction
- Legislators fear loss of funding for social programs like universal service or tax dollars
- Big incumbent telcos fear loss of access charges
- And rural telcos fear loss of massive subsidies and they fear a low-cost competitor that will eat their lunch.

This fear is well-placed.

VoIP disrupts the tax base. Estimates are that telecommunications companies and their customers pay an average effective tax rate that is 250 percent higher than the tax rate for all other industries with the exception of electric utilities. In some local jurisdictions the

total taxes paid by telecom consumers is more than 25 percent of the customer's bill.

The Multi-State Tax Commission issued a report during the Congressional debate over extension of the ban on Internet taxes estimating that if the telecommunications industry migrates its services to the Internet, and the ban on telecom taxes migrates with it, the revenue loss to state and local governments would be upwards of \$22 billion.

That's a lot of tax revenue. Even more ominous than that — organizations that advocate for public services are calculating the impact of tax preemption on IP-telephony in terms of the number of teachers, policemen and firefighters that will be laid off if VoIP remains tax-exempt.

VoIP disrupts universal service

funding. In 2003, my Commission issued a report to the California Legislature indicating that the migration to IP-telephony (if left unregulated) will lead to a 40 percent reduction in funding for universal service programs, including high-cost funds and deaf and disabled programs, by 2008.

Understand something — to policymakers, *those are fighting words*.

VoIP disrupts the regulatory detente that has governed relations between states and the federal government for decades. States like California, Michigan, and New York all tried to put stakes in the ground to declare jurisdiction over VoIP providers, using the "if it quacks like a duck" test. In October of 2003, Commission staff in California sent a letter out to all VoIP providers in the State that ordered all VoIP providers to file an application with the Commission for authority to conduct business in the state just like a

traditional telephone utility.

I managed to open a proceeding to investigate the jurisdictional questions this raised, which postponed any enforcement actions in California long enough to let the FCC step in and preempt states from regulating VoIP. And the FCC did take the very important step of preempting most state regulation of VoIP in the Vonage decision. But that was just the first battle in this IP insurgency.

Until Congress rewrites key portions of the 1996

Telecommunications Act, or until regulators and policymakers are overtaken by technological events, every aspect of Internet telephony will continue to be a battleground.

State regulators will continue to take incremental steps to impose price controls, taxes, fees, and consumer protection

rules on VoIP on the theory that "a duck is a duck," and believing that "parity" means regulating "up" — in other words, making sure that both the traditional phone service and the new generation of telecom services operate under the same yoke of regulation.

Here in California, that theory was taken to an extreme when my commission, last year, passed a 250-page omnibus "Telecommunications Consumer Bill of Rights" attempting to expand traditional monopoly regulation to virtually anyone providing voice services for a fee, including wireless and VoIP providers. We did this under provisions in the 1996 Act that expressly give states jurisdiction over "terms and conditions" of service. So don't assume that the FCC's Vonage decision puts you safely out of reach of state regulators.

After a huge battle, we suspended

Most of you in this room don't know me, and if you have good karma in this life, you never will. I'm a regulator.

those rules when Governor Schwarzenegger's new appointees joined the Commission this year, but the battle is not over.

Another example of old crashing into new is the FCC's order for VoIP providers to meet a sharp deadline to provide E911 services. As well-intended as the FCC's decision is — and I can't say that if I was in Chairman Martin's shoes that I could have done anything different — the practical result is that we're forcing VoIP technologies to jerry-rig a system in order to operate within the old legacy network, instead of building a new architecture based on newer, more efficient IP-based services.

The messiest collision on the horizon, though, is intercarrier compensation. Until the FCC finishes a major overhaul of the way carriers compensate each other for connecting calls — and deals with the inevitable impact on rural carriers who rely on massive subsidies through access charges and universal service funding — IP telephony will likely get saddled with many of the same costs and fees that traditional phone providers pay to support the PSTN in rural areas.

Nomadic VoIP providers will be difficult to saddle. For example a customer with a 310 phone number (in the Los Angeles area code) could be living in New York and make a VoIP call from their 310 number to another 310 number while sitting in their apartment in Manhattan. From a technology perspective, that's a non-issue.

But for a regulator, it's a *nightmare*. Is that a local call or a long distance call? Do they pay "recip comp" or access charges? Whose customer is it — California's or New York's? Who decides

these issues — the State commission based on the customer's billing address or the state to which the area code is assigned? What happens if New York decides it's a local call and California decides it's a long distance call? Where does the carrier go to resolve a compensation dispute — California, New York, or the FCC?

These are not the kind of problems that lend themselves to piecemeal or incremental solutions, because when you pull on one string, the fabric comes undone.

I would like to see a complete overhaul of the 1996 Act, but I will settle for a narrow approach that walls off IP telephony from state regulation and gives the FCC the time and, most importantly, the authority to sort these issues out.

I'm afraid an overall solution designed for a new world will

not come from Congress anytime soon, because these issues are simply too sticky. There are too many constituents with vested interests in preserving some piece of the status quo to allow meaningful reform to make it through the legislative process.

But we don't have much time. When these mergers are done and the big companies have time to focus on the competitive landscape, and when enough traffic migrates to IP platforms to impact the revenue streams of the large network owners, these compensation and interconnection disputes will become more serious.

Additionally, as more and more traffic migrates to IP platforms and away from the PSTN, more costs will be loaded on those services that do pay into the universal service fund — which will raise costs even more for consumers using those services. This will, in turn, drive

even more customers to lower-cost alternatives like VoIP — which will, in turn, put even more pressure on the remaining services to financially support the PSTN.

This is a malignant cycle that hurts customers, hurts competition, and hurts any service that uses the PSTN. It is imperative that the FCC change the funding mechanism to one that is technology and platform neutral. I believe the only mechanism for the foreseeable future, at least as a transition, is one that places a small monthly fee on all numbers from the North American Numbering Plan.

I know some ask what the purpose of the Universal Service Fund is today, with so many low cost alternatives out there. But don't kid yourself: Congress will not allow the Universal Service Fund to wither away. That's not going to happen, so you had better get behind a solution you can live with before you end up like the wireless industry — they are just about the largest contributors to the fund, passing enormous costs onto their customers, yet few are able to receive funds in return.

The real regulatory battle for the future of Internet telephony will be on the issue of "Net neutrality." Regulators are in a tough spot on this one. I have to tell you, I am a strong believer in using all the regulatory tools at my disposal to ensure customers have access to the services of their choice. But for the better part of this year now I have been asking everyone I come across to tell me how to write it. No one seems to know how to do it without being dangerously vague or rigid.

I moderated a panel in Boston a few months ago on this very topic and, despite the passion in the room for "Net neutrality," no two people could define something as simple as the definition of "discrimination" in the same way.

Network operators do have legitimate issues concerning bandwidth management, traffic flow, and network security that could easily be considered

These are not the kind of problems that lend themselves to piecemeal or incremental solutions, because when you pull on one string, the fabric comes undone.

discrimination by some definitions. For example, blocking access to Websites that are advertised in spam messages would be a form of discrimination; Asymmetrical bandwidth flows are, by default, a form of discrimination; Differential pricing, bundling, and co-marketing agreements all favor some customers and products while others pay more.

There is no “one-size-fits-all.” But, more importantly, it is very, very difficult — if not impossible — to write a regulation that allows for some types of discrimination but prohibits others, because any regulation that, by definition, involves making a judgment call (“this type of discrimination is ok”), at best becomes unenforceable and, at worst, becomes a maze of endless litigation. This is coming from a regulator who strongly supports the principle of Net neutrality, but who could not find a way to write it into regulation without causing much more harm than good.

That’s very different from what I would consider blatantly anti-competitive acts, such as port-blocking, or the use of filtering technologies designed to block Internet phone services without the users knowledge or consent. The FCC demonstrated in the Madison River case that it has the power to prevent anti-competitive actions by network owners (without needing new regulations), and that it is willing to use that power.

It’s a little harder to intercede where contract provisions are involved. The *Wall Street Journal* had an article just last week about Verizon Wireless and Vodafone subscription contracts that bar the use of their high-speed EvDO networks for Internet calling. I’m a Verizon wireless customer and I found that very disturbing.

But you know what? I don’t have to stay a Verizon customer. Cingular provides the same service where I live in the San Francisco area, and if I wait just a little while longer, Google may give me all the Web access I need while I’m in

The City.

Cable companies had these exact same types of provisions a few years ago preventing customers from using home servers and attaching certain devices to their home network. Market forces made those provisions bad for business a lot faster than it would have taken to remove them a regulation.

I have come to believe that we have to approach the issue of Net neutrality like we do the right to free speech or privacy. What constitutes speech or privacy is not necessarily defined in statute — these are *principles* that are enforced on a case by case basis and codified in a dynamic and robust body of case law.

I believe the FCC should address this issue on a case by case basis until a problem materializes that consumers cannot fix on their own through the power of choice in a free market.

On the other hand, where customer choices are being limited by blatantly anti-competitive actions, regulators should be fearless about stepping in.

My commission released its proposed decisions in both the SBC and Verizon mergers last week, and in those decisions — which approve both mergers — you will find a condition that requires both companies to end the practice of forcing customers to buy traditional voice service from them as a condition of accessing DSL. I pushed for this because I believe competitive VoIP providers are at a distinct and artificial disadvantage if a customer who wants to use their service is forced to pay twice for the privilege.

I can make the argument that a customer can simply switch to cable broadband if they want to use a competitive VoIP service, but many states,

like California, are in the middle of trying to eliminate most economic regulation on traditional voice services — and I’m simply not willing to do that as long as these companies make it harder for consumers to go to their competition.

And we’re not trying to regulate naked DSL. Let me repeat that. We’re not trying to regulate DSL. SBC and Verizon don’t have to comply with our request, just like we don’t have to

approve the mergers within any reasonable period of time. And we don’t have to give them relief from legacy regulation any time soon.

Verizon’s already said they are planning to offer it — before we made it a merger condition — and I believe SBC will follow. Because a competitive market forced them to do it — not regulators. We’re just helping to

move them along.

That’s how regulators can actually help Internet telephony thrive — by knowing when to step in and when to lie in wait. There’s an old prayer I’ve started using to guide me:

God, grant me the Serenity to accept the things I cannot fix through regulation; the Courage to step in when I need to; and the Wisdom to know who’s paying for it.

I will leave you with that. Thank you very much. IT

For more information on Susan Kennedy or the California Public Utilities Commission, please visit that organization’s Web site at <http://www.cpuc.ca.gov>.

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VoIP: The SMB Opportunity

By Greg Galitzine

According to recent IDC/CompTIA research defining the reseller opportunity for selling VoIP to small and medium-sized businesses (SMB), it appears that the SMB market is ready for VoIP.

The report finds that resellers are presented with a "significant opportunity to sell converged communications solutions to SMBs," with the majority of respondents saying that they recognize the business value in converged solutions, such as unified messaging and integrated voice and data applications.

The research shows that 13 percent have already deployed a merged solution, while an additional 40 percent said they are currently evaluating or will make the evaluation within 18 months. Less than one-third of the

respondents said they had no plans to carry out or evaluate the merging of voice and data communications over a common network.

While the numbers show an increased awareness within the SMB community of [VoIP \(define - news - alert\)](#) and its benefits, it's clear that not all SMBs are convinced that VoIP is a worthwhile consideration for their business operations. Perhaps it's simply a matter of not being aware of all the potential benefits that accompany an upgrade to IP-based communications technology.

► Cost

The first thing many people think about VoIP is that this technology is primarily a cost-saver. For many enterprises, that is enough of a reason to consider VoIP, and in fact, the cost savings element has many aspects to it that merit consideration. Tremendous cost savings come in the form of lower telephone bills. By converting voice into packets and transporting these packets over an IP network, either a private WAN or public Internet links, corporations are able to avoid the Public Switched Telephone Network (PSTN) [\(define - news - alert\)](#) and the associated tolls. It becomes theoretically possible to drive the cost of voice transport down to zero.

In the case of an enterprise with multiple branch offices, this is especially true. By using the company's data network, enterprises can eliminate all costs associated with calling between branches. Furthermore, they can have all locations served off of a single IP PBX, thus enabling extension dialing between far-flung locations. Now, by simply dialing a co-worker's three- or four-digit extension, you can speak to a distant colleague as if he were in the very next cubicle, when in reality they might be sitting on the other side of the same building, across town, or in a remote office located on the other side of the world.

If the data network reaches a remote location, so too do the telephony applications

that are enjoyed by employees at the main corporate location. Applications such as conferencing, voice mail, unified communications, click to dial: all of these new productivity enhancing services are enabled across the enterprise.

The IDC/CompTIA research found that, when asked about unified messaging, "25 percent of respondents claimed they had already deployed the solution and felt it provided 'good business value.'" Another 41 percent who had not yet deployed unified messaging said they recognized it would provide good business value.

Another major benefit of VoIP for SMBs is that managing the telecommunications system becomes increasingly simplified due to the elimination of the need to look after multiple networks. By combining separate voice and data networks into one network, VoIP enables cost savings from a network infrastructure perspective as well. In so-called 'greenfield' deployments, there is no need to run two separate network cables (one each for voice and data). Furthermore, network administrators need manage only the single converged network.

VoIP also reduces the cost and complexity associated with moves, adds, and changes. Many enterprise VoIP solutions enable administrators to manage the system via a Web-based browser interface and allow managers to enact changes to an employee's phone settings and voice mail settings (for example) remotely, and without the need to call the phone system's manufacturer to send a representative to make those moves, adds and changes. The costs can add up quickly. VoIP practically negates that expense.

There are many benefits to trading up to an IP-based telecommunications system for the SMB marketplace. Cost savings, an increase in efficiency, easier system management, and better integration of business process applications and telecommunications applications all point to a brighter future courtesy of VoIP. Many in the SMB community have already seen the light and are prepared to embrace VoIP on its merits. So this begs the question: What are you waiting for? **IT**

Greg Galitzine is the editorial director of Internet Telephony magazine.



SMBs Looking Adopt To VoIP

Jay Krauser

In an increasingly competitive business climate, organizations of all sizes continue to look to innovative technologies to solve fundamental business problems while slashing costs. The growing adoption of VoIP technology and the applications it supports has provided organizations with the solutions needed to improve corporate efficiency while lowering operating costs. This scenario is certainly the case when looking at multi-national organizations that employ thousands of people. However, large corporations are not the only companies that are deploying VoIP technology.

In an age when small and medium-sized businesses (SMBs) are looking to gain market share while expanding their national and global reach, VoIP solution sets provide an appealing answer to many of the unique challenges facing these organizations. Recent studies suggest that the adoption level of VoIP technologies among SMBs continues to surge with an even greater percentage currently evaluating the benefits and solutions on the market.

After the successful launch of NEC's UNIVERGE SV7000 MPS telephony server, a pure-IP solution for the SMB, the company has seen a sharp increase in businesses that are looking to gain an understanding of the options available to them. Yet, organizations are looking for more than just a cost-saving instrument that allows them to make phone calls. When deploying a new communications solution, businesses are purchasing a full array of tailored applications, hardware components and services that ensure the solution will expand as the organization grows. Productivity enhancing tools such as NEC's OpenWorX Communications Portal, Unified Messaging, and SoftPhones give SMBs the ability to conduct everyday tasks more efficiently while at the office or on the go. In addition to a wide array of applications, businesses of all sizes are increasingly relying upon specialized services to ensure the survivability of their communication system, the lifeline of any organization.

Applications and services continue to be hot-button solutions that existing and new customers are evaluating. However, new business objectives and needs have prompted prospective and existing customers to investigate new ways that an organization's communication system can expand as their business grows. In response to their customers' growing demands, SMBs have increasingly opened new offices around the globe to pro-

vide more localized support. With new offices come increasing communication complexities and demands.

In a recent study conducted by The Yankee Group, SMB respondents were asked to list the major business drivers that were prompting them to evaluate VoIP technologies. In the study, 53.4 percent of respondents answered that the ability of remote workers to conduct business outside of the office was a major factor in their

decision to investigate VoIP technology (Source: Yankee Group 2004 Small & Medium Business Broadband VoIP Survey). In response to customer demand and an increase in SMB interest in VoIP technologies, NEC's SV7000 MPS telephony solution was developed to provide the needed flexibility to tackle the most complex organizational needs.

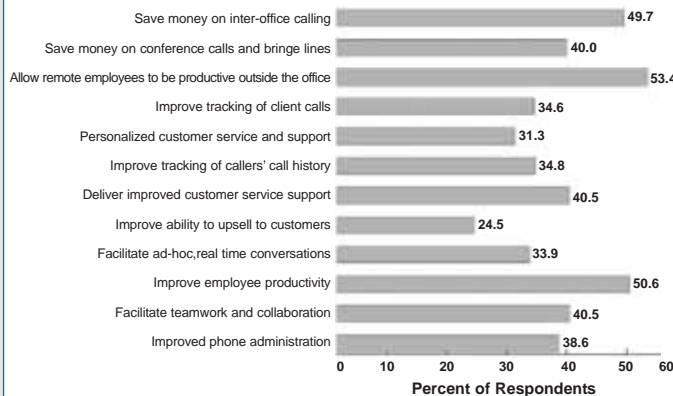
The SV7000 MPS IP telephony solution provides a unique set of advantages to those

businesses seeking an advanced information system that is both flexible and dependable. With the ability to serve as a stand-alone IP telephony server, a high-density media converter/media gateway or a fully-functional remote media gateway controller for remote office use, the SV7000 MPS sets a standard yet to be attained by any other product on the market. With the SMB in mind, NEC developed the SV7000 MPS to work with an organization's existing hardware and application infrastructure in order to provide remote users with the same features available to those in the home office location. The SV7000 MPS's remote media gateway controller gives remote workers the ability to access the organization's productivity enhancing tools from any remote location. Additionally, remote users may use an organization's communication solutions, such as softphones, presence applications, and other tools, to ensure that standard business procedures are not only completed, but are done so more efficiently.

As SMBs evaluate VoIP technologies and the value they provide, NEC will continue to provide innovative solutions, like the SV7000 MPS, that not only prove to lower operating costs associated with phone charges, but also increase organizational efficiencies between home and remote office locations. NEC's commitment to innovation continues to provide growing organizations with the tailored solutions they need in order to remain competitive in today's business climate.

Jay Krauser is general manager of Product Management Division, NEC Unified Solutions. ([news](#) - [alert](#))

Major Business Drivers for SMBs Adopting VoIP Services



Source: Yankee Group 2004 Small & Medium Business Broadband VoIP Survey

Banner & Witcoff

Mobility/VoIP Case Study

The law firm Banner & Witcoff specializes in intellectual property law, including patent, trademark, copyright, trade secret, computer, franchise, and unfair competition law. Firm members deal with legal problems across a wide range of technologies and industries, from automotive manufacturing to lasers, and custom catalysts for petrochemical processes to genetically engineered pharmaceuticals. The firm also has successfully represented clients in numerous landmark cases, including several renowned intellectual property decisions in the United States Supreme Court. The firm has offices in Chicago, Boston, Washington, D.C., and Portland, Oregon.

Banner & Witcoff came to understand very early on that excellent client service would differentiate its law practice from competing firms and be a major factor in the firm's success. The firm also was aware that emerging IP technology, coupled with a highly-skilled team of attorneys, could make this vision a reality. The goal was to enable Banner & Witcoff's attorneys, regardless of location, to be reached by and respond to their clients.

The firm wanted attorneys to be able to retain their telephone numbers and customized features as they traveled from office to office. In addition, Banner & Witcoff wanted employees in all four of its locations to collaborate easily and efficiently, while controlling communications costs. Consolidating its four separate systems into a single company-wide network would allow the firm to maintain and administer one network of systems, with a single point of contact for service. At the same time,

the firm wanted to unify access to all messages and enhance mobility by allowing its attorneys to quickly and easily communicate with clients and associates.

Business continuity was also a top priority. The new solution would have to ensure that, in case of a network or location disruption, individual offices would continue to function — and keep the brains of the business productive.

The verdict for Banner & Witcoff was a combination of Avaya IP Telephony and Mobility solutions that seamlessly connect its locations. The Banner & Witcoff solution is based on Avaya MultiVantage Communications Applications, including Avaya Communication Manager running on redundant Avaya S8700 Media Servers at the firm's Washington, D.C. office. This server pair also delivers telephony features and control to the firm's corporate offices in Chicago, Boston and Portland. At each site, Avaya Media

Gateways and Media Servers with Local Survivable Processors stand ready to take over call processing locally and keep communication moving in the event that network links are impaired. The 200 employees of the firm in all four locations use Avaya IP telephones.

"The IP telephony solution is flexible and easy to manage, and we can change and grow, practically without limit, no matter what the future may hold," says Bill Costello, Manager of Information Technology for Banner & Witcoff.

Results

Since the installation of the Avaya system, the firm has made dramatic improvements to internal processes, resulting in streamlined operations and the ability to respond more quickly to clients.

- Increased speed and effectiveness in client support through more efficient access and delivery of messages and information. The unified inbox provided by [Avaya \(quote - news - alert\)](#) Unified Communication Center is one of the most important mobility and productivity enablers. Now, employees at the desktop can access e-mail, voice messages, and faxes on-screen from a single inbox.

- Consistent features and functions across all offices eliminates need to re-educate traveling associates on differ-

ent systems. An attorney traveling to another Banner & Witcoff office can get right to work simply by picking up a phone and entering a personal identification code. Instantly, that phone takes on all the characteristics of the lawyer's primary office phone.

- Faster linkage of people, processes, and resources creates more productive internal collaboration for delivery of critical client services. In everyday operations, four-digit dialing between the four main offices makes it easier for attorneys to quickly contact each other for consultation and collaboration. Attorneys can quickly set up conferences with up to six associates and clients using the Avaya Communication Manager software's built-in conferencing capabilities. Initiating calls and adding conferees are simplified by an integrated directory.

- Avaya's "work from anywhere" solution enhances business continuity and fosters more secure, reliable, and agile business operations. The Avaya IP Softphone provides the "office anywhere" capability. The IP Softphone client software loads onto a laptop or other computer, giving Banner & Witcoff's attorneys all the network and communication capabilities they would have in their home office — the same telephone number, same customized telephone capabilities, and the same access to the company network and directories. The Avaya IP Softphone facilitates important gains in business continuity, enabling attorneys to work efficiently even when the office becomes unavailable.

- Reduced costs through elimination of intra-company calling costs, lowered voice network management, and maintenance at individual locations. Maintenance has been greatly simplified, for now there is one communications system throughout the company and one messaging server for all messages. Today, one part-time employee maintains the converged network, instead of the four different vendors the company used previously. Avaya Global Services monitors system operations on a 24x7 schedule. Avaya Integrated Management makes it easy to adminis-

ter the entire communication solution and do basic troubleshooting from one location. IT

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"The IP telephony solution is flexible and easy to manage, and we can change and grow, practically without limit, no matter what the future may hold."

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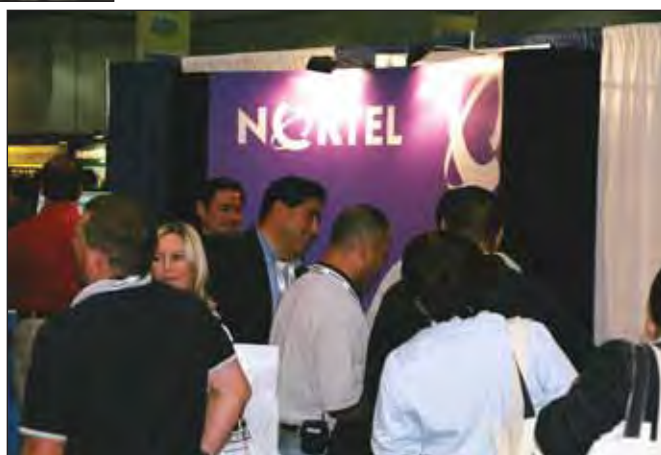
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From the keynotes by Carly Fiorina, Michael Powell, Niklas Zennstrom (via videoconference) and 18 other industry leaders, to the packed conference sessions to the Future of IP Telephony panel, the over 7,000 attendees at INTERNET TELEPHONY Conference & EXPO in Los Angeles spent four enriching days learning the best ways to deploy [VoIP \(define - news - alert\)](#), provide VoIP service, develop VoIP applications and resell VoIP service and equipment.



The World's Largest VoIP Marketplace

No technology event can match the activity you find on the INTERNET TELEPHONY Conference & EXPO exhibit floor. Thousands of buyers from more than 50 countries met with the 150+ companies on the show floor. Attendees took advantage of the energetic atmosphere to network with colleagues, form relationships and build their businesses.





Second Annual INTERNET TELEPHONY VoIP Service Provider Awards



INTERNET TELEPHONY magazine and the International Packet Communications Consortium (IPCC) recognized the 'Best of the Best' when they handed out their second annual VoIP Service Providers Awards at a special dinner and reception during INTERNET TELEPHONY Conference & EXPO Fall 2005 in Los Angeles.

Awards were given to the 'Top 100 VoIP Service Providers' as selected by INTERNET TELEPHONY and the IPCC.

In addition, 25 'Best of' awards were handed out to select companies who scored highest in specific categories as judged by a survey of INTERNET TELEPHONY magazine readers, and verified by the IPCC and the editors of INTERNET TELEPHONY magazine.

TMC president Rich Tehrani and IPCC Chairman Michael Khalilian presided over the evening's events.



Internet Telephony Conference & EXPO WEST: Best of Show



EXPO Coverage

At the recently concluded Internet Telephony Conference & EXPO, held in Los Angeles, CA from October 24–27, editors from *Internet Telephony*, TMCnet.com, and TMC Labs met with exhibitors and tried out new products, noting the very best of the show.

According to TMC Labs executive technology editor, Tom Keating, “Demonstrations of exhibitors’ products and services and the sheer volume of new and exciting companies and applications were the real show in Los Angeles this year.”

Judging was based on a company’s overall contributions to the VoIP/IP Communications industry, with an emphasis on things like technological innovation and product feature sets. Forward-looking products and services designed to aid in the development of the next generation of products and services were also awarded.

Winners submitted an application and displayed and demonstrated their product on the Internet Telephony Conference & EXPO show floor.

The following list comprises the award winners for the Fall 2005 Internet Telephony Conference & EXPO Best of Show. Congratulations!

COMPANY NAME	WEB SITE	COMPANY NAME	WEB SITE
Adtran	www.adtran.com	Quintum Technologies	www.quintum.com
Altigen	www.altigen.com	RADCOM	www.radcom.com
cyLogistics	www.cylogistics.com	RNKVoIP	www.rnkvoip.com
Diamondware	www.dw.com	Samsung Telecommunications America	www.samsung.com/bcs
Digium	www.digium.com	Sangoma Technologies	www.sangoma.com
EagleACD	www.eagleacd.com	Sphere Communications	www.spherecom.com
Ericsson	www.ericsson.com/us	Stealth Communications	www.stealth.net
Fonality	www.fonality.com	Sychip	www.sychip.com
Ingate	www.ingate.com	Tadiran America	www.tadiranamerica.com
Interstar Technologies	www.faxserver.com	Telephony@Work	www.telephonyatwork.com
Inter-Tel	www.inter-tel.com	TimeWarner Cable	www.rrbiz.com
Intertex	www.intertexdata.com	Toshiba America Information Systems	www.telecom.toshiba.com
Juniper Networks	www.juniper.net	VegaStream	www.vegastream.com
Kentrox	www.kentrox.com	Vertical Communications	www.vertical.com
Lucent	www.lucent.com	VOCAL Technologies	www.vocal.com
Microsoft	www.microsoft.com	VoIPShield Systems	www.voipshield.com
NEC Unified	www.necunified.com	Vonexus	www.vonexus.com
Netcentrex	www.netcentrex.net	Zoom Technologies	www.zoom.com
Nortel	www.nortel.com		

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- 2 Boards Voice/Fax
- 3 Computers/Fault Tolerant/NEBS
- 4 Computers/Industrial
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- 6 DSP Resource Boards
- 7 Internet Telephony Boards
- 8 Modems
- 9 Network Interface Cards
- 10 Video Conferencing Equipment
- 11 Chassis/Enclosures
- 12 Computer-less IP Telephony Devices
- 13 Multimedia Headsets/Phonesets
- 14 UPS/Power Protection/Management
- 15 Video Cameras

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- 39 OSS
- 40 Quality of Service
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- 58 Internet Fax
- 59 IP Centrex
- 60 IP Multicasting
- 61 IP Video Conferencing
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- 92 Integrated Access Device
- 93 Internet Telephony Appliances
- 94 Internet Telephony Gateways
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- 96 IP Phone (SIP, H.323, Ethernet...)
- 97 Media Gateway
- 98 Multipoint Control Unit
- 100 Network PBX
- 101 Programmable Switches
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- 103 Routers

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- 122 Consumer ASP (MS Office, AppleWorks, StarOffice...)
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- 126 Arbitrage
- 127 Clearinghouse
- 128 Consultant
- 129 Developer
- 130 Distributor
- 131 Interconnect
- 132 Long-Distance Broker
- 133 Reseller
- 134 Systems Integrator

1Number4U (E)
866-824-8245
<http://www.1number4u.com>
Products/Services: 50,54,63,69,70

1WorldFone (B, E)
+45 32 51 13 82
<http://www.1WorldFone.com>
Products/Services: 50,55,56,63,116

3Com, SIP Solutions (A, D)
847-262-7262
<http://www.3com.com/sip>
Products/Services: 58,63,20,123,113



Aastra Telecom (A)
905-760-4200
<http://www.aastra.com>
Products/Services: 60,12,96,105,36

AccessLine Communications (B, D)
206-654-1013
<http://www.accessline.com>
Products/Services: 50,63,67,68,69

Accurate Always (C, D)
800-828-9428 x1
<http://www.accuratealways.com>
Products/Services: 72,4,129

Accuva Technologies (A, D)
877-480-7727
<http://www.accuva.net>
Products/Services: 71,132,113,31,36

ACE*COMM Corporation (C)
301-721-3000
<http://www.acecomm.com>
Products/Services: 59,29,38,39
Other: Telemanagement: Fault, Configuration, Accounting, and Performance Management

Acoustic Magic (A)
978-440-9384
<http://www.AcousticMagic.com>
Products/Services: 50,52,61,67
Other: Microphones

Actelis Networks (A)
510-545-1059
<http://www.actelis.com>
Products/Services: 8,81,88

Aculab (A)
850-763-9281
<http://www.aculab.com>
Products/Services: 2,6,7,94,104

Adamind Inc. (C)
408-468-3915
<http://www.adamind.com>
Products/Services: 37,77
Other: Mobile Adaptation Software

Adaptive Digital Technologies, Inc. (C, D)
610-825-0182
<http://adaptivedigital.com>
Products/Services: 16,17,104,123,113

Adax (A)
510-548-7047 x182
<http://www.adax.com>
Products/Services: 105,44,77
Other: Protocol Controller Boards

ADC (A, D)
800-366-3889
<http://www.adc.com>
Products/Services: 134,38
Other: Communications infrastructure (data, voice, video)

ADigit Technologies, Corp (A)
886-3-5720379
<http://www.adigit.com.tw>
Products/Services: 58,7,113,46,79



Adomo (C, D)
20401 Stevens Creek Blvd.,
Cupertino, CA 95014
408-996-7086
<http://www.adomo.com>
info@adomo.com
Products/Services: 68,69,92,45,46
Adomo provides a new generation of voice applications and unified communications products that smooth your migration to VoIP. Adomo's open, hardened appliance platform gives customers freedom of choice in selecting the appropriate technology, vendor and timing for their VoIP rollout. By integrating with Microsoft Exchange and Active Directory, the Adomo solution eliminates the costs of supporting and integrating multiple systems from multiple vendors, while providing easy access to voice messages from any phone, or any Microsoft Exchange compatible device or client. Adomo. Bringing Voice Forward.

ADTRAN, Inc. (A)
256-963-8000
<http://www.adtran.com>
Products/Services: 86,90,92,103
Other: Ethernet Switches

Adtron Corporation (A)
602-735-0300
<http://www.adtron.com>
Other: In-chassis data storage

AdvancedVoIP.com (B, D)
213-341-1431
<http://www.AdvancedVoIP.com>
Products/Services: 60,64,118,123,30

Agilent Technologies (A)
800-829-4444
<http://agilent.com/comms>
Products/Services: 24,25,26,27,28

Ai-Logix, Inc (D)
732-469-0880
<http://www.ai-logix.com>
Products/Services: 2,6,7,31

Aktino (A)
949-258-0545
<http://www.aktino.com>
Other: Data Transmission Equipment

Alliance Systems (A, D)
972-633-3400
<http://www.alliancesystems.com>
Products/Services: 28,93,94,97,101

Allot Communications (D)
952-697-4203
<http://www.allot.com>
Products/Services: 106,38,40,42,43

Alltel CPI (E)
800-725-5835
<http://www.alltelcpi.com>
Products/Services: 86,92,96,95,103



Allworx (A)
635 Crosskeys Office Park,
Fairport, NY 14450
Contact: Sandra Gault
585-421-3850 x124
<http://www.allworx.com>
info@allworx.com
Products/Services: 94,95,100,108
Other: VoIP Key & PBX Phone and Data Network System
Allworx develops and markets VoIP & networking equipment. The Allworx product line is specifically designed to meet the needs of a small business (< 100 employees per site). The main system — Allworx 10x — is a converged communications system comprising of a phone system, network server and messaging server. The phone system supports both VoIP & CO lines along with PBX & Key system functionality. The network server and messaging software includes email, voicemail, unified messaging, follow-me calling, and group calendaring. Allworx can manage all the mission-critical communications for a business and reduce the complexity and cost of their infrastructure.

Altigen Communications, Inc. (A, D)
510-252-9712
<http://www.altigen.com>
Products/Services: 72,2,96,36
Other: IP-PBX and IP Contact Center Solutions

Amcom Software Inc. (C)
800-852-8935
<http://www.amcomsoft.com>
Products/Services: 70,72,20,31,32

Amedia Networks (A)
732-949-2350
<http://www.amedianetworks.com>
Products/Services: 81,84,85
Other: FTTP Ethernet Access

Americon (A)
707-539-3321
<http://www.controlroomsusa.com>
Other: Custom control room and call center furniture, large screen video display system

Ameritex Corporation (A, D)
626-915-5441 x135
<http://www.ameritex.com>
Products/Services: 24,25,27,28

Amity Systems, Inc. (A, D)
408-436-1900 x113
<http://www.amity-systems.com>
Products/Services: 49,50,61,68
Other: Multimedia Application Routing Server

AnchorPoint (C)
508-628-4511
<http://www.anchorpoint.com>
Products/Services: 29,31,32
Other: Telecom Expense Management for VoIP

Anew Broadband (A, B)
305-261-7778 x173
<http://www.anewbroadband.com/>
Products/Services: 111,113,114,116

AnswerNet Network (B, D)
800-411-5777
<http://www.answernet.com>
Products/Services: 53,54,68,70
Other: E-mail Management, Live Chat, Web Order Entry, Online Appointment Scheduling

APCON, Inc. (A, D)
503-639-6700
<http://www.apcon.com>
Products/Services: 25,101,35,38,41

Applied Voice & Speech Technologies (AVST) (C)
949-699-2300
<http://www.avst.com>
Products/Services: 63,68,69

arca technologies (A, D)
+44 (0) 28 9084 5700
<http://www.arca-technologies.com>
Products/Services: 24,25,26,27,28

ARRIS (A, D)
770-622-8691
<http://www.arrisi.com>
Products/Services: 81,88,93,37,45

Artesyn Technologies (D)
608-826-8227
<http://www.artesyncp.com>
Products/Services: 7,9,38,44
Other: WAN Interfaces And CPU Boards

Artisan Communications (B)
214-269-2751
<http://www.artisancommunications.net>
Products/Services: 59,113,114,116,79

Ascendent Systems (D)
888-507-1777
<http://www.ascendenttelecom.com>
Products/Services: 50,63,68,106,95

Astute Solutions (C, D)
614-508-6142
<http://www.astutesolutions.com>
Products/Services: 68,70,72,31,47

Atreus Systems, Inc. (C)
613-233-1741 x109
<http://www.atreus-systems.com>
Products/Services: 39,42
Other: Service Provisioning, Self-management for VoIP and Advanced IP Offerings

AudioCodes (A)
408-577-0488
<http://www.audiocodes.com>
Products/Services: 2,7,94,97,44

Avaya Inc. (A, C)
800-784-6104
<http://www.avaya.com>
Products/Services: 68,72,95,108,43

Avotus Corporation (D)
905-890-9199
<http://www.avotus.com>
Products/Services: 29

AZ Technology (C, E)
256-837-9877 x123
<http://www.aztechnology.com>
Products/Services: 49,50,60,61,129



BayPackets, Inc. (D)
510-743-2500
<http://www.baypackets.com>
Products/Services: 63,64,66,68,71

BEA Systems Inc. (C)
408-570-8701
<http://www.bea.com/wlcom>
Products/Services: 21,23,82,118,119



Belden/CDT Networking
1405 S. Milpitas Blvd.
Milpitas, CA 95035
Contact: Lance Rasmussen
800-989-4295
<http://www.power-sense.com>
sales@power-sense.com
Other: Power over Ethernet Hubs
PowerSense Midspan Power over Ethernet Hubs provide centralized powering for VoIP phone installations, Wireless LAN access points, IP Security cameras and other low voltage networked devices. PowerSense hubs are totally modular, cover standard and non-standard PoE applications, have durable all metal chassis and an industry leading 2-year warranty. Midspan hubs allow life extension of non-powered Ethernet switches by adding on Power over Ethernet capabilities. Check us out!!

BenchmarkPortal, Inc. (B, C)
805-614-0123 x60
<http://www.BenchmarkPortal.com>
Other: Benchmarking, Agent Satisfaction, Caller Satisfaction Measurement

Brix Networks (A)
978-367-5600
<http://www.brixnet.com>
Products/Services: 27,28,38,40,43

BTNAcess (B, D)
703-621-1635
<http://www.btnaccess.com>
Products/Services: 58,59,68,71,72

Bway.net (B)
212-982-9800
<http://www.bway.net>
Products/Services: 95,113,114,115
Other: Hosted PBX



CapRock Communications (B)
832-668-2300
<http://www.caprock.com>
Products/Services: 66,71,80
Other: satellite communications

Carrius Technologies, Inc. (A, C)
214-572-8094
<http://www.carriustech.com>
Products/Services: 84,106,94,97,101

Carroll Communications (A, D)
732-751-0101
<http://www.carrollcommunications.com>
Products/Services: 96,95,100,108,36

Catapult Communications Corporation (C, D)
650-960-1025
<http://www.catapult.com>
Products/Services: 24,25,28
Other: Protocol Analyzer

Cbeyond Communications (B, D)
678-424-2400
<http://www.cbeyond.net>
Products/Services: 121,123,111,114,116

Centillum Communications, Inc. (A, D)
510-771-3700
<http://www.centillum.com>
Products/Services: 5,97,46
Other: VoIP System-On-Chip

Ceragon Networks, Inc (A)
201-845-6955 x23
<http://www.ceragon.com>
Products/Services: 48,78,79,80
Other: Fixed Broadband Wireless

Cerida Corporation (B, D)
978-659-6500
<http://www.cerida.com>
Products/Services: 56,72,128
Other: Customer Relationship Management

Check Point Software Technologies (C)
650-628-2000
<http://www.checkpoint.com>
Products/Services: 71,90,41

Cicero Networks (C)
+353 1 6636510
<http://www.cicronetworks.com>
Products/Services: 45,46,79
Other: wVoIP Solutions

Clarisy (A)
847-439-4333 x440
<http://www.clarisy.com>
Products/Services: 66,88,96,30
Other: IP Hardphone/Speakerphone For Softphone Applications

ClearOne Communications (A)
800-707-6994
<http://www.clearone.com>
Products/Services: 50,52,67,15,17

Cognitronics (A, D)
203-830-3523
<http://www.cognitronics.com>
Products/Services: 22,23,82,106
Other: Media Servers

CoMatrix (E)
714-992-5982
Products/Services: 12,14,130



THE IP NETWORK AND VOIP SOLUTIONS PROVIDER

CommPartners (D)
3291 North Buffalo Drive, Suite 3
Las Vegas, NV 89129
Contact: Mark Peterson
702-367-8647 x1017
<http://www.commpartners.us>
info@commpartners.com
Products/Services: 111,113,39,47
Other: IP-Based Wholesale Solutions
CommPartners is a leading provider of wholesale IP network services, including hosted Voice over Internet Protocol services such as IP Centrex, hosted PBX, and conferencing functionality, as well as nationwide origination and termination services for domestic and foreign carriers. CommPartners has the largest U.S. domestic footprint for hosted VoIP, and its service infrastructure is designed for Internet Service Providers (wireline and wireless), IT Integrators, Private Cable Operators, Independent Operating Companies, Fiber-To-The-Home and Overbuilding entities. Founded and operated by industry veterans, CommPartners has optimized packet-based protocols in a distributed and robust architecture to provide high-quality VoIP connectivity and service offerings to its customers.



CommuniGate Systems (D)
655 Redwood Hwy, Ste 275
Mill Valley, CA 94941
Contact: Ali Liptrot
415-383-7164
<http://www.communiGate.com>
sales@communiGate.com
Products/Services: 50,56,59,68,23
Founded in 1991 and based in Mill Valley, California, CommuniGate Systems (CGS) develops carrier-class Internet Communications software for broadband & mobile service providers, enterprises, universities and OEM partners worldwide. Over 115 million end users including 40 million voice customers rely upon CGS products for their voice and data communication needs. CommuniGate Systems maintains the highest customer satisfaction level in the industry and has won more awards than any other Internet communications solution. CGS provides unsurpassed scalability and an expansive feature set all with unique clustering technology for 99.999% uptime. CGS has over 175 members in its partner network worldwide.

Compro Technologies Inc. (C, D)
609-242-2211
<http://www.comprotech.com>
Products/Services: 55,62,64,23,44

Computer Talk Technology, Inc. (B, D)
800-410-1051
<http://www.computer-talk.com>
Products/Services: 56,72,121,123,33

ComputerPREP (D)
800-228-1027 x4196
<http://www.ctpcertified.com>
Products/Services: 52,37
Other: CTP Certification Training and Education, Certification Testing

Concentric, An XO Communications Service (B)
866-500-9696
<http://www.concentric.com>
Products/Services: 114
Other: Web Hosting, Email, Domain Name Registration

Conklin-Intracom (A)
770-295-2500
<http://www.conklin-intracom.com>
Products/Services: 88,96,95,36,38

Connexn Technologies (C, D)
303-301-6200
<http://www.cnnxn.com>
Products/Services: 128,39
Other: Revenue Assurance, Service Activation Software Services

Contact Solutions, Inc. (D, E)
703-234-7877
<http://www.contactsolutions.com>
Products/Services: 42,43

Contek Networks, Inc. (A)
650-352-4777
<http://conteknet.com>
Products/Services: 94,96,95

Continuous Computing (A, D)
858-882-8800
<http://ccpu.com>
Products/Services: 3,19,22,23,44

Convedia Corporation (A)
604-918-6300
<http://www.convedia.com>
Products/Services: 106,98
Other: Media Server

Converged Access Inc. (A)
978-436-9111 x404
<http://www.convergedaccess.com>
Products/Services: 92,107,40,41,46

Copia International, Ltd. (C)
800-689-8898
<http://www.copia.com>
Products/Services: 53,54,58,68,89

Corinex Communications Corp. (A, C)
778-371-7697
<http://www.corinex.com>
Products/Services: 60,13,94,23,323,
Other: 200 Mbps Powerline Ethernet Adapters with QoS

CorpoTel (B, D)
877-420-5111
<http://www.corpotel.com>
Products/Services: 59,95,128,134
Other: Relocation; Multi-branch Integration; Outsourcing; Management; Hosted IP-PBX

CosmoCom, Inc. (C)
631-940-4200
<http://www.cosmocom.com>
Products/Services: 56,70,72,33
Other: Unified IP Contact Center

CPDI (A, C)
360-694-2977
<http://cpdi.com>
Products/Services: 64,20,123,124,117

CPT International Inc. (B)
866-388-8358
<http://www.cptii.com>
Products/Services: 123
Other: VoiceXML Application Hosting

Crystal Group Inc. (A, D)
319-378-1636
<http://www.crystalpc.com>
Products/Services: 11,3,4,134
Other: IP Telephony Developer Platform



A: EQUIPMENT VENDOR
B: SERVICE PROVIDER/
CARRIER
C: SOFTWARE DEVELOPER
D: SOLUTIONS PROVIDER
E: RESELLER/DISTRIBUTOR

CrystalVoice Communications (C, D)
805-899-4260
<http://www.crystalvoice.com>
Products/Services: 56,72,23,93,96

CTGi — Coastal Technologies Group, Inc. (B, D)
800-448-2835
<http://www.CTGi.biz>
Products/Services: 123,29,39,42

CTI — Customer Transaction Intelligence (C, D)
800-800-2333
<http://www.ctigroup.com>
Products/Services: 129,134,119,31
Other: Billing Analysis, Invoice Processing, Call Management, TEM

CTI Squared Ltd (C, D)
+972 9 9605220
<http://www.cti2.com>
Products/Services: 68,106,89,119
Other: Visual Voicemail, Video Messaging, Visual Mobile Client, Mobile Mail, Content

Cummins Power Generation (A, B)
763-574-5000
<http://www.cumminspower.com>
Products/Services: 14
Other: Power Generation

Cummins Power Rent (A)
623-572-4940
<http://www.cumminspowerrent.com>
Products/Services: 14
Other: Temporary turnkey power stations/rental generators

CustomCall Data Systems
608-274-3009
<http://www.customcall.com>
Products/Services: 29

D

Data Connection Limited (C)
011 44 20 8366 1177
<http://www.dataconnection.com>
Products/Services: 49,68,22,23
Other: IP Routing, VPN, MPLS and ATM.

DataLinx (C, D)
914-333-0882
<http://www.datalinx.net>
Products/Services: 51,29,39

DataProse Billing Solutions
408-255-5006
<http://www.dataprose.com/billing>
Products/Services: 29
Other: Electronic Bill Presentment & Payment

De Lage Landen Financial Services
800-669-9441 x5761
<http://www.delagelanden.com>
Other: Financial Services to the Business Communications Industry

DFA, Inc. (B, E)
770-394-7944
<http://dfaco.com>
Products/Services: 50,56,59,123,116

Dialexia Communications Inc. (C, D)
514-421-1151 x214
<http://www.dialexia.com>
Products/Services: 59,21,23,95,29

DiamondWare, Ltd. (C)
480-380-1122
<http://www.dw.com>
Products/Services: 50,20,129,79
Other: Converged Enterprise Communications Solution, Low Latency Windows/PDA Softphone

Dictaphone Corporation (A, D)
800-886-4908
<http://www.dictaphone.com>
Other: Recording, Quality Monitoring, Workforce Relationship Management

Digital Talk (B, D)
954-949-0501 x505
<http://www.pcfonica.com/webcalling>
Products/Services: 56,72,98,47
Other: ASP VoIP Conferencing Portals; B2B VoIP Integration with Third-Party Web Applications



Digium, Inc. (A, D)
150 West Park Loop, Suite 100
Huntsville, AL 35806
Contact: Greg Vance
256-428-6000
<http://www.digium.com>
sales@digium.com
Products/Services: 2
Other: Asterisk, the Open Source PBX
Digium is the creator and primary developer of Asterisk, the first Open Source PBX. When used with Digium's PCI telephony interface cards, Asterisk offers a strategic, highly cost-effective approach to voice and data transport over TDM, switched, and Ethernet architectures. Digium solutions reduce the costs of traditional TDM and VoIP implementations through Open Source, standards-based software and next-generation gateways, media servers, and application servers. Digium supports a wide range of VoIP protocols, TDM voice protocols, and data protocols. Digium provides a refined selection of quality hardware and software products, along with a full range of professional services, including consulting, technical support, and custom software development services.

Dimension Data (D, E)
866-343-2828
<http://didata.com>

Diversified Technology (A, D)
800-443-2667
<http://www.dtimes.com>
Products/Services: 11,3,4,106,94

Doretel Communications, Inc. (A, D)
404-755-5721
<http://www.doretel.com>
Products/Services: 105,104,29,44
Other: Cisco Registered Partner, Quintum VoIP Products

DSP Group (D)
408-986-4470
<http://www.dspg.com>
Products/Services: 5,7,96,37,74

DSP Research, Inc. (D)
408-481-0264
<http://www.dspr.com>
Products/Services: 1,6,7,16,110



Earthphone.ca (D)
905-853-4966
<http://www.earthphone.ca>
Products/Services: 70,72,93,94,104

ECI Telecom (A, D)
972-3-926-8341
<http://www.ecitele.com>
Other: MSPP, Bandwidth Management, SDH Integrated Access Unit, DSLAM, xDSL modems

eDial (C)
781-895-3655
<http://www.edial.com>
Products/Services: 50,68,23
Other: Web Conferencing



Eicon Networks (A)
Americas', 2805 N. Dallas Pkwy
Suite 200
Plano, TX 75093
Contact: Leigh Ann Clavenna
972-473-4500
<http://www.eicon.com>
leigh.clavenna@eicon.com
Products/Services: 2,6,7,20,31
Eicon Networks Corporation is a leading designer, developer and manufacturer of quality communication products for networked business applications. Founded in 1984 with Headquarters in Montreal, Canada, Eicon has a global presence with regional offices across the world distributing, marketing and supporting products in more than 80 countries through a network of channel partners. Eicon's Research and Development centers in Canada, Germany and Ireland develop products which today have an installed base of over 3 million units.

Electric Cloud, Inc. (C)
650-968-2950
<http://www.electric-cloud.com>
Products/Services: 119

Elix (B, D)
514-768-1000 x2323
<http://www.bceelix.com>
Products/Services: 125,31,37,47
Other: contact center solutions

Elma Electronic Inc.
510-490-7388 x516
<http://www.elmabustronic.com>
Products/Services: 11



Emergent
Network Solutions, Inc.

Emergent Network Solutions (A, D)
1024 S. Greenville, Suite 201
Allen, TX 75002
Contact: Derek Schartz
888-879-3674
<http://www.emergent-netsolutions.com>
sales@emergent-netsolutions.com
Products/Services: 59,23,104,108
Other: Session Border Controller
Emergent Network Solutions, Inc. provides open software solutions and services tailored to the emerging network. Solutions include a retail/enterprise VoIP solution, softswitch, session controller, prepaid, postpaid, voicemail and various gateway solutions.

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Empire Communications (A, D)
707-545-8300
<http://www.empirecomm.com>
Products/Services: 67,68,72,95,131

Empirix, Inc. (A, C)
781-266-3285
<http://www.empirix.com>
Products/Services: 23,25,27,28,40

enKoo (D)
408-978-3526
<http://www.enkoo.com>
Products/Services: 71

Entuity (D)
212-489-0559
<http://www.entuity.com>
Products/Services: 38

Envision (C, D)
206-225-0800 x500
<http://www.envisioninc.com>
Products/Services: 119
Other: Business Intelligence, Quality Monitoring, Workforce Management and eLearning



Epygi Technologies (A)
Two Legacy Town Center, 6900
Dallas Parkway, Suite 850
Plano, TX 75024
Contact: Jeff Kirchner
972-692-1166 x38
<http://www.epygi.com>
jeff.kirchner@epygi.com
Products/Services: 50,82,94,95,103
Epygi Technologies designs and manufactures the Quadro line of feature-packed 'All-In-One-Box' IP PBXs, VoIP gateways, and Conference Servers. Designed for the small business, Quadros are reliable, feature-rich units that are compatible with most analog and VoIP products. With extensive knowledge of VoIP protocols, and network infrastructure, Epygi brings traditional telephony and the Internet together. Based in Plano, Texas, Epygi Technologies is a privately held US company that was founded in 2000 and has over 200 employees worldwide. The company has sales and development offices on three continents.

Ericsson Inc., (A, D)
972-583-0000
<http://www.ericsson.com/>
Products/Services: 63,68,70,95,100

Esna Technologies Inc (C)
905-707-9700 x346
<http://www.esnatech.com>
Products/Services: 53,54,68
Other: Unified Communications

Excel Switching Corporation (A)
508-862-3091
<http://www.excelswitching.com>
Products/Services: 64,82,106,97,101

EyeBill (C, D)
877 649 5622
<http://www.eyebill.net>
Products/Services: 62,64,21,119,29

eyeP Media (C)
41244239420
<http://www.eyepmedia.com>
Products/Services: 17,20,22,23,96

F

FacetCorp (A, D)
800-235-9901
<http://www.facetcorp.com>
Products/Services: 68,95,100,104,36

Falcon Electric, Inc. (A)
800-842-6940
<http://www.falconups.com>
Products/Services: 14

Fidelio Communications System (A, B)
847-993-5442
<http://www.fidelioconnect.com>
Products/Services: 49,50,56,61,130

Five9 (D)
925-201-2096
<http://www.five9.com>
Products/Services: 72,23,123,31,33

FlashTalk Communications (B)
301-585-4481 x305
<http://www flashtalk.com>
Products/Services: 49,50,56,123,36

Forum Communications International (A, D)
972-680-0700 x1581
<http://www.forum-com.com>
Products/Services: 49,50,67
Other: Emergency Response/Collaboration

Freeway Communications (B, D)
213-225-2200
<http://freeway.com>
Products/Services: 64,104,133,113,29

G

General Bandwidth (A, D)
512-681-5400
<http://www.genband.com>
Products/Services: 20,84,97,45,46

General Telecom (D)
303-278-0700
<http://www.gentel.net>
Products/Services: 38
Other: Full-Service TDM And IP Network Management D

GL Communications, Inc. (D)
301-670-4784 x114
<http://www.gl.com>
Products/Services: 24,25,26,27,28

Global IP Sound (C, D)
415-397-2555
<http://www.globalipsound.com>
Products/Services: 17,18,24
Other: Embedded Voice Processing Software

Global Knowledge (D)
919-388-1032
<http://www.globalknowledge.com>
Products/Services: 52
Other: VoIP & Telephony Training

GlobalPhone Corp. (B)
703-533-2122
<http://www.gphone.com>
Products/Services: 55,56,59,64,116

Globalscape, Inc. (C, E)
210-308-8267 x143
<http://www.globalscape.com>
Products/Services: 49,129,41
Other: VoIP Services

Globalstar (B)
408-933-4543
<http://www.globalstar.com>
Products/Services: 121,76
Other: Satellite communications

GM Voices, Inc. (B, D)
770-752-4500
<http://www.gmvoices.com>
Products/Services: 123,125,113
Other: Voice Branding, Speech Recognition, International Telephony, Corporate Storytelling

GN Netcom, Inc. (A)
800-826-4656 x743
<http://www.gnnetcom.com>
Products/Services: 13,93

Go Tek Inc. (D)
416-817-6888
<http://www.softswitch.ca>
Products/Services: 61,29,39,45,46

GOOD LIFE TECHNOLOGY INC. (B, E)
818-726-8647
<http://www.goodlifetech.cm>
Products/Services: 111,113,117
Other: Termination and Origination

Grandstream Networks, Inc. (A, C)
617-566-9300
<http://www.grandstream.com>
Products/Services: 23,93,94,96,97

H

Headsets.com Inc. (A, E)
800-450-7686
<http://www.headsets.com>
Products/Services: 13

Hewlett-Packard Company (A)
281-370-0670
<http://www.hp.com/go/rackandpower>
Products/Services: 14

High Tech High Touch Solutions, Inc. (B)
425-398-9292
<http://www.HTHTS.com>
Products/Services: 72,128,134,123
Other: Help Desk, CRM, Call Center Consulting Services

KEY

- A: EQUIPMENT VENDOR
- B: SERVICE PROVIDER/
CARRIER
- C: SOFTWARE DEVELOPER
- D: SOLUTIONS PROVIDER
- E: RESELLER/DISTRIBUTOR

HigherGround, Inc. (C, D)
818-591-3133 x249
<http://www.highergroundinc.com>
Products/Services: 29,31,40
Other: Call Recording Solution

HostedSwitch (B, D)
866-744-1140
<http://www.HostedSwitch.com>
Products/Services: 127,113,29

Hyperfone (B, E)
517-745-1530
<http://www.myhyperfone.com/shawn>
Products/Services: 93,130
Other: VoIP Business Opportunity With Both Dial-Up and Broadband

I

I.S. Associates, Inc. (C, D)
888-583-3440 x153
<http://www.isassoc.com>
Products/Services: 129,119,123,29,38



iKnowWare (C)
439 Champions Drive,
Georgetown, TX 78628
Contact: Regional Contacts on
Web Site
512-215-4305
<http://www.iKnowWare.com>
sales@iknowware.com
Products/Services: 49,50,68,72
iKnowWare is an integrated web-based application that empowers small businesses and growing companies to effectively manage all business processes, marketing, sales and service, task and project management, operations, distribution, finance and client relationships, with greater efficiency. Through a secure storehouse of up-to-the minute information, companies save time and money and have unprecedented visibility into their operations, without adding expensive infrastructure or personnel. iKnowWare is the first and only business management solution that gives companies all they need to know, anytime, anywhere, from any internet enabled device including PDAs, PCs, Mobile & Voip telephony.

ILC (C)
404-504-7440
<http://www.ilc.com>
Products/Services: 38,39,40

IN-Call Company (A, B)
626-912-0388
<http://www.in-call.com>
Products/Services: 56,12,23,94,115

Ingate Systems (A)
603-883-6569
<http://www.ingate.com>
Products/Services: 23,90,93,41
Other: SIP-Enabled Firewalls and SIParators, NAT traversal, remote connectivity

Intec Telecom Systems (C)
404-705-2800 x2982
<http://www.intecbilling.com>
Products/Services: 29

Integrated Research (C)
303-283-7700
<http://www.ir.com>
Products/Services: 27,28,38,40
Other: IP Telephony Infrastructure Management

IntelliNet Technologies, Inc. (C, D)
321-726-0686
<http://www.intellinet-tech.com>
Products/Services: 20,105,44,75,77

Interactive Intelligence Inc. (C)
317-872-3000 x3
<http://www.ININ.com>
Products/Services: 63,68,70,23,78

International Systems Research Co. (C, D)
650-570-6960
<http://www.isrus.com>
Products/Services: 23,134,30,78,79

Intertext Data (A)
508-385-6335
[intertextdata.com](http://www.intertextdata.com)
Products/Services: 8,90,94,95,103

Interwise (C)
617-475-2166
[interwise.com](http://www.interwise.com)
Products/Services: 49,50,52,61

Intoto Inc. (C, D)
408-844-0480 x323
<http://www.intoto.com>
Products/Services: 71,23,41,46,80

Intrado (D)
877-856-7504
<http://www.intrado.com>
Other: E9-1-1 Solutions

Invores Systems, Inc. (C, D)
516-868-5455
<http://www.invores.com>
Products/Services: 69,23,119,123,125

IP Unity (C, D)
408-582-1100
<http://www.ip-unity.com>
Products/Services: 50,61,64,68
Other: Media Server and Applications Servers for Web Conferencing, Video Chat, Enhanced/IP Services Platform

IP-Centrex.ca (B)
604-484-8647 x102
<http://www.IP-Centrex.ca/>
Products/Services: 123,115,116,117

IPCB.net (SM) (B, D)
866-744-1140
<http://www.IPCB.net>
Products/Services: 91,104,127,131,29

IPCMall (E)
972-234-4343 x204
<http://www.ipcmall.com>
Products/Services: 82,90,100,31,36

IPCS (ICC Public Communication Systems) (B, E)
562-926-0734 x139
<http://www.internetvoip.com>
Products/Services: 91,94,96,45,46

Iperia, Inc (C, D)
781-993-3500
<http://www.iperia.com>
Products/Services: 50,68,21,23

ipeya (A, E)
408-727-0440 x103
<http://www.ipeya.com>
Products/Services: 82,90,93,95,100

ipNetfusion (A, D)
972-761-9271 x214
<http://ipnetfusion.com>
Products/Services: 24,25,26,27,28

iQ NetSolutions, Inc. (A, D)
508-870-3228
<http://www.ignetsolutions.com>
Products/Services: 50,20,129,31,32





IVR USA (D)
9725 SW Beaverton Hillsdale
Hwy, Suite 230, Suite 230
Beaverton, OR 97005
Contact: John Orton
971-249-1322
<http://www.ivrusa.com>
johno@ivrusa.com
Products/Services: 129,133,134
IVR USA is a premier provider of SIP business solutions for contact centers, speech enabled IVR's, CRM integrations and custom development. In addition, we provide SMB solutions and offer top level expertise in Audio and Video Conferencing.

Ixia (A)
818-871-1800
<http://www.ixiacom.com>
Products/Services: 25,27,28



Jeongmin electronics (A)
82 2 21132256
jeongmin.com
Products/Services: 61,10,23,323,
Other: IP video phone



kasenna (D)
650-943-8600
<http://www.kasenna.com>
Other: Video Network Systems

Kentrox (A, B)
503-350-6001
<http://www.kentrox.com>
Products/Services:
71,90,103,38,40

KIRK telecom Inc. (A, E)
404-614-1751
<http://www.kirktelecom.com>
Products/Services:
65,110,129,130,79

Know IT!, Inc. (C)
888-566-9284
<http://www.knowit-cti.com>
Products/Services:
56,62,72,31,36

Koncept International Inc. (A, D)
626-796-7688
<http://www.konceptusa.com>
Products/Services:
50,91,94,23,129



Level 3 Communications (B)
877-2LE-VEL3
<http://www.Level3.com>
Products/Services: 113,116

LignUp (C, D)
650-265-2000
<http://www.lignup.com>
Products/Services: 59,23,104
Other: Software Media Server;
VoiceXML Web Services
(Development tools)

Linksys, a Division of Cisco Systems (A)
408-853-7682
<http://www.linksys.com>
Products/Services: 93,94,96,95

LogiSense Corporation (C, D)
519-249-0508 x1103
<http://www.logisense.com>
Products/Services: 29,38,39,45,46

LumenVox LLC (C)
877-977-0707 xSales
<http://www.LumenVox.com>
Products/Services:
69,70,129,119,125



M5 Networks (B)
646-230-5000
<http://www.m5net.com>
Products/Services: 59,95,123,115,36

Mantis Telecom, Inc. (B, D)
954-315-1754
<http://www.mantistelecom.com>
Products/Services: 128,131,133,113

MCI (B)
800-465-7187
<http://www.mci.com>
Products/Services: 50,59,72,111,114

Mediatix Telecom, Inc. (A, D)
514-285-0058
<http://www.mediatix.com>
Products/Services: 23,84,92,94,36

MERA Systems, Inc. (A, C)
888-238-0057
<http://www.mera-systems.com>
Products/Services: 104
Other: Session Border Controller



A: EQUIPMENT VENDOR
**B: SERVICE PROVIDER/
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C: SOFTWARE DEVELOPER
D: SOLUTIONS PROVIDER
E: RESELLER/DISTRIBUTOR

Meru Networks (A)
408-215-5357
<http://www.merunetworks.com>
Products/Services: 80
Other: WLAN Access Points, WLAN
Controllers, Radio Switch family

Metropark Communications (D)
314-439-1900
<http://www.metropark.com>
Products/Services: 93,94,96,31,36

MGE UPS Systems, Inc. (A)
714-557-1636
<http://www.mgeups.com/us>
Products/Services: 14

Millenigence Inc. (C, D)
949-955-3180 x110
<http://www.millenigence.com>
Products/Services: 59,20,21,129



MINACOM (A, C)
260 Queen St.,
Montreal, PQ H3C 2N8
Contact: Charles Coutu
514-879-9111 x228
<http://www.minacom.com>
info@minacom.com
Products/Services: 27,28,38,40
Other: Single-End VoIP Probes

Minacom's DirectQuality R7 Service Level Test Automation platform integrates VoIP, data, video, fax/modem and analog voice QoS testing with a highly scalable web-based OSS system. DirectQuality also offers trunk, carrier, and route testing, helping Telcos automate least cost routing and other critical business processes with the same Minacom test solution over 60 carriers already use to monitor their next-gen IP services. Cable MSO's will benefit from DirectQuality's extensive integration with widely deployed softswitches, transponders, handheld test-sets and MTA's, offering a unique digital voice test automation solution that leverages the network assets they already own.

Mindspeed Technologies, Inc. (D)
949-579-3650
<http://www.mindspeed.com>
Other: Comcerto enterprise and carrier-class VoIP processing solutions

Morgle (C)
01452614271
<http://www.morgle.com>
Products/Services: 32
Other: New Voip Directory

Motorola Broadband (A)
215-323-1000
Products/Services:
92,93,94,96,110

Motorola Embedded Communications Computing Group (D)
602-437-3623
<http://www.motorola.com/computing>
Products/Services: 11,3,97,118
Other: Communications Server

Multi-Tech Systems, Inc. (A)
800-328-8717 x5178
<http://www.multitech.com>
Products/Services: 12,8,94,103,77



NACT Telecommunications (B, D)
801-802-3000 x368
<http://www.nact.com>
Products/Services: 64,68,20,23,29

Natural Convergence (C)
613-280-2000
<http://www.naturalconvergence.com>
Products/Services: 59,21,82,119
Other: Hosted VoIP Applications
Software

Natural Data Inc. (A)
905-884-3338
<http://www.naturaldata.com>
Products/Services: 58,2,8,89
Other: Fax for Sabanes Oxley Act



NEC Unified Solutions, Inc. (D)
6535 N. State Highway 161,
Irving, TX 75039-2402
Contact: Amy Dittman
214-262-6384
<http://www.necunifiedsolutions.com>
ADittman@necunified.com
Products/Services:
28,95,134,40,80

NEC Unified Solutions Inc., is a leader in integrated communications solutions for the enterprise. We deliver an innovative suite of products; applications and services that help customers achieve their business goals. This includes a broad range of communications services and solution choices, flexible product platforms and applications, and an open migration path to protect investments. NEC Unified Solutions is a relationship-driven company, approaching each challenge and opportunity with the highest levels of commitment and consideration for our customers' long-term benefit. NEC Unified Solutions has the unique ability to optimize a customer's communications infrastructure and technology investments, and deliver excellence through its Professional and Managed services like network assessments; remote monitoring and management; systems integration and network security.

NEON Communications, Inc. (B)
508-616-7837
<http://www.neoninc.com>
Products/Services: 71
Other: Ethernet, Wavelength,
SONET Private Line, Colocation

Neon Software (D)
925-283-9771
<http://www.neon.com>
Products/Services: 38,40

Net2Phone (A, E)
91-79-22124427
<http://www.net2phone.com>
Products/Services: 64,71,23,45,79

NetCentrex (C, D)
408-521-7400
<http://www.netcentrex.net>
Products/Services: 59,82,104,46
Other: Triple Play

NetFabric Corporation (A)
203-775-1178
<http://www.netfabric.net>
Products/Services: 62,65,106,94
Other: Intelligent Call Router

NetHertz.com, Inc. (B, E)
701-282-5555
Products/Services:
70,23,132,122,123

NetIQ (C)
713-418-5759
<http://www.netiq.com/voip>
Products/Services: 27,28

NetScout Systems (D)
888-999-5946
<http://www.netscout.com>
Products/Services: 38,39,40,43
Other: Application Performance
Management

netVOICE communications (D, E)
604-484-8647 x102
<http://www.netvoice.ca/>
Products/Services: 96,95,104,36

NetWolves Corporation (A, B)
813-286-8644
<http://www.netwolves.com>
Products/Services: 71,90,29,40,41

Network General Corporation (A)
408-571-5000
<http://www.networkgeneral.com>
Products/Services: 28,38

Subscribe FREE online at <http://www.itmag.com>

Network Instruments (A, C)
952-932-9899
<http://www.networkinstruments.com>
Products/Services: 25,28,38,80

NETXUSA Inc. (E)
864-271-9868 x122
<http://netxusa.com>
Products/Services: 50,96,95
Other: Asterisk Boards and Devices

New Global Telecom (D)
303-278-0700
<http://www.ngt.com>
Products/Services: 113,38
Other: Comprehensive Wholesale VoIP for Service Providers

NewCross Technologies (A)
650-347-5045 x1
<http://www.newxt.com>
Products/Services:
59,82,84,104,44

NewLogic Technologies (D)
+43 5577 995-0
Products/Services: 80

Newport Networks Limited (A)
+44 (0) 1291 635830
<http://www.newport-networks.com>
Products/Services: 59,62,23,131
Other: Session Border Controller

NextCentra Integrated Communications Solutions (C)
+54 11 4903-6817
<http://www.nextcentra.com>
Products/Services: 128,31,42

NexTone Communications (C, D)
240-912-1310
<http://www.nexttone.com>
Products/Services: 104,38,40
Other: Session Border Control

NextPage (C)
801-748-4500
<http://www.nextpage.com/getsmart>
Products/Services: 49,72

NextWest Phone Systems (A, D)
877-446-6398
<http://www.nextwest.com>
Products/Services: 2,95,116,33

NMS Communications (A)
508-271-1682
<http://www.nmss.com>
Products/Services:
2,7,84,106,94

Nortel Networks (A)
800-4NORTEL
<http://www.nortelnetworks.com>
Products/Services:
68,71,70,72,23

Nuance (B, C)
650-480-4017
<http://nuance.com/>
Products/Services: 125
Other: Voice recognition software

NUASIS Corporation (C)
650-318-2200
<http://www.nuas.com>
Products/Services: 62,70,72,23
Other: IP-based Contact Center Software

NuCall Communications Inc. (B, D)
617-275-4100 x4103
<http://www.nucall.com>
Products/Services: 49,59,61,116

Nuvio (B)
816-444-4422
<http://www.nuvio.com>
Products/Services:
59,63,70,123,113



Octasic Inc. (D)
514-282-8863
<http://www.octasic.com>
Products/Services: 6,16,17,46
Other: Chips For Packetization, Compression

Openet Telecom (C, D)
866-873-7614
<http://www.openet.com>
Products/Services: 29,39,77,78
Other: Rating and Mediation

Orative (C)
408-625-3100
<http://www.orative.com>
Products/Services: 68,30,32,79

OZ (C)
514-390-1333
<http://www.oz.com>
Products/Services: 68
Other: Mobile messaging (IM & E-mail) software



PacketTalk, LLC (B, D)
212-400-3730
<http://www.packetalk.net>
Products/Services:
113,114,115,79,80

Packeteer (A)
408-873-4400
<http://www.packeteer.com>
Products/Services: 16,38,40

Pactolus Communications Software (C)
508-616-0900
<http://www.Pactolus.com>
Products/Services: 50,64,68,82,42



Pandora Networks (B, D)
1195 Park Avenue, Ste 201,
Emeryville, CA 94608
Contact: Jon Beck
800-805-0558 x1
<http://www.pandoranetworks.com>
info@pandoranetworks.com
Products/Services:
49,59,65,68,70
Pandora Networks presents Worksmart, the leading On Demand IP Communications solution designed for the SMB. Worksmart is the only On Demand communications service that provides integrated communications services including; virtual IP-PBX and ACD, private and public instant messaging, web based presentation and, collaboration, audio/video/IM/web conferencing, web based contact center from a browser and thin client to any office or employee worldwide. Worksmart is built on an open-source, SIP and standards-based architecture that is designed with scalability, extensibility and flexibility to integrate with legacy and existing billing, PBX, collaboration, messaging applications. The service is sold exclusively via service providers and resellers.

Pangea Communications Corp. (B, D)
503-221-2121
<http://www.pangea-comm.com>
Products/Services: 53,58,68,112

PBX.NET CORPORATION (B)
248-553-7100 x#12
<http://www.pbx.net>
Products/Services:
59,96,123,113,115

pbxnsip inc. (A)
978-364-0072 x111
<http://www.pbxnsip.com>
Products/Services: 93,95



PC Telecom (D, E)
860-536-1199
<http://www.pctelecom.com>
Products/Services:
106,101,104,108,110

PC Telecom Global (D, E)
(65) 6562 8709
Products/Services:
101,104,107,108,110

Pedestal Networks (A, D)
510-578-0158
<http://www.pedestalnetworks.com>
Products/Services: 88

PentaWare Inc. (C, D)
888-998-1492
<http://www.pentaware.com>
Products/Services: 49,129

Phihong (A, D)
510-445-0100
<http://www.phihong.com>
Products/Services: 14

Phonetic Systems, Inc. (C)
978-439-3600
<http://www.PhoneticSystems.com>
Products/Services: 125,32
Other: Voice-Enabled Technology

PIKA Technologies Inc. (A)
613-591-1555 x388
<http://www.pikatechnologies.com>
Products/Services: 2,6,7,17,23

Pipeline Telecom Inc. (B, D)
321-409-9971 x11
<http://www.pipelinetelecom.com>
Products/Services: 55,64,65,131
Other: PC-to-Phone

Plantronics (A)
800-544-4660 x5521
<http://www.plantronics.com>
Products/Services: 13
Other: Headsets for the computer

PointOne (B)
512-735-1200
pointone.com
Products/Services: 59,116,40,45,46

Polycom, Inc. (A)
800-POL-YCOM
<http://www.polycom.com>
Products/Services: 10,83,91,96,98

Precision Communication Services, Inc. (A, E)
813-237-3805
<http://www.precisioncommunications.com>
Products/Services: 13,87,130,133

Pronexus Inc. (D)
877-766-3987
<http://www.pronexus.com>
Products/Services:
53,54,119,125,31

Pronto Networks (C, D)
925-227-5500
<http://www.prontonetworks.com>
Products/Services: 29,39,80

ProsoftTraining (D)
800-228-1027 x4196
<http://www.ctpcertified.com>
Products/Services: 52,37
Other: CTP Certification Training and Education, Certification Testing

Protus IP Solutions (D)
613-733-0000 x551
<http://www.protus.com>
Products/Services: 53,58
Other: Voice Broadcasting; On-Line Fax Service

Proxim Corporation (A, D)
408-542-3979
<http://www.proxim.com>
Products/Services: 110,78,79,80
Other: Point-To-Point Wireless Bridges

Psytechnics (C, D)
978-392-1244
<http://www.psytechnics.com>
Products/Services: 26,27,28,40



Qovia, Inc. (D)
301-846-0020
<http://www.qovia.com>
Products/Services: 27,28,38,40
Other: VoIP Monitoring and Management

Quintum Technologies, Inc. (A)
732-460-9000 x238
<http://www.quintum.com>
Products/Services: 58,91,94,97
Other: Session Border Controllers, Call Routing Servers



RAD Data Communications, Inc. (A)
201-529-1100 x330
<http://www.radusa.com>
Products/Services: 81,86,92,107
Other: TDMoIP Gateways

RADCOM, Ltd. (A, D)
201-518-0033 x320
<http://www.RADCOM.com>
Products/Services:
24,25,27,28,40

Ranch Networks (A)
732-817-1900 x230
ranchnetworks.com
Products/Services: 90,93,108,41

RealEast Networks, LLC (C, D)
+7 8312 729802 x224
<http://www.realeastnetworks.com>
Products/Services:
59,19,23,104,29

ReView Video (E)
630-723-0254
<http://www.solutionsoverip.com>
Products/Services:
61,10,23,96,130

Rhino Equipment Corp. (A)
480-940-1826 x6311
<http://www.rhinoequipment.com>
Products/Services: 87,94,95,107
Other: Channelbanks

RNK Telecom (B, D)
781-613-6000
<http://www.rnktel.com>
Products/Services: 64,65,111
Other: VoIP Wholesaler

Rodopi Software (C)
858-410-6985
<http://www.rodopi.com>
Products/Services: 51,29,38,39
Other: Applications and Services:
100 Percent Web-based Billing
Engine

S

S&D Marketing (B, D)
267-254-5051
<http://www.sdmarketing.com>
Products/Services: 68,128
Other: Online Live Person Interactive
Sales, Disconnection Prevention

Samsung BCS (D)
972-761-7000
<http://www.samsung.com/bcs>
Products/Services: 95,100,31

Sandvine Incorporated (A)
519-880-2600
<http://www.sandvine.com>
Products/Services:
62,38,40,41,43

SAS Institute (D)
866-270-5734
<http://www.sas.com>
Products/Services: 119
Other: Business Intelligence,
Customer Relations Management

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SBE (A)
925-355-2000
<http://www.sbei.com>
Products/Services: 6,9,97

Scitec (D)
800-451-4035 x222
<http://www.scitecinc.com>
Products/Services: 59,95,36,80

ScopServ Inc (A, C)
514-373-8103
<http://www.scopserv.com>
Products/Services:
50,63,64,100,36

Sennheiser Communications (A)
877-736-6434 x195
<http://sennheiserusa.com>
Products/Services: 13
Other: Telephone headsets, PC/IP
headsets

sentio Networks (A)
888-747-0110 x246
<http://www.sentio.com>
Products/Services:
84,85,97,105,104

**Seoul Communication
Technology (C, D)**
82-16-215-3823
Products/Services:
51,54,59,61,5

SER Solutions, Inc. (D)
703-948-5500
<http://www.ser.com>
Products/Services: 119

serVonic (C)
+49 8142 4799 x12
<http://www.servonic.com>
Products/Services:
53,54,68,119,31

SES AMERICOM (B, D)
609-987-4555
Products/Services:
60,71,78,79
Other: Satellite Communications

**Shenzhen Konzept Technology
Development Co.,Ltd (D)**
(86)755 82197307 x823
<http://www.konceptusa.com>
Products/Services: 23,29,39,45
Other: VOIP

ShoreTel (A, C)
408-331-3369
<http://www.shoretel.com>
Products/Services:
22,96,95,100,36

Siemens Communications (A)
800-765-6123
<http://www.communications.usa.siemens.com/home.html>
Products/Services:
49,68,72,36,80

**Siemens Information &
Communication Networks (C, D)**
800-765-6123
<http://communications.usa.siemens.com>
Products/Services:
49,59,95,30,36

Signius (B, D)
609-921-7450
<http://www.signius.com>
Products/Services:
53,54,58,68,70

Silver Telecom
+44 1633 811833
<http://www.silvertel.com>
Products/Services:
2,7,128,129
Other: Line Interface, FXS
and FXO

Sipura Technology, Inc. (A)
408-572-5674
<http://www.sipura.com>
Products/Services: 92,93,94,96

**SMART NETWORK SOLUTIONS
(A, D)**
305-808-7361
<http://www.smartisvoip.com>
Products/Services:
91,130,133,134,29

snom technology AG (A)
++49-(0)30-39833 x104
<http://www.snom.com>
Products/Services: 19,23,96

Softswitch Consulting (D)
720-839-4063
<http://www.softswitchconsulting.com>
Products/Services: 104,128,79

Sonus Networks (A)
617-894-2807
<http://www.sonusnet.com>
Products/Services:
84,85,91,94,104

Source, Inc. (A, B)
800-788-9598
<http://www.source.com>
Products/Services:
94,96,95,100,108

SOYO Group, Inc. (A, D)
909-292-2500 x2503
<http://www.soyogroup.com>
Products/Services:
64,94,23,103,36

**Spanlink Communications
(B, C)**
605 Highway 169 North,
Minneapolis, MN 55441-6422
Contact: Kristen Jacobsen
763-971-2000
<http://www.spanlink.com>
mktg@spanlink.com
Products/Services:
70,95,129,31,42
Spanlink Communications is a
leading provider of customer
interaction solutions that lever-
age VoIP technology. With near-
ly 20 years experience, Spanlink
develops and markets
Collaborative Customer
Interaction products, Intelligent
Information products and
CentralControl™ System
Management products, all of
which exploit the benefits of
VoIP network infrastructures.
Spanlink applies expert plan-
ning, migration and support
services to tailor each cus-
tomer's solution and support
plan to its business needs for
transformational business
improvements in productivity,
efficiency and customer satis-
faction.

Spectralink (A, D)
303-583-5321
<http://www.spectralink.com>
Products/Services: 96,74

Spirent Communications (A)
800-927-2660
<http://spirentcom.com>
Products/Services: 24,25,27,28

SPIRIT (C, D)
+7 095 912-7103
<http://www.spiritdsp.com>
Products/Services: 60,16,17,30,79

Sprint (OEM) (A)
913-791-7700
<http://www.sprint.com/equipment>
Products/Services: 8,14,25,95,108

Sprint North Supply (E)
800-755-3004
<http://www.sprintnorthsupply.com>
Products/Services:
86,95,104,130,80

SS8 Networks (A)
408-944-0250
<http://www.SS8.com>
Products/Services: 68,82,106
Other: Lawful Intercept

Sterling Audits (D)
877-504-5145
<http://www.sterlingaudits.com>
Products/Services: 128

Stratus Technologies (A, D)
978-461-7000
<http://stratus telecom.com>
Products/Services:
3,84,106,95,105

Surf Communication Solutions (C)
866-644-3379
<http://www.surf-com.com>
Products/Services: 5,8,16,17,18


SyChip (C, D)
972-202-8847
<http://www.sychip.com>
Products/Services: 18,20,23,79,80

SyncVoice
714-415-6690
<http://www.syncvoice.com>
Products/Services: 27,28
Other: Voice Management

SysMaster Corporation (A, D)
877-900-3993
<http://www.sysmaster.com>
Products/Services: 64,94,95,29
Other: Integrated VoIP Solutions

**System Engineering International
(A)**
301-694-9601 x216
<http://www.seipower.com>
Products/Services: 14
Other: Mid Span Power over
Ethernet

T


Tadiran America (A, C)
4 Tri Harbor Court,
Port Washington, NY 11050
Contact: Pat Lennon
866-595-4900
<http://www.tadiranamerica.com>
info@tadiranamerica.com
Products/Services:
70,94,95,100,36
Tadiran America provides com-
plete communications solutions
for all size organizations. For
the last 40 years Tadiran
Telecom has been quietly solv-
ing real-world problems in 41
countries with scalable solu-
tions to support small business
and multi-site, large enterprises
of 50,000 users or more. Tadiran
IP solutions support both SIP
and MGCP.

TalkSwitch (A)
888-332-9322 x111
<http://www.talkswitch.com>
Products/Services: 23,95,100
Other: Telephone Handsets

Target Distributing (A, E)
800-873-5528 x1120
<http://www.targetd.com>
Products/Services: 133

Technoland, Inc. (A, E)
408-992-0888 x211
<http://www.technoland.com>
Products/Services: 11,3,4,82,134

Tekelec (A)
919-380-3842
<http://www.tekelec.com>
Products/Services: 59,82,97,105,104

Tekno Telecom, L.L.C. (A)
630-579-9800 x203
<http://www.teknotelecom.com>
Products/Services: 29,38,39,40,44



Tektronix, Inc. (A)
503-627-7111
<http://www.tektronix.com>
Products/Services: 25,28,38

tekVizion PVS, Inc. (D)
214-242-5916
<http://www.tekVizion.com>
Products/Services: 28,128,129,134

Telacquire Marketing Group Inc. (B)
604-677-7780
<http://www.telacquire.com>
Products/Services: 128,133

Telchemy Incorporated (C, D)
770-614-6944
<http://www.telchemy.com>
Products/Services: 18,27,38,40,43

Telco Systems, a BATM Company (A)
800-221-2849 x2250
<http://www.telco.com>
Products/Services: 71,88,92,107
Other: VDSL, IP Platforms, Fiber Transport Terminals, Frame Relay

TelCove (B)
724-743-9567
<http://www.telcove.com>
Products/Services: 71,111,114
Other: Metro and Inter-City Ethernet

TeleCommunication Systems, Inc. (TCS) (B, C)
410-263-7616
<http://www.telecomsys.com>
Products/Services: 74,75,76,78,79

Telecommunications Industry Association
703-907-7721
<http://www.tiaonline.org>
Other: Non-Profit Trade Association

Teledex LLC (A)
408-363-3100
<http://www.teledex.com>
Products/Services: 96

Teleglobe International Holdings Ltd. (B, D)
514-868-7272
<http://www.teleglobe.com>
Products/Services: 126,131,124,113,114

TelePartners (B, D)
800-482-5556
<http://www.telepartners.com>
Products/Services: 53,54,58,65
Other: E-mail management, live chat, hosting, database development

Telephony@Work, Inc (C, D)
858-410-1600 x735
<http://www.telephonyatwork.com>
Products/Services: 51,62,70,33,37

Telerx (B, D)
800-2TE-LERX
<http://www.telerx.com>
Other: CRM Customer Relationship Management

telic.net (B, D)
212-400-8181 x1102
<http://www.telic.net>
Products/Services: 55,64,65,118,29

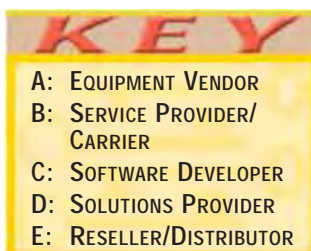
Telcor Communications (B, D)
949-335-0150
<http://www.telcor.net>
Products/Services: 23,104,121,116
Other: VoIP / SIP Transport Supplier

Teltronics, Inc. (A, D)
941-753-5000 x7315
<http://www.teltronics.com>
Products/Services: 50,55,68,72,44

telx
212-480-3300
<http://www.telx.com>
Products/Services: 131
Other: Operator of Network Interconnection Facilities

Texas Digital Systems, Inc. (D)
979-693-9378
<http://www.txdigital.com>
Other: Reader Boards

Texas Instruments (C)
800-477-8924 x4500
<http://www.ti.com/voip>
Products/Services: 5,40,45,46,79



The Great Voice Company (D)
201-541-8595
<http://www.greatvoiceco.com>
Other: Voice Talent for all Applications

Tom Logic LLC (A)
707-265-6622
<http://sniffer.com>
Products/Services: 25

Toshiba America Information Systems, Digital Solutions Div. (A)
949-583-3000 x3715
<http://www.telecom.toshiba.com>
Products/Services: 68,96,95,74
Other: VoIP, Video Comm, Key Systems, Softphones, Traditional Analog/Digital Phones

Tracespan Communications (A)
734-846-0549
<http://www.tracespan.com>
Products/Services: 25,128,46

TransNexus (C)
404-526-6060
<http://www.transnexus.com>
Products/Services: 62,104,29,39
Other: GKTMP Route Server

Trapeze Networks (A)
925-474-2274
<http://www.trapezenetworks.com>
Products/Services: 108,40,41,80
Other: WLAN switch, access points

Traxi Technologies, LLC (C, D)
212-812-9450 x114
<http://www.traxitech.com>
Products/Services: 129,119,29,31
Other: Call Recording/CRM Integration

Trenton Technology, Inc. (A)
800-875-6031
<http://www.TrentonTechnology.com>
Products/Services: 3,4
Other: Backplanes, Single Board Computers, CompactPCI

Trinity Convergence (C)
919-433-7000
<http://www.trinityconvergence.com>
Products/Services: 16,17,18,20,23

TurboSchedule (B, E)
888-398-6100
Products/Services: 49,69,133,74
Other: Web Based Scheduling /CRM /Communications Solution

TuVox (D)
650-623-0210
Other: Speech Applications and Tools



U4EA Technologies (A, C)
+441173736775
<http://www.u4eatech.com>
Products/Services: 92,40
Other: Embedded QoS Software Modules

UbiCall Communications (C)
+ 32 65 321 546
<http://www.ubicall.com>
Products/Services: 69,93

Ubiquity Software Corporation (C, D)
650-413-7103
<http://www.ubiquitysoftware.com>
Products/Services: 50,20,21,23,42



UCN, Inc. (B)
14870 Pony Express Rd.,
Salt Lake City, UT 84065
Contact: info@ucn.net
888-UCN-0002
<http://www.ucn.net>
info@ucn.net
Products/Services: 70,72,121,33,37
Improve the quality of your customer contacts — voice, e-mail, fax — without adding complexity to your IT infrastructure. With inContactT from UCN, manage a multi-site customer contact team with a unified set of call handling features — self-service IVR, intelligent routing (ACD), integration with your database/ CRM. Already invested in a phone system? Supplement it with on-demand features from inContact. Support at-home workers with the same set of features. Unified reporting, monitoring and recording available across all locations. Pay by-the-month. Scale capacity up or down to meet seasonal fluctuations or business spikes. Unique, visual, drag-and-drop programming tool, for custom development.

Ulticom, Inc. (C)
856-787-2700
<http://www.ulticom.com>
Products/Services: 23,119,44

Unicoi Systems, Inc. (C)
678-208-2250 x320
<http://www.unicoi.com>
Products/Services: 16,17,18,23
Other: VoIP reference designs

Unimax Systems Corporation (C, D)
612-341-0946
<http://www.unimax.com>
Products/Services: 20,32,38
Other: Software for Deployment and Administration of Telephony Equipment

Unique Communications International, Inc (C)
801-830-5900
<http://www.unique.net>
Products/Services: 29,32,38,39
Other: Telemanagement Software & E-911

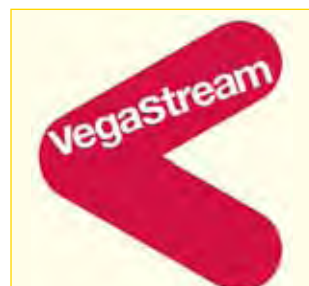
Universal Digital Productions, Inc.
615-252-8753
<http://www.unidig.com>
Other: On-hold Production, IVR Voice Prompt Production

US LEC (B)
704-319-6875
<http://www.uslec.com>
Products/Services: 111,114



V-SPAN (B)
888-44V-SPAN
<http://www.vspan.com>
Products/Services: 50,60,61,66,120

VAPPS (A)
201-420-1155 x21
<http://www.vapps.com>
Products/Services: 50,83
Other: VoIP audio conferencing bridge



VegaStream (A)
10445 Pacific Center Court,
San Diego, CA 92121
Contact: Lisa Nell
858-824-6388
<http://www.vegastream.com>
sales@vegastream.com
Products/Services: 94
VegaStream manufactures and distributes Voice over IP (VoIP) gateways which enable service providers and business customers to rapidly deploy and profit from lower telephony costs and improved productivity across their organizations' HQs and remote offices. The award winning Vega gateways are based on international communications standards, including SIP and H.323 to deliver an open and non-proprietary VoIP solution that can be seamlessly integrated alongside existing communications investments. VegaStream's mission is to enable seamless interoperability between the wide and varied range of proprietary telephone systems and the new IP networks.

Veramark Technologies, Inc. (C)
585-381-6000
<http://www.veramark.com>
Other: Telecom Software Developer

Veraz Networks (A, D)
408-750-9400
<http://www.veraznetworks.com>
Products/Services: 19,23,82,84,104

Verio (B)
800-438-8374
<http://www.verio.com>
Products/Services: 71,114,38,41
Other: Managed Web Hosting, Shared Web Hosting, Storage Solutions, IPv6 connectivity

VeriSign (B)
650-961-7500
<http://www.verisign.com>
Products/Services: 116,29,44,76,77

Versatel Networks (A)
819-771-0011 x271
<http://www.versatelnetworks.com>
Products/Services: 84,106,97,101,118

VIACK Corporation (B, D)
480-735-5925
<http://www.viack.com>
Products/Services: 49,61,67,120
Other: Secure e-Meeting Software

Viola Networks, Inc. (C, D)
610-337-6530 x18
<http://www.ViolaNetworks.com>
Products/Services: 24,27,28,40,43

Virtual PBX (B)
888-825-0800 x382
<http://www.virtualpbx.com>
Products/Services: 59,63,67,70,123

Viziqr Solutions (C, D)
508-248-9896
<http://www.viziqr.com>
Products/Services: 129,131,29,39
Other: Revenue Assurance

VocalData, A Tekelec Company (C, D)
972-354-2100
<http://www.vocaldata.com>
Products/Services: 59,63,82,36
Other: Hosted Residential Broadband

Vodavi Communications Systems (A)
480-443-6441
<http://www.vodavi.com>
Products/Services: 68,94,95,31,36

VoiceAge Corporation (D)
514-737-4940 x274
<http://www.voiceage.com>
Products/Services: 16,19,23,77
Other: Codec Solutions

VoiceGenie Technologies (A)
416-736-0905
<http://voicegenie.com>
Products/Services: 94,125
Other: VoiceXML Gateway

VoIP Inc. (A, B)
954-434-2000
<http://www.voipsolutions.com>
Products/Services: 8,23,111,113,116

VoIPshield Systems (C)
613-224-4443 x317
<http://www.voipshield.com>
Products/Services: 41

VoIPVoice (A)
0044 161 772 3000
<http://www.voipvoice.com>
Products/Services: 12,13,93

Vonex Inc. (D)
888-817-5904
<http://www.vonex.com>
Products/Services: 63,68,23,47,79



VoX Communications (B)
610 Sycamore Street, Suite 120
Celebration, FL 34747
Contact: Kim Martin
813-217-9777

<http://www.voxcorp.net>
kmartin@voxcorp.net
Products/Services: 104,113,45,46
Other: Residential and Business VoIP
VoX offers wholesale broadband voice, origination and termination services for cable, wireless and wireline operators, and enhanced VoIP telephone service to the small business and residential marketplace. VoX's VoIP service is a feature-rich, low-cost and high-quality alternative to traditional landline phone service.

Voxbone (B)
+32 22 18 55 39
<http://www.voxbone.com>
Products/Services: 131,111,113,116
Other: Origination Services

VoxIP Canada (A, E)
866-869-4722 x6400
<http://www.voxip.ca>
Products/Services: 58,67,93,94,100

VoxMedia Consulting, Inc. (D)
781-259-0404
<http://www.voxmediaconsulting.com>
Products/Services: 128
Other: Call Center Voice Automation

Voxpilot (A, D)
864-627-1442
<http://www.voxpilot.com>
Products/Services: 64,70,97,125,44



Westell (A)
630-898-2500
<http://www.westell.com>
Products/Services: 92,46,80

WideBand Solutions (A)
860-404-9478
<http://www.widebandsolutions.com>
Products/Services: 50,52,61



A: EQUIPMENT VENDOR
B: SERVICE PROVIDER/CARRIER
C: SOFTWARE DEVELOPER
D: SOLUTIONS PROVIDER
E: RESELLER/DISTRIBUTOR

WildPackets (C)
925-937-3200
<http://www.wildpackets.com>
Products/Services: 27,28,38,80
Other: Distributed Network Analysis Solutions

Witness Systems (C, D)
770-754-8651
<http://www.witness.com>
Products/Services: 72,40,47

Wizzard Software (C)
412-621-0902
<http://www.wizzardssoftware.com>
Other: Speech Technology Applications Development Tools

Workgroup Technology Partners (D, E)
207-856-5300
<http://www.wgtech.com>
Products/Services: 68,134,35,36,38

World on IP (A)
0039011971413
<http://www.worldonip.com>
Products/Services: 50,12,91,79,80

World Telecom Labs (A, C)
0041845573222
<http://www.wtl.be>
Products/Services: 84,94,97,105,104

WorldACCXX LLC (A, D)
866-VOI-PBOX
<http://www.thebox.com>
Products/Services: 58,65,23,94,123



Xten Networks, Inc. (C, D)
604-878-0440 x5
<http://www.xten.com>
Products/Services: 50,56,23,96,30



Zarlink Semiconductor (A)
613-270-7115
<http://www.zarlink.com>
Products/Services: 12,5,17

Zhone Technologies (A)
510-777-7000
<http://www.zhone.com>
Products/Services: 81,92,94,102,108

Zoom Technologies, Inc. (A, B)
617-753-0691
<http://www.zoom.com>
Products/Services: 93,103,113,80
Other: Dialers

Zultys Technologies (A)
408-328-0450
<http://www.zultys.com>
Products/Services: 93,23,95,36,74

Please tell the vendors you saw it in

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2006 Buyers' Guide

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www.itmag.com
www.itmag.com
www.itmag.com

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INDEX
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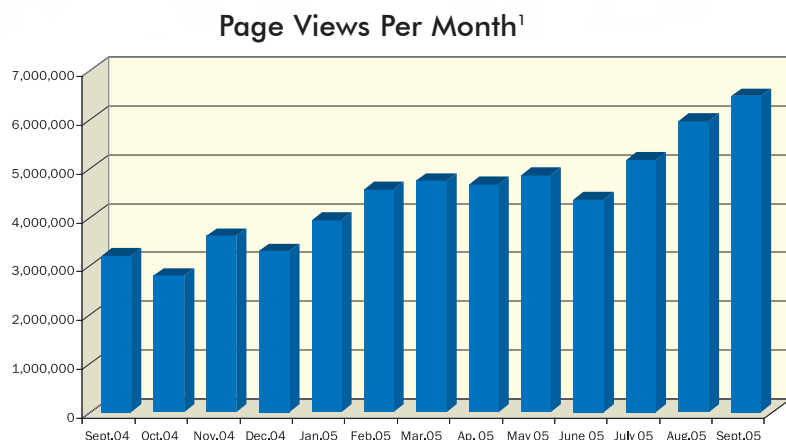
The World's Leading Communications & Technology Site! www.TMCnet.com

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No Other Telecom Site Comes Close!

- Unique feature stories not available anywhere else
- Constantly updated news feeds provide hundreds of VoIP every day
- Content from **INTERNET TELEPHONY**[®], SIP Magazine & IMS Magazine
- Leading VoIP, bloggers



Source: 1 Webtrends September 05



Completely Redesigned in July 2005!

TMCnet ranks among the top 1% most visited Web sites in the WORLD by Alexa.com

Web Site	Alexa ² Site Rank ¹
TMCnet.com	2,410
InformationWeek.com	4,950
InfoWorld.com	6,618
NetworkWorld.com	8,394
LightReading.com	14,655
TelephonyOnline.com	58,251
VoIP-News.com	78,682
America's Network.com	185,033

Source: 2 Alexa.com ranks Web sites by traffic. The number indicates a site's proximity to being the number one most visited Web site.

Date: 11/15/05

Alexa is an Amazon.com Company. Neither Alexa.com nor Amazon.com endorse, or are affiliated with, TMCnet.com in any way.

1. Boards Video Conferencing

DSP Research, Inc.
408-481-0264
<http://www.dspr.com>

2. Boards Voice/Fax

Aculab
850-763-9281
<http://www.aculab.com>

Ai-Logix, Inc.
732-469-0880
<http://www.ai-logix.com>

Altigen Communications, Inc.
510-252-9712
<http://www.altigen.com>

AudioCodes
408-577-0488
<http://www.audiocodes.com>

Digium, Inc.
256-428-6000
<http://www.digium.com>
(See our enhanced listing in the alphabetical section.)

Eicon Networks
972-473-4500
<http://www.eicon.com>
(See our enhanced listing in the alphabetical section.)

Natural Data Inc.
905-884-3338
<http://www.naturaldata.com>

NextWest Phone Systems
877-446-6398
<http://www.nextwest.com>

NMS Communications
508-271-1682
<http://www.nmss.com>

PIKA Technologies Inc.
613-591-1555 x388
<http://www.pikatechnologies.com>

Silver Telecom
+44 1633 811833
<http://www.silvertel.com>

3. Computers/Fault Tolerant/NEBS

Continuous Computing
858-882-8800
ccpu.com

Crystal Group Inc.
319-378-1636
<http://www.crystalpc.com>

Diversified Technology
800-443-2667
<http://www.dtim.com>

Motorola Embedded Communications Computing Group
602-437-3623
<http://www.motorola.com/computing>

Stratus Technologies
978-461-7000
stratustelecom.com

Technoland, Inc.
408-992-0888 x211
<http://www.technoland.com>

Trenton Technology, Inc.
800-875-6031
<http://www.TrentonTechnology.com>

4. Computers/Industrial

Accurate Always
800-828-9428 x1
<http://www.accuratealways.com>

Crystal Group Inc.
319-378-1636
<http://www.crystalpc.com>

Diversified Technology
800-443-2667
<http://www.dtim.com>

Technoland, Inc.
408-992-0888 x211
<http://www.technoland.com>

Trenton Technology, Inc.
800-875-6031
<http://www.TrentonTechnology.com>

5. DSP Chips

Centillum Communications, Inc.
510-771-3700
<http://www.centillum.com>

DSP Group
408-986-4470
<http://www.dspg.com>

Seoul Communication Technology
82-16-215-3823

Surf Communication Solutions
866-644-3379
<http://www.surf-com.com>

Texas Instruments
800-477-8924 x4500
<http://www.ti.com/voip>

Zarlink Semiconductor
613-270-7115
<http://www.zarlink.com>

6. DSP Resource Boards

Aculab
850-763-9281
<http://www.aculab.com>

Ai-Logix, Inc.
732-469-0880
<http://www.ai-logix.com>

DSP Research, Inc.
408-481-0264
<http://www.dspr.com>

Eicon Networks
972-473-4500
<http://www.eicon.com>
(See our enhanced listing in the alphabetical section.)

Octasic Inc.
514-282-8863
<http://www.octasic.com>

PIKA Technologies Inc.
613-591-1555 x388
<http://www.pikatechnologies.com>

SBE
925-355-2000
<http://www.sbei.com>

7. Internet Telephony Boards

Aculab
850-763-9281
<http://www.aculab.com>

ADigit Technologies, Corp
886-3-5720379
<http://www.adigit.com.tw>

Ai-Logix, Inc
732-469-0880
<http://www.ai-logix.com>

Artesyn Technologies
608-826-8227
<http://www.artesynpc.com>

AudioCodes
408-577-0488
<http://www.audiocodes.com>

DSP Group
408-986-4470
<http://www.dspg.com>

DSP Research, Inc.
408-481-0264
<http://www.dspr.com>

Eicon Networks
972-473-4500
<http://www.eicon.com>
(See our enhanced listing in the alphabetical section.)

NMS Communications
508-271-1682
<http://www.nmss.com>

PIKA Technologies Inc.
613-591-1555 x388
<http://www.pikatechnologies.com>

Silver Telecom
+44 1633 811833
<http://www.silvertel.com>

8. Modems

Actelis Networks
510-545-1059
<http://www.actelis.com>

Intertext Data
508-385-6335
intertextdata.com

Multi-Tech Systems, Inc.
800-328-8717 x5178
<http://www.multitech.com>

Natural Data Inc.
905-884-3338
<http://www.naturaldata.com>

Sprint (OEM)
913-791-7700
<http://www.sprint.com/equipment>

Surf Communication Solutions
866-644-3379
<http://www.surf-com.com>

VoIP Inc.
954-434-2000
<http://www.voipsolutions.com>

9. Network Interface Cards

Artesyn Technologies
608-826-8227
<http://www.artesynpc.com>

SBE
925-355-2000
<http://www.sbei.com>

10. Video Conferencing Equipment

Jeongmin electronics
82 2 21132256
jeongmin.com

Polycom, Inc.
800-POL-YCOM
<http://www.polycom.com>

ReView Video
630-723-0254
<http://www.solutionsoverip.com>

11. Chassis/Enclosures

Crystal Group Inc.
319-378-1636
<http://www.crystalpc.com>

Diversified Technology
800-443-2667
<http://www.dtim.com>

Elma Electronic Inc.
510-490-7388 x516
<http://www.elmabustronic.com>

Motorola Embedded Communications Computing Group
602-437-3623
<http://www.motorola.com/computing>

Technoland, Inc.
408-992-0888 x211
<http://www.technoland.com>

12. Computer-less IP Telephony Devices

Aastra Telecom
905-760-4200
<http://www.aastra.com>

CoMatrix
714-992-5982

IN-Call Company
626-912-0388
<http://www.in-call.com>

Multi-Tech Systems, Inc.
800-328-8717 x5178
<http://www.multitech.com>

VoIPVoice
0044 161 772 3000
<http://www.voipvoice.com>

World on IP
0039011971413
<http://www.worldonip.com>

Zarlink Semiconductor
613-270-7115
<http://www.zarlink.com>

13. Multimedia Headsets/Phonesets

Corinex Communications Corp.
778-371-7697
<http://www.corinex.com>

GN Netcom, Inc.
800-826-4656 x743
<http://www.gnnetcom.com>

Headsets.com Inc.
800-450-7686
<http://www.headsets.com>

Plantronics
800-544-4660 x5521
<http://www.plantronics.com>

Precision Communication Services, Inc.
813-237-3805
<http://www.precisioncommunications.com>

Sennheiser Communications
877-736-6434 x195
sennheiserusa.com

VoIPVoice
0044 161 772 3000
<http://www.voipvoice.com>

14. UPS/Power Protection/Management

CoMatrix
714-992-5982

Cummins Power Generation
763-574-5000
<http://www.cumminspower.com>

Cummins Power Rent
623-572-4940
<http://www.cumminspowerrent.com>



Falcon Electric, Inc.
800-842-6940
<http://www.falconups.com>

Hewlett-Packard Company
281-370-0670
<http://www.hp.com/go/rackandpower>

MGE UPS Systems, Inc.
714-557-1636
<http://www.mgeups.com/us>

Phihong
510-445-0100
<http://www.phihong.com>

Sprint (OEM)
913-791-7700
<http://www.sprint.com/equipment>

System Engineering International
301-694-9601 x216
<http://www.seipower.com>

15. Video Cameras

ClearOne Communications
800-707-6994
<http://www.clearone.com>

SOFTWARE

16. Compression Algorithms

Adaptive Digital Technologies, Inc.
610-825-0182
adaptivedigital.com

DSP Research, Inc.
408-481-0264
<http://www.dspr.com>

Octasic Inc.
514-282-8863
<http://www.octasic.com>

Packeteer
408-873-4400
<http://www.packeteer.com>

SPiRiT
+7 095 912-7103
<http://www.spiritdsp.com>

Surf Communication Solutions
866-644-3379
<http://www.surf-com.com>

Trinity Convergence
919-433-7000
<http://www.trinityconvergence.com>

Unicoi Systems, Inc.
678-208-2250 x320
<http://www.unicoi.com>

VoiceAge Corporation
514-737-4940 x274
<http://www.voiceage.com>

17. Echo Cancellation

Adaptive Digital Technologies, Inc.
610-825-0182
<http://adaptivedigital.com>

ClearOne Communications
800-707-6994
<http://www.clearone.com>

eyeP Media
41244239420
<http://www.eyepmedia.com>

Global IP Sound
415-397-2555
<http://www.globalipsound.com>

Octasic Inc.
514-282-8863
<http://www.octasic.com>

PIKA Technologies Inc.
613-591-1555 x388
<http://www.pikatechnologies.com>

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+7 095 912-7103
<http://www.spiritdsp.com>

Surf Communication Solutions
866-644-3379
<http://www.surf-com.com>

Trinity Convergence
919-433-7000
<http://www.trinityconvergence.com>

Unicoi Systems, Inc.
678-208-2250 x320
<http://www.unicoi.com>

Zarlink Semiconductor
613-270-7115
<http://www.zarlink.com>

18. Embedded Software Tools

Global IP Sound
415-397-2555
<http://www.globalipsound.com>

Surf Communication Solutions
866-644-3379
<http://www.surf-com.com>

SyChip
972-202-8847
<http://www.sychip.com>

Telchemy Incorporated
770-614-6944
<http://www.telchemy.com>

Trinity Convergence
919-433-7000
<http://www.trinityconvergence.com>

Unicoi Systems, Inc.
678-208-2250 x320
<http://www.unicoi.com>

19. H.323 Protocol Stack

Continuous Computing
858-882-8800
<http://ccpu.com>

RealEast Networks, LLC
+7 8312 729802 x224
<http://www.realeastnetworks.com>

snom technology AG
++49-(0)30-39833 x104
<http://www.snom.com>

Veraz Networks
408-750-9400
<http://www.veraznetworks.com>

VoiceAge Corporation
514-737-4940 x274
<http://www.voiceage.com>

20. Internet Telephony API

3Com, SIP Solutions
847-262-7262
<http://www.3com.com/sip>

Amcom Software Inc.
800-852-8935
<http://www.amcomsoft.com>

CPDI
360-694-2977
<http://cpdi.com>

DiamondWare, Ltd.
480-380-1122
<http://www.dw.com>

Eicon Networks
972-473-4500
<http://www.eicon.com>
(See our enhanced listing in the alphabetical section.)

eyeP Media
41244239420
<http://www.eyepmedia.com>

General Bandwidth
512-681-5400
<http://www.genband.com>

IntelliNet Technologies, Inc.
321-726-0686
<http://www.intellinet-tech.com>

iQ NetSolutions, Inc.
508-870-3228
<http://www.iqnetsolutions.com>

Millenigence Inc.
949-955-3180 x110
<http://www.millenigence.com>

NACT Telecommunications
801-802-3000 x368
<http://www.nact.com>

INTERNET TELEPHONY®
www.itmag.com

SyChip
972-202-8847
<http://www.sychip.com>

Trinity Convergence
919-433-7000
<http://www.trinityconvergence.com>

Ubiquity Software Corporation
650-413-7103
<http://www.ubiquitysoftware.com>

Unimax Systems Corporation
612-341-0946
<http://www.unimax.com>

21. Java/Java Telephony

BEA Systems Inc.
408-570-8701
<http://www.bea.com/wlcom>

Dialexia Communications Inc.
514-421-1151 x214
<http://www.dialexia.com>

EyeBill
877 649 5622
<http://www.eyebill.net>

IPeria, Inc
781-993-3500
<http://www.iperia.com>

Millenigence Inc.
949-955-3180 x110
<http://www.millenigence.com>

Natural Convergence
613-280-2000
<http://www.naturalconvergence.com>

Ubiquity Software Corporation
650-413-7103
<http://www.ubiquitysoftware.com>

22. MGCP/MEGACO

Cognitronics
203-830-3523
<http://www.cognitronics.com>

Continuous Computing
858-882-8800
<http://ccpu.com>

Data Connection Limited
011 44 20 8366 1177
<http://www.dataconnection.com>

eyeP Media
41244239420
<http://www.eyepmedia.com>

ShoreTel
408-331-3369
<http://www.shoretel.com>

23. SIP

BEA Systems Inc.
408-570-8701
<http://www.bea.com/wlcom>

Cognitronics
203-830-3523
<http://www.cognitronics.com>

CommuniGate Systems
415-383-7164
<http://www.communiGate.com>
(See our enhanced listing in the alphabetical section.)

Compro Technologies Inc.
609-242-2211
<http://www.comprotech.com>

Continuous Computing
858-882-8800
<http://ccpu.com>

CrystalVoice Communications
805-899-4260
<http://www.crystalvoice.com>

Data Connection Limited
011 44 20 8366 1177
<http://www.dataconnection.com>

Dialexia Communications Inc.
514-421-1151 x214
<http://www.dialexia.com>

eDial

781-895-3655
<http://www.edial.com>

Emergent Network Solutions

888-879-3674
<http://www.emergent-netsolutions.com>
 (See our enhanced listing in the alphabetical section.)

Empirix, Inc.

781-266-3285
<http://www.empirix.com>

eyeP Media

412-442-39420
<http://www.eyepmedia.com>

Five9

925-201-2096
<http://www.five9.com>

Grandstream Networks, Inc.

617-566-9300
<http://www.grandstream.com>

IN-Call Company

626-912-0388
<http://www.in-call.com>

Ingate Systems

603-883-6569
<http://www.ingate.com>

Interactive Intelligence Inc.

317-872-3000 x3
<http://www.IININ.com>

International Systems Research Co.

650-570-6960
<http://www.isrus.com>

Intoto Inc.

408-844-0480 x323
<http://www.intoto.com>

Invoves Systems, Inc.

516-868-5455
<http://www.invoves.com>

IPeria, Inc

781-993-3500
<http://www.iperia.com>

Koncept International Inc.

626-796-7688
<http://www.konceptusa.com>

LignUp

650-265-2000
<http://www.lignup.com>

Mediatrix Telecom, Inc.

514-285-0058
<http://www.mediatrix.com>

NACT Telecommunications

801-802-3000 x368
<http://www.nact.com>

Net2Phone

91-79-22124427
<http://www.net2phone.com>

NetHertz.com, Inc.

701-282-5555

Newport Networks Limited

+44 (0) 1291 635830
<http://www.newport-networks.com>

Nortel Networks

800-4NORTEL
<http://www.nortelnetworks.com>

NUASIS Corporation

650-318-2200
<http://www.nuasisis.com>

PIKA Technologies Inc.

613-591-1555 x388
<http://www.pikatechnologies.com>

RealEast Networks, LLC

+7 8312 729802 x224
<http://www.realeastnetworks.com>

ReView Video

630-723-0254
<http://www.solutionsoverip.com>

Shenzhen Koncept Technology Development Co.,Ltd

(86)755 82197307 x823
<http://www.konceptusa.com>

snom technology AG

++49-(0)30-39833 x104
<http://www.snom.com>

SOYO Group, Inc.

909-292-2500 x2503
<http://www.soyogroup.com>

SyChip

972-202-8847
<http://www.sychip.com>

TalkSwitch

888-332-9322 x111
<http://www.talkswitch.com>

Telcor Communications

949-335-0150
<http://telcor.net>

Trinity Convergence

919-433-7000
<http://www.trinityconvergence.com>

Ubiquity Software Corporation

650-413-7103
<http://www.ubiquitysoftware.com>

Ulticom, Inc.

856-787-2700
<http://www.ulticom.com>

Unicoi Systems, Inc.

678-208-2250 x320
<http://www.unicoi.com>

Veraz Networks

408-750-9400
<http://www.veraznetworks.com>

VoiceAge Corporation

514-737-4940 x274
<http://www.voiceage.com>

VoIP Inc.

954-434-2000
<http://www.voipsolutions.com>

Vonexus Inc.

888-817-5904
<http://www.vonexus.com>

WorldACCXX LLC

866-VOI-PBOX
<http://www.thebox.com>

Xten Networks, Inc.

604-878-0440 x5
<http://www.xten.com>

Zultys Technologies

408-328-0450
<http://www.zultys.com>

TESTING

24. Simulators

Agilent Technologies

800-829-4444
[agilent.com/comms](http://www.agilent.com/comms)

Ameritec Corporation

626-915-5441 x135
<http://www.ameritec.com>

arca technologies

+44 (0) 28 9084 5700
<http://www.arca-technologies.com>

Catapult Communications Corporation

650-960-1025
<http://www.catapult.com>

GL Communications, Inc.

301-670-4784 x114
<http://www.gl.com>

Global IP Sound

415-397-2555
<http://www.globalipsound.com>

ipNetfusion

972-761-9271 x214
ipnetfusion.com

RADCOM, Ltd.

201-518-0033 x320
<http://www.RADCOM.com>

Spirent Communications

800-927-2660
spirentcom.com

Viola Networks, Inc.

610-337-6530 x18
<http://www.ViolaNetworks.com>

25. Testing Hardware

Agilent Technologies

800-829-4444
[agilent.com/comms](http://www.agilent.com/comms)

Ameritec Corporation

626-915-5441 x135
<http://www.ameritec.com>

APCON, Inc.

503-639-6700
<http://www.apcon.com>

arca technologies

+44 (0) 28 9084 5700
<http://www.arca-technologies.com>

Catapult Communications Corporation

650-960-1025
<http://www.catapult.com>

Empirix, Inc.

781-266-3285
<http://www.empirix.com>

GL Communications, Inc.

301-670-4784 x114
<http://www.gl.com>

ipNetfusion

972-761-9271 x214
ipnetfusion.com

Ixia

818-871-1800
<http://www.ixiacom.com>

Network Instruments

952-932-9899
<http://www.networkinstruments.com>

RADCOM, Ltd.

201-518-0033 x320
<http://www.RADCOM.com>

Spirent Communications

800-927-2660
spirentcom.com

Sprint (OEM)

913-791-7700
<http://www.sprint.com/equipment>

Tektronix, Inc.

503-627-7111
<http://www.tektronix.com>

Tom Logic LLC

707-265-6622
sniffer.com

Tracespan Communications

734-846-0549
<http://www.tracespan.com>

26. Toolkits

Agilent Technologies

800-829-4444
[agilent.com/comms](http://www.agilent.com/comms)

arca technologies

+44 (0) 28 9084 5700
<http://www.arca-technologies.com>

GL Communications, Inc.

301-670-4784 x114
<http://www.gl.com>

ipNetfusion

972-761-9271 x214
ipnetfusion.com

Psytechnics

978-392-1244
<http://www.psytechnics.com>

27. Voice Quality Measurement

Agilent Technologies

800-829-4444
[agilent.com/comms](http://www.agilent.com/comms)

Ameritec Corporation

626-915-5441 x135
<http://www.ameritec.com>

arca technologies

+44 (0) 28 9084 5700
<http://www.arca-technologies.com>

Brix Networks

978-367-5600
<http://www.brixnet.com>

Empirix, Inc.

781-266-3285
<http://www.empirix.com>

GL Communications, Inc.

301-670-4784 x114
<http://www.gl.com>

Integrated Research

303-283-7700
<http://www.ir.com>

ipNetfusion

972-761-9271 x214
ipnetfusion.com

Ixia

818-871-1800
<http://www.ixiacom.com>

MINACOM
514-879-9111 x228
<http://www.minacom.com>
(See our enhanced listing in the alphabetical section.)

NetIQ
713-418-5759
<http://www.netiq.com/voip>

Psytechnics
978-392-1244
<http://www.psytechnics.com>

Qovia, Inc.
301-846-0020
<http://www.qovia.com>

RADCOM, Ltd.
201-518-0033 x320
<http://www.RADCOM.com>

Spirent Communications
800-927-2660
<http://spirentcom.com>

SyncVoice
714-415-6690
<http://www.syncvoice.com>

Telchemy Incorporated
770-614-6944
<http://www.telchemy.com>

Viola Networks, Inc.
610-337-6530 x18
<http://www.ViolaNetworks.com>

WildPackets
925-937-3200
<http://www.wildpackets.com>

28. VoIP Testing

Agilent Technologies
800-829-4444
<http://agilent.com/comms>

Alliance Systems
972-633-3400
<http://www.alliancesystems.com>

Ameritec Corporation
626-915-5441 x135
<http://www.ameritec.com>

arca technologies
+44 (0) 28 9084 5700
<http://www.arca-technologies.com>

Brix Networks
978-367-5600
<http://www.brixnet.com>

Catapult Communications Corporation
650-960-1025
<http://www.catapult.com>

Empirix, Inc.
781-266-3285
<http://www.empirix.com>

GL Communications, Inc.
301-670-4784 x114
<http://www.gl.com>

Integrated Research
303-283-7700
<http://www.ir.com>

ipNetfusion
972-761-9271 x214
<http://pnetfusion.com>

Ixia
818-871-1800
<http://www.ixiacom.com>

MINACOM
514-879-9111 x228
<http://www.minacom.com>
(See our enhanced listing in the alphabetical section.)

NEC Unified Solutions, Inc.
214-262-6384
<http://www.necunifiedsolutions.com>
(See our enhanced listing in the alphabetical section.)

NetIQ
713-418-5759
<http://www.netiq.com/voip>



Network General Corporation
408-571-5000
<http://www.networkgeneral.com>

Network Instruments
952-932-9899
<http://www.networkinstruments.com>

Psytechnics
978-392-1244
<http://www.psytechnics.com>

Qovia, Inc.
301-846-0020
<http://www.qovia.com>

RADCOM, Ltd.
201-518-0033 x320
<http://www.RADCOM.com>

Spirent Communications
800-927-2660
<http://spirentcom.com>

SyncVoice
714-415-6690
<http://www.syncvoice.com>

Tektronix, Inc.
503-627-7111
<http://www.tektronix.com>

tekVizion PVS, Inc.
214-242-5916
<http://www.tekVizion.com>

Viola Networks, Inc.
610-337-6530 x18
<http://www.ViolaNetworks.com>

WildPackets
925-937-3200
<http://www.wildpackets.com>

SOLUTIONS

29. Billing/Convergent Billing

ACE*COMM Corporation
301-721-3000
<http://www.acecomm.com>

AnchorPoint
508-628-4511
<http://www.anchorpoint.com>

Avotus Corporation
905-890-9199
<http://www.avotus.com>

CTGi — Coastal Technologies Group, Inc.
800-448-2835
<http://www.CTGi.biz>

CustomCall Data Systems
608-274-3009
<http://www.customcall.com>

DataLinx
914-333-0882
<http://www.datalinx.net>

DataProse Billing Solutions
408-255-5006
<http://www.dataprose.com/billing>

Dialexia Communications Inc.
514-421-1151 x214
<http://www.dialexia.com>

Doretel Communications, Inc.
404-755-5721
<http://www.doretel.com>

EyeBill
877 649 5622
<http://www.eyebill.net>

Freeway Communications
213-225-2200
freeway.com

Go Tek Inc.
416-817-6888
<http://www.softswitch.ca>

HigherGround, Inc.
818-591-3133 x249
<http://www.highergroundinc.com>

HostedSwitch
866-744-1140
<http://www.HostedSwitch.com>

I.S. Associates, Inc.
888-583-3440 x153
<http://www.isassoc.com>

Intec Telecom Systems
404-705-2800 x2982
<http://www.intecbilling.com>

IPCB.net (SM)
866-744-1140
<http://www.IPCB.net>

LogiSense Corporation
519-249-0508 x1103
<http://www.logisense.com>

NACT Telecommunications
801-802-3000 x368
<http://www.nact.com>

NetWolves Corporation
813-286-8644
<http://www.netwolves.com>

Openet Telecom
866-873-7614
<http://www.openet.com>

Pronto Networks
925-227-5500
<http://www.prontonetworks.com>

RealEast Networks, LLC
+7 8312 729802 x224
<http://www.realeastnetworks.com>

Rodopi Software
858-410-6985
<http://www.rodopi.com>

Shenzhen Konzept Technology Development Co., Ltd
(86)755 82197307 x823
<http://www.konceptusa.com>

SMART NETWORK SOLUTIONS
305-808-7361
<http://www.smartisvoip.com>

SysMaster Corporation
877-900-3993
<http://www.sysmaster.com>

Tekno Telecom, L.L.C.
630-579-9800 x203
<http://www.teknotelecom.com>

telic.net
212-400-8181 x1102
<http://www.telic.net>

TransNexus
404-526-6060
<http://www.transnexus.com>

Traxi Technologies, LLC
212-812-9450 x114
<http://www.traxitech.com>

Unique Communications International, Inc
801-830-5900
<http://www.unique.net>

VeriSign
650-961-7500
<http://www.verisign.com>

Viziqor Solutions
508-248-9896
<http://www.viziqor.com>

30. Client Software (Internet Phones)

AdvancedVoIP.com
213-341-1431
<http://www.AdvancedVoIP.com>

Clarisys
847-439-4333 x440
<http://www.clarisys.com>

International Systems Research Co.
650-570-6960
<http://www.isrus.com>

Orative
408-625-3100
<http://www.orative.com>

Siemens Information & Communication Networks
800-765-6123
communications.usa.siemens.com

SPIRIT
+7 095 912-7103
<http://www.spiritdsp.com>

Xten Networks, Inc.
604-878-0440 x5
<http://www.xten.com>

31. CTI

Accuva Technologies
877-480-7727
<http://www.accuva.net>

Ai-Logix, Inc.
732-469-0880
<http://www.ai-logix.com>

Amcom Software Inc.
800-852-8935
<http://www.amcomsoft.com>

AnchorPoint
508-628-4511
<http://www.anchorpoint.com>

Astute Solutions
614-508-6142
<http://www.astutesolutions.com>

CTI — Customer Transaction Intelligence
800-800-2333
<http://www.ctigroup.com>

Eicon Networks
972-473-4500
<http://www.eicon.com>
(See our enhanced listing in the alphabetical section.)

Elix
514-768-1000 x2323
<http://www.bceelix.com>

Five9
925-201-2096
<http://www.five9.com>

HigherGround, Inc.
818-591-3133 x249
<http://www.highergroundinc.com>

IPCMail
972-234-4343 x204
<http://www.ipcmall.com>

iQ NetSolutions, Inc.
508-870-3228
<http://www.iqnetsolutions.com>

Know IT!, Inc.
888-566-9284
<http://www.knowit-cti.com>

Metropark Communications
314-439-1900
<http://www.metropark.com>

NextCentra Integrated Communications Solutions
+54 11 4903-6817
<http://www.nextcentra.com>

Pronexus Inc.
877-766-3987
<http://www.pronexus.com>

Samsung BCS
972-761-7000
<http://www.samsung.com/bcs>

serVonic
+49 8142 4799 x12
<http://www.servonic.com>

Spanlink Communications
763-971-2000
<http://www.spanlink.com>
(See our enhanced listing in the alphabetical section.)

Traxi Technologies, LLC
212-812-9450 x114
<http://www.traxitech.com>

Vodavi Communications Systems
480-443-6441
<http://www.vodavi.com>

32. Directory Services

Amcom Software Inc.
800-852-8935
<http://www.amcomsoft.com>

AnchorPoint
508-628-4511
<http://www.anchorpoint.com>

iQ NetSolutions, Inc.
508-870-3228
<http://www.iqnetsolutions.com>

Morgle
01452614271
<http://www.morgle.com>

Orative
408-625-3100
<http://www.orative.com>

Phonetic Systems, Inc.
978-439-3600
<http://www.PhoneticSystems.com>

Unimax Systems Corporation
612-341-0946
<http://www.unimax.com>

Unique Communications International, Inc.
801-830-5900
<http://www.unique.net>

33. Internet ACD

Computer Talk Technology, Inc.
800-410-1051
<http://www.computer-talk.com>

CosmoCom, Inc.
631-940-4200
<http://www.cosmocom.com>

Five9
925-201-2096
<http://www.five9.com>

NextWest Phone Systems
877-446-6398
<http://www.nextwest.com>

Telephony@Work, Inc.
858-410-1600 x735
<http://www.telephonyatwork.com>

UCN, Inc.
888-UCN-0002
<http://www.ucn.net>
(See our enhanced listing in the alphabetical section.)

35. Internetworking

APCON, Inc.
503-639-6700
<http://www.apcon.com>

Workgroup Technology Partners
207-856-5300
<http://www.wgtech.com>

36. LAN-Based Telephony

Aastra Telecom
905-760-4200
<http://www.aastra.com>

Accuva Technologies
877-480-7727
<http://www.accuva.net>

Altigen Communications, Inc.
510-252-9712
<http://www.altigen.com>

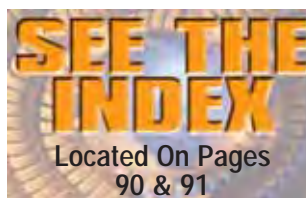
Carroll Communications
732-751-0101
<http://www.carrollcommunications.com>

Conklin-Intracom
770-295-2500
<http://www.conklin-intracom.com>
FacetCorp

800-235-9901
<http://www.facetcorp.com>

FlashTalk Communications
301-585-4481 x305
<http://www.flashtalk.com>

IPCMail
972-234-4343 x204
<http://www.ipcmall.com>



Know IT!, Inc.
888-566-9284
<http://www.knowit-cti.com>

M5 Networks
646-230-5000
<http://www.m5net.com>

Mediatix Telecom, Inc.
514-285-0058
<http://www.mediatix.com>

Metropark Communications
314-439-1900
<http://www.metropark.com>

netVOICE communications
604-484-8647 x102
<http://www.netvoice.ca/>

Scitec
800-451-4035 x222
<http://www.scitecinc.com>

ScopServ Inc
514-373-8103
<http://www.scopserv.com>

ShoreTel
408-331-3369
<http://www.shoretel.com>

Siemens Communications
800-765-6123
<http://www.communications.usa.siemens.com/home.html>

Siemens Information & Communication Networks
800-765-6123
<http://communications.usa.siemens.com>

SOYO Group, Inc.
909-292-2500 x2503
<http://www.soyogroup.com>

Tadiran America
866-595-4900
<http://www.tadiranamerica.com>
(See our enhanced listing in the alphabetical section.)

VocalData, A Tekelec Company
972-354-2100
<http://www.vocaldata.com>

Vodavi Communications Systems
480-443-6441
<http://www.vodavi.com>

Workgroup Technology Partners
207-856-5300
<http://www.wgtech.com>

Zultys Technologies
408-328-0450
<http://www.zultys.com>

37. Multimedia

Adamind Inc.
408-468-3915
<http://www.adamind.com>

ARRIS
770-622-8691
<http://www.arrisi.com>

ComputerPREP
800-228-1027 x4196
<http://www.ctpcertified.com>

DSP Group
408-986-4470
<http://www.dspg.com>

Elix
514-768-1000 x2323
<http://www.bceelix.com>

ProsoftTraining
800-228-1027 x4196
<http://www.ctpcertified.com>

Telephony@Work, Inc.
858-410-1600 x735
<http://www.telephonyatwork.com>

UCN, Inc.
888-UCN-0002
<http://www.ucn.net>
(See our enhanced listing in the alphabetical section.)

38. Network Management

ACE*COMM Corporation
301-721-3000
<http://www.acecomm.com>

ADC
800-366-3889
<http://www.adc.com>

Allot Communications
952-697-4203
<http://www.allot.com>

APCON, Inc.
503-639-6700
<http://www.apcon.com>

Artesyn Technologies
608-826-8227
<http://www.artesyncp.com>

Brix Networks
978-367-5600
<http://www.brixnet.com>

Conklin-Intracom
770-295-2500
<http://www.conklin-intracom.com>

Entuity
212-489-0559
<http://www.entuity.com>

General Telecom
303-278-0700
<http://www.gentel.net>

I.S. Associates, Inc.
888-583-3440 x153
<http://www.isassoc.com>

ILC
404-504-7440
<http://www.ilc.com>

Integrated Research
303-283-7700
<http://www.ir.com>

Kentrox
503-350-6001
<http://www.kentrox.com>

LogiSense Corporation
519-249-0508 x1103
<http://www.logisense.com>

MINACOM
514-879-9111 x228
<http://www.minacom.com>
(See our enhanced listing in the alphabetical section.)

Neon Software
925-283-9771
<http://www.neon.com>

NetScout Systems
888-999-5946
<http://www.netscout.com>

Network General Corporation
408-571-5000
<http://www.networkgeneral.com>

Network Instruments
952-932-9899
<http://www.networkinstruments.com>

New Global Telecom
303-278-0700
<http://www.ngt.com>

NexTone Communications
240-912-1310
<http://www.nextone.com>

Packeteer
408-873-4400
<http://www.packeteer.com>

Qovia, Inc.
301-846-0020
<http://www.qovia.com>

Rodopi Software
858-410-6985
<http://www.rodopi.com>

Sandvine Incorporated
519-880-2600
<http://www.sandvine.com>

Tekno Telecom, L.L.C.
630-579-9800 x203
<http://www.teknotelecom.com>

Tektronix, Inc.
503-627-7111
<http://www.tektronix.com>

Telchemy Incorporated
770-614-6944
<http://www.telchemy.com>

Unimax Systems Corporation
612-341-0946
<http://www.unimax.com>

Unique Communications International, Inc
801-830-5900
<http://www.unique.net>

Verio
800-438-8374
<http://www.verio.com>

WildPackets
925-937-3200
<http://www.wildpackets.com>

Workgroup Technology Partners
207-856-5300
<http://www.wgtech.com>

39. OSS

ACE*COMM Corporation
301-721-3000
<http://www.acecomm.com>

Atreus Systems, Inc.
613-233-1741 x109
<http://www.atreus-systems.com>

CommPartners
702-367-8647 x1017
<http://www.commpartners.us>
(See our enhanced listing in the alphabetical section.)

Connexn Technologies
303-301-6200
<http://www.cnnxn.com>

Subscribe FREE online at <http://www.itmag.com>

CTGi — Coastal Technologies Group, Inc.
800-448-2835
<http://www.CTGi.biz>

DataLinX
914-333-0882
<http://www.datalinx.net>

Go Tek Inc.
416-817-6888
<http://www.softswitch.ca>

ILC
404-504-7440
<http://www.ilc.com>

LogiSense Corporation
519-249-0508 x1103
<http://www.logisense.com>

NetScout Systems
888-999-5946
<http://www.netscout.com>

Openet Telecom
866-873-7614
<http://www.openet.com>

Pronto Networks
925-227-5500
<http://www.prontonetworks.com>

Rodopi Software
858-410-6985
<http://www.rodopi.com>

Shenzhen Konzept Technology Development Co., Ltd
(86)755 82197307 x823
<http://www.konceptusa.com>

Tekno Telecom, L.L.C.
630-579-9800 x203
<http://www.teknotelecom.com>

TransNexus
404-526-6060
<http://www.transnexus.com>

Unique Communications International, Inc
801-830-5900
<http://www.unique.net>

ViziQor Solutions
508-248-9896
<http://www.viziqor.com>

40. Quality of Service

Allot Communications
952-697-4203
<http://www.allot.com>

Brix Networks
978-367-5600
<http://www.brixnet.com>

Converged Access Inc.
978-436-9111 x404
<http://www.convergedaccess.com>

Empirix, Inc.
781-266-3285
<http://www.empirix.com>

HigherGround, Inc.
818-591-3133 x249
<http://www.highergroundinc.com>

ILC
404-504-7440
<http://www.ilc.com>

Integrated Research
303-283-7700
<http://www.ir.com>

Kentrox
503-350-6001
<http://www.kentrox.com>

MINACOM
514-879-9111 x228
<http://www.minacom.com>
(See our enhanced listing in the alphabetical section.)

NEC Unified Solutions, Inc.
214-262-6384
<http://www.necunifiedsolutions.com>
(See our enhanced listing in the alphabetical section.)

Neon Software
925-283-9771
<http://www.neon.com>

NetScout Systems
888-999-5946
<http://www.netscout.com>

NetWolves Corporation
813-286-8644
<http://www.netwolves.com>

NexTone Communications
240-912-1310
<http://www.nextone.com>

Packeteer
408-873-4400
<http://www.packeteer.com>

PointOne
512-735-1200
<http://www.pointone.com>

Psytechnics
978-392-1244
<http://www.psytechnics.com>

Qovia, Inc.
301-846-0020
<http://www.qovia.com>

RADCOM, Ltd.
201-518-0033 x320
<http://www.RADCOM.com>

Sandvine Incorporated
519-880-2600
<http://www.sandvine.com>

Tekno Telecom, L.L.C.
630-579-9800 x203
<http://www.teknotelecom.com>

Telchemy Incorporated
770-614-6944
<http://www.telchemy.com>

Texas Instruments
800-477-8924 x4500
<http://www.ti.com/voip>

Trapeze Networks
925-474-2274
<http://www.trapezenetworks.com>

U4EA Technologies
+441173736775
<http://www.u4eatech.com>

Viola Networks, Inc.
610-337-6530 x18
<http://www.ViolaNetworks.com>

Witness Systems
770-754-8651
<http://www.witness.com>

41. Security

APCON, Inc.
503-639-6700
<http://www.apcon.com>

Check Point Software Technologies
650-628-2000
<http://www.checkpoint.com>

Converged Access Inc.
978-436-9111 x404
<http://www.convergedaccess.com>

Globalscape, Inc.
210-308-8267 x143
<http://www.globalscape.com>

Ingate Systems
603-883-6569
<http://www.ingate.com>

Intoto Inc.
408-844-0480 x323
<http://www.intoto.com>

NetWolves Corporation
813-286-8644
<http://www.netwolves.com>

Ranch Networks
732-817-1900 x230
<http://ranchnetworks.com>

Sandvine Incorporated
519-880-2600
<http://www.sandvine.com>

Trapeze Networks
925-474-2274
<http://www.trapezenetworks.com>

Verio
800-438-8374
<http://www.verio.com>

VoIPshield Systems
613-224-4443 x317
<http://www.voipshield.com>

42. Service Creation Environment

Allot Communications
952-697-4203
<http://www.allot.com>

Atreus Systems, Inc.
613-233-1741 x109
<http://www.atreus-systems.com>

Contact Solutions, Inc.
703-234-7877
<http://www.contactsolutions.com>

CTGi — Coastal Technologies Group, Inc.
800-448-2835
<http://www.CTGi.biz>

NextCentra Integrated Communications Solutions
+54 11 4903-6817
<http://www.nextcentra.com>

Pactolus Communications Software
508-616-0900
<http://www.Pactolus.com>

Spanlink Communications
763-971-2000
<http://www.spanlink.com>
(See our enhanced listing in the alphabetical section.)

Ubiquity Software Corporation
650-413-7103
<http://www.ubiquitysoftware.com>

43. Service Level Management

Allot Communications
952-697-4203
<http://www.allot.com>

Avaya Inc.
800-784-6104
<http://www.avaya.com>

Brix Networks
978-367-5600
<http://www.brixnet.com>

Contact Solutions, Inc.
703-234-7877
<http://www.contactsolutions.com>

NetScout Systems
888-999-5946
<http://www.netscout.com>

Sandvine Incorporated
519-880-2600
<http://www.sandvine.com>

Telchemy Incorporated
770-614-6944
<http://www.telchemy.com>

Viola Networks, Inc.
610-337-6530 x18
<http://www.ViolaNetworks.com>

44. SS7 Solution

Adax
510-548-7047 x182
<http://www.adax.com>

Artesyn Technologies
608-826-8227
<http://www.artesyn.com>

AudioCodes
408-577-0488
<http://www.audiocodes.com>

Compro Technologies Inc.
609-242-2211
<http://www.comprotech.com>

Continuous Computing
858-882-8800
<http://ccpu.com>

Doretel Communications, Inc.
404-755-8221
<http://www.doretel.com>

IntelliNet Technologies, Inc.
321-726-0686
<http://www.intellinet-tech.com>

NewCross Technologies
650-347-5045 x1
<http://www.newxt.com>

Tekno Telecom, L.L.C.
630-579-9800 x203
<http://www.teknotelecom.com>

Teltronics, Inc.
941-753-5000 x7315
<http://www.teltronics.com>

Ulticom, Inc.
856-787-2700
<http://www.ulticom.com>

VeriSign
650-961-7500
<http://www.verisign.com>

Voxpilot
864-627-1442
<http://www.voxpilot.com>

45. Voice Over Cable

Adomo
408-996-7086
<http://www.adomo.com>
(See our enhanced listing in the alphabetical section.)

ARRIS
770-622-8691
<http://www.arrisi.com>

Cicero Networks
+353 1 6636510
<http://www.cicronetworks.com>

General Bandwidth
512-681-5400
<http://www.genband.com>

Go Tek Inc.
416-817-6888
<http://www.softswitch.ca>

IPCS (ICC Public Communication Systems)
562-926-0734 x139
<http://www.internetvoip.com>

LogiSense Corporation
519-249-0508 x1103
<http://www.logisense.com>

Net2Phone
91-79-22124427
<http://www.net2phone.com>



PointOne
512-735-1200
<http://pointone.com>

Shenzhen Koncept Technology Development Co., Ltd
(86)755 82197307 x823
<http://www.konceptusa.com>

Texas Instruments
800-477-8924 x4500
<http://www.ti.com/voip>

VoX Communications
813-217-9777
<http://www.voxcorp.net>
(See our enhanced listing in the alphabetical section.)

46. Voice Over DSL

ADigit Technologies, Corp
886-3-5720379
<http://www.adigit.com.tw>

Adomo
408-996-7086
<http://www.adomo.com>
(See our enhanced listing in the alphabetical section.)

Centillium Communications, Inc.
510-771-3700
<http://www.centillium.com>

Cicero Networks
+353 1 6636510
<http://www.cicronetworks.com>

Converged Access Inc.
978-436-9111 x404
<http://www.convergedaccess.com>

General Bandwidth
512-681-5400
<http://www.genband.com>

Go Tek Inc.
416-817-6888
<http://www.softswitch.ca>

Intoto Inc.
408-844-0480 x323
<http://www.intoto.com>

IPCS (ICC Public Communication Systems)
562-926-0734 x139
<http://www.internetvoip.com>

LogiSense Corporation
519-249-0508 x1103
<http://www.logisense.com>

NetCentrex
408-521-7400
<http://www.netcentrex.net>

Octasic Inc.
514-282-8863
<http://www.octasic.com>

PointOne
512-735-1200
<http://pointone.com>

Texas Instruments
800-477-8924 x4500
<http://www.ti.com/voip>

Tracespan Communications
734-846-0549
<http://www.tracespan.com>

VoX Communications
813-217-9777
<http://www.voxcorp.net>
(See our enhanced listing in the alphabetical section.)

Westell
630-898-2500
<http://www.westell.com>

47. Web-Based Customer Service

Astute Solutions
614-508-6142
<http://www.astutesolutions.com>

CommPartners
702-367-8647 x1017
<http://www.commpartners.us>
(See our enhanced listing in the alphabetical section.)

Digital Talk
954-949-0501 x505
<http://www.pcfonica.com/webcalling>

Elix
514-768-1000 x2323
<http://www.bceelix.com>

Vonexus Inc.
888-817-5904
<http://www.vonexus.com>

Witness Systems
770-754-8651
<http://www.witness.com>

48. Wireless Local Loop

Ceragon Networks, Inc
201-845-6955 x23
<http://www.ceragon.com>

APPLICATIONS & SERVICES

49. Application Sharing/Collaborative Computing

Amity Systems, Inc.
408-436-1900 x113
<http://www.amity-systems.com>

AZ Technology
256-837-9877 x123
<http://www.aztechnology.com>

Data Connection Limited
011 44 20 8366 1177
<http://www.dataconnection.com>

Fidelio Communications System
847-993-5442
<http://www.fidelioconnect.com>

FlashTalk Communications
301-585-4481 x305
<http://www flashtalk.com>

Forum Communications International
972-680-0700 x1581
<http://www.forum-com.com>

Globalscape, Inc.
210-308-8267 x143
<http://www.globalscape.com>

iKnowWare
512-215-4305
<http://www.iKnowWare.com>
(See our enhanced listing in the alphabetical section.)

Interwise
617-475-2166
[interwise.com](http://www.interwise.com)

NextPage
801-748-4500
<http://www.nextpage.com/getsmart>

NuCall Communications Inc.
617-275-4100 x4103
<http://www.nucall.com>

Pandora Networks
800-805-0558 x1
<http://www.pandoranetworks.com>
(See our enhanced listing in the alphabetical section.)

PentaWare Inc.
888-998-1492
<http://www.pentaware.com>

Siemens Communications
800-765-6123
<http://www.communications.usa.siemens.com/home.html>

Siemens Information & Communication Networks
800-765-6123
communications.usa.siemens.com

TurboSchedule
888-398-6100

VIACK Corporation
480-735-5925
<http://www.viack.com>

50. Audio Conferencing

1Number4U
866-824-8245
<http://www.1number4u.com>

1WorldFone
+45 32 51 13 82
<http://www.1WorldFone.com>

AccessLine Communications
206-654-1013
<http://www.accessline.com>

Acoustic Magic
978-440-9384
<http://www.AcousticMagic.com>

Amity Systems, Inc.
408-436-1900 x113
<http://www.amity-systems.com>

Ascendent Systems
888-507-1777
<http://www.ascendenttelecom.com>

AZ Technology
256-837-9877 x123
<http://www.aztechnology.com>

ClearOne Communications
800-707-6994
<http://www.clearone.com>

CommuniGate Systems
415-383-7164
<http://www.communiGate.com>
(See our enhanced listing in the alphabetical section.)

DFA, Inc.
770-394-7944
<http://dfaco.com>

DiamondWare, Ltd.
480-380-1122
<http://www.dw.com>

eDial
781-895-3655
<http://www.edial.com>

Epygi Technologies
972-692-1166 x38
<http://www.epygi.com>
(See our enhanced listing in the alphabetical section.)

Fidelio Communications System
847-993-5442
<http://www.fidelioconnect.com>

FlashTalk Communications
301-585-4481 x305
<http://www.flashtalk.com>

Forum Communications International
972-680-0700 x1581
<http://www.forum-com.com>

iKnowWare
512-215-4305
<http://www.iKnowWare.com>
(See our enhanced listing in the alphabetical section.)

Interwise
617-475-2166
<http://interwise.com>

IP Unity
408-582-1100
<http://www.ip-unity.com>

IPeria, Inc
781-993-3500
<http://www.iperia.com>

iQ NetSolutions, Inc.
508-870-3228
<http://www.iqnetsolutions.com>

Koncept International Inc.
626-796-7688
<http://www.konceptusa.com>

MCI
800-465-7187
<http://www.mci.com>

NETXUSA Inc.
864-271-9868 x122
<http://netxusa.com>

Pactolus Communications Software
508-616-0900
<http://www.Pactolus.com>

ScopServ Inc
514-373-8103
<http://www.scopserv.com>

Teltronics, Inc.
941-753-5000 x7315
<http://www.teltronics.com>

Ubiquity Software Corporation
650-413-7103
<http://www.ubiquitysoftware.com>

V-SPAN
888-44V-SPAN
<http://www.vspan.com>

VAPPS
201-420-1155 x21
<http://www.vapps.com>

WideBand Solutions
860-404-9478
<http://www.widebandsolutions.com>

World on IP
0039011971413
<http://www.worldonip.com>

Xten Networks, Inc.
604-878-0440 x5
<http://www.xten.com>

51. Customer Self-Provisioning

DataLinx
914-333-0882
<http://www.datalinx.net>

Rodopi Software
858-410-6985
<http://www.rodopi.com>

Seoul Communication Technology
82-16-215-3823

Telephony@Work, Inc
858-410-1600 x735
<http://www.telephonyatwork.com>

52. Distance Learning

Acoustic Magic
978-440-9384
<http://www.AcousticMagic.com>

ClearOne Communications
800-707-6994
<http://www.clearone.com>

ComputerPREP
800-228-1027 x4196
<http://www.ctpcertified.com>

Global Knowledge
919-388-1032
<http://www.globalknowledge.com>

Interwise
617-475-2166
<http://interwise.com>

ProsoftTraining
800-228-1027 x4196
<http://www.ctpcertified.com>

WideBand Solutions
860-404-9478
<http://www.widebandsolutions.com>

53. Fax Broadcasting

AnswerNet Network
800-411-5777
<http://www.answerNet.com>

Copia International, Ltd.
800-689-8898
<http://www.copia.com>

Esna Technologies Inc
905-707-9700 x346
<http://www.esnatech.com>

Pangea Communications Corp.
503-221-2121
<http://www.pangea-comm.com>

Pronexus Inc.
877-766-3987
<http://www.pronexus.com>

Protus IP Solutions
613-733-0000 x551
<http://www.protus.com>



serVonic
+49 8142 4799 x12
<http://www.servonic.com>

Signius
609-921-7450
<http://www.signius.com>

TelePartners
800-482-5556
<http://www.telepartners.com>

54. Fax On Demand

1Number4U
866-824-8245
<http://www.1number4u.com>

AnswerNet Network
800-411-5777
<http://www.answerNet.com>

Copia International, Ltd.
800-689-8898
<http://www.copia.com>

Esna Technologies Inc
905-707-9700 x346
<http://www.esnatech.com>

Pronexus Inc.
877-766-3987
<http://www.pronexus.com>

Seoul Communication Technology
82-16-215-3823

serVonic
+49 8142 4799 x12
<http://www.servonic.com>

Signius
609-921-7450
<http://www.signius.com>

TelePartners
800-482-5556
<http://www.telepartners.com>

55. International Callback

1WorldFone
+45 32 51 13 82
<http://www.1WorldFone.com>

Compro Technologies Inc.
609-242-2211
<http://www.comprotech.com>

GlobalPhone Corp.
703-533-2122
<http://www.gphone.com>

Pipeline Telecom Inc.
321-409-9971 x11
<http://www.pipeline telecom.com>

telic.net
212-400-8181 x1102
<http://www.telic.net>

Teltronics, Inc.
941-753-5000 x7315
<http://www.teltronics.com>

56. Internet Access To Live Agents (Click to Talk)

1WorldFone
+45 32 51 13 82
<http://www.1WorldFone.com>

Cerida Corporation
978-659-6500
<http://www.cerida.com>

CommuniGate Systems
415-383-7164
<http://www.communiGate.com>
(See our enhanced listing in the alphabetical section.)

Computer Talk Technology, Inc.
800-410-1051
<http://www.computer-talk.com>

CosmoCom, Inc.
631-940-4200
<http://www.cosmocom.com>

CrystalVoice Communications
805-899-4260
<http://www.crystalvoice.com>

DFA, Inc.
770-394-7944
<http://dfaco.com>

Digital Talk
954-949-0501 x505
<http://www.pcfonica.com/webcalling>

Fidelio Communications System
847-993-5442
<http://www.fidelioconnect.com>

FlashTalk Communications
301-585-4481 x305
<http://www.flashtalk.com>

GlobalPhone Corp.
703-533-2122
<http://www.gphone.com>

IN-Call Company
626-912-0388
<http://www.in-call.com>

Know IT!, Inc.
888-566-9284
<http://www.knowit-cti.com>

Xten Networks, Inc.
604-878-0440 x5
<http://www.xten.com>

58. Internet Fax

3Com, SIP Solutions
847-262-7262
<http://www.3com.com/sip>

ADigit Technologies, Corp
886-3-5720379
<http://www.adigit.com.tw>

BTNAccess
703-621-1635
<http://www.btnaccess.com>

Copia International, Ltd.
800-689-8898
<http://www.copia.com>

Natural Data Inc.
905-884-3338
<http://www.naturaldata.com>

Pangea Communications Corp.
503-221-2121
<http://www.pangea-comm.com>

Protus IP Solutions
613-733-0000 x551
<http://www.protus.com>

Quintum Technologies, Inc.
732-460-9000 x238
<http://www.quintum.com>

Signius
609-921-7450
<http://www.signius.com>

TelePartners
800-482-5556
<http://www.telepartners.com>

VoxIP Canada
866-869-4722 x6400
<http://www.voxip.ca>

WorldACCXX LLC
866-VOI-PBOX
<http://www.thebox.com>

59. IP Centrex

ACE*COMM Corporation
301-721-3000
<http://www.acecomm.com>

Artisan Communications
214-269-2751
<http://www.artisancommunications.net>

BTNAcess
703-621-1635
<http://www.btnaccess.com>

CommuniGate Systems
415-383-7164
<http://www.communigate.com>
(See our enhanced listing in the alphabetical section.)

CorpoTel
877-420-5111
<http://www.corpotel.com>

DFA, Inc.
770-394-7944
<http://dfaco.com>

Dialexia Communications Inc.
514-421-1151 x214
<http://www.dialexia.com>

Emergent Network Solutions
888-879-3674
<http://www.emergent-netsolutions.com>
(See our enhanced listing in the alphabetical section.)

GlobalPhone Corp.
703-533-2122
<http://www.gphone.com>

LignUp
650-265-2000
<http://www.lignup.com>

M5 Networks
646-230-5000
<http://www.m5net.com>

MCI
800-465-7187
<http://www.mci.com>

Millenigence Inc.
949-955-3180 x110
<http://www.millenigence.com>

Natural Convergence
613-280-2000
<http://www.naturalconvergence.com>

NetCentrex
408-521-7400
<http://www.netcentrex.net>

NewCross Technologies
650-347-5045 x1
<http://www.newxt.com>

Newport Networks Limited
+44 (0) 1291 635830
<http://www.newport-networks.com>

NuCall Communications Inc.
617-275-4100 x4103
<http://www.nucall.com>

Nuvio
816-444-4422
<http://www.nuvio.com>

Pandora Networks
800-805-0558 x1
<http://www.pandoranetworks.com>
(See our enhanced listing in the alphabetical section.)

PBX.NET CORPORATION
248-553-7100 x#12
<http://www.pbx.net>

PointOne
512-735-1200
<http://pointone.com>

RealEast Networks, LLC
+7 8312 729802 x224
<http://www.realeastnetworks.com>

Scitec
800-451-4035 x222
<http://www.scitecinc.com>

Seoul Communication Technology
82-16-215-3823

Siemens Information & Communication Networks
800-765-6123
<http://communications.usa.siemens.com>

Tekelec
919-380-3842
<http://www.tekelec.com>

Virtual PBX
888-825-0800 x382
<http://www.virtualpbx.com>

VocalData, A Tekelec Company
972-354-2100
<http://www.vocaldata.com>

60. IP Multicasting

Aastra Telecom
905-760-4200
<http://www.aastra.com>

AdvancedVoIP.com
213-341-1431
<http://www.AdvancedVoIP.com>

AZ Technology
256-837-9877 x123
<http://www.aztechnology.com>

Corinex Communications Corp.
778-371-7697
<http://www.corinex.com>

SES AMERICOM
609-987-4555

SPIRIT
+7 095 912-7103
<http://www.spiritdsp.com>

V-SPAN
888-44V-SPAN
<http://www.vspan.com>

61. IP Video Conferencing

Acoustic Magic
978-440-9384
<http://www.AcousticMagic.com>

Amity Systems, Inc.
408-436-1900 x113
<http://www.amity-systems.com>

AZ Technology
256-837-9877 x123
<http://www.aztechnology.com>

Fidelio Communications System
847-993-5442
<http://www.fidelioconnect.com>

Go Tek Inc.
416-817-6888
<http://www.softswitch.ca>

Interwise
617-475-2166
<http://interwise.com>

IP Unity
408-582-1100
<http://www.ip-unity.com>

Jeongmin electronics
82 2 21132256
<http://jeongmin.com>

NuCall Communications Inc.
617-275-4100 x4103
<http://www.nucall.com>

ReView Video
630-723-0254
<http://www.solutionsoverip.com>

Seoul Communication Technology
82-16-215-3823

V-SPAN
888-44V-SPAN
<http://www.vspan.com>

VIACK Corporation
480-735-5925
<http://www.viack.com>

WideBand Solutions
860-404-9478
<http://www.widebandsolutions.com>

62. Least-Cost Routing

Compro Technologies Inc.
609-242-2211
<http://www.comprotech.com>

EyeBill
877 649 5622
<http://www.eyebill.net>

Know IT!, Inc.
888-566-9284
<http://www.knowit-cti.com>

NetFabric Corporation
203-775-1178
<http://www.netfabric.net>

Newport Networks Limited
+44 (0) 1291 635830
<http://www.newport-networks.com>

NUASIS Corporation
650-318-2200
<http://www.nuasis.com>

Sandvine Incorporated
519-880-2600
<http://www.sandvine.com>

Telephony@Work, Inc
858-410-1600 x735
<http://www.telephonyatwork.com>

TransNexus
404-526-6060
<http://www.transnexus.com>

63. One Number/Follow Me

1Number4U
866-824-8245
<http://www.1number4u.com>

1WorldFone
+45 32 51 13 82
<http://www.1WorldFone.com>

3Com, SIP Solutions
847-262-7262
<http://www.3com.com/sip>

AccessLine Communications
206-654-1013
<http://www.accessline.com>

Applied Voice & Speech Technologies (AVST)
949-699-2300
<http://www.avst.com>

Ascendent Systems
888-507-1777
<http://www.ascendenttelecom.com>

BayPackets, Inc.
510-743-2500
<http://www.baypackets.com>

Ericsson Inc.,
972-583-0000
<http://www.ericsson.com/>

Interactive Intelligence Inc.
317-872-3000 x3
<http://www.ININ.com>

Nuvio
816-444-4422
<http://www.nuvio.com>

ScopServ Inc
514-373-8103
<http://www.scopserv.com>

Virtual PBX
888-825-0800 x382
<http://www.virtualpbx.com>

VocalData, A Tekelec Company
972-354-2100
<http://www.vocaldata.com>

Vonexus Inc.
888-817-5904
<http://www.vonexus.com>

64. Prepaid Calling Cards

AdvancedVoIP.com
213-341-1431
<http://www.AdvancedVoIP.com>

BayPackets, Inc.
510-743-2500
<http://www.baypackets.com>

Compro Technologies Inc.
609-242-2211
<http://www.comprotech.com>

CPDI
360-694-2977
<http://cpdi.com>

Excel Switching Corporation
508-862-3091
<http://www.excelswitching.com>

EyeBill
877 649 5622
<http://www.eyebill.net>

Freeway Communications
213-225-2200
<http://freeway.com>

GlobalPhone Corp.
703-533-2122
<http://www.gphone.com>

IP Unity
408-582-1100
<http://www.ip-unity.com>

NACT Telecommunications
801-802-3000 x368
<http://www.nact.com>

Net2Phone
91-79-22124427
<http://www.net2phone.com>

Subscribe FREE online at <http://www.itmag.com>

Pactolus Communications Software

508-616-0900
<http://www.Pactolus.com>

Pipeline Telecom Inc.

321-409-9971 x11
<http://www.pipeline telecom.com>

RNK Telecom

781-613-6000
<http://www.rnktel.com>

ScopServ Inc

514-373-8103
<http://www.scopserv.com>

SOYO Group, Inc.

909-292-2500 x2503
<http://www.soyogroup.com>

SysMaster Corporation

877-900-3993
<http://www.sysmaster.com>

telic.net

212-400-8181 x1102
<http://www.telic.net>

Voxpilot

864-627-1442
<http://www.voxpilot.com>

65. SOHO**KIRK telecom Inc.**

404-614-1751
<http://www.kirktelecom.com>

NetFabric Corporation

203-775-1178
<http://www.netfabric.net>

Pandora Networks

800-805-0558 x1
<http://www.pandoranetworks.com>
 (See our enhanced listing in the alphabetical section.)

Pipeline Telecom Inc.

321-409-9971 x11
<http://www.pipeline telecom.com>

RNK Telecom

781-613-6000
<http://www.rnktel.com>

TelePartners

800-482-5556
<http://www.telepartners.com>

telic.net

212-400-8181 x1102
<http://www.telic.net>

WorldACCXX LLC

866-VOI-PBOX
<http://www.thebox.com>

66. Streaming Audio/Video**BayPackets, Inc.**

510-743-2500
<http://www.baypackets.com>

CapRock Communications

832-668-2300
<http://www.caprock.com>

Clarisys

847-439-4333 x440
<http://www.clarisys.com>

V-SPAN

888-44V-SPAN
<http://www.vspan.com>

67. Telecommuting**AccessLine Communications**

206-654-1013
<http://www.accessline.com>

Acoustic Magic

978-440-9384
<http://www.AcousticMagic.com>

ClearOne Communications

800-707-6994
<http://www.clearone.com>

Empire Communications

707-545-8300
<http://www.empirecomm.com>

Forum Communications International

972-680-0700 x1581
<http://www.forum-com.com>

VIACK Corporation

480-735-5925
<http://www.viack.com>

Virtual PBX

888-825-0800 x382
<http://www.virtualpbx.com>

VoxIP Canada

866-869-4722 x6400
<http://www.voxip.ca>

68. Unified/Integrated Messaging**AccessLine Communications**

206-654-1013
<http://www.accessline.com>

Adomo

408-996-7086
<http://www.adomo.com>
 (See our enhanced listing in the alphabetical section.)

Amity Systems, Inc.

408-436-1900 x113
<http://www.amity-systems.com>

AnswerNet Network

800-411-5777
<http://www.answer.net>

Applied Voice & Speech Technologies (AVST)

949-699-2300
<http://www.avst.com>

Ascendent Systems

888-507-1777
<http://www.ascendenttelecom.com>

Astute Solutions

614-508-6142
<http://www.astutesolutions.com>

Avaya Inc.

800-784-6104
<http://www.avaya.com>

BayPackets, Inc.

510-743-2500
<http://www.baypackets.com>

BTNAccess

703-621-1635
<http://www.btnaccess.com>

CommuniGate Systems

415-383-7164
<http://www.communiGate.com>
 (See our enhanced listing in the alphabetical section.)

Copia International, Ltd.

800-689-8898
<http://www.copia.com>

CTI Squared Ltd

+972 9 9605220
<http://www.cti2.com>

Data Connection Limited

011 44 20 8366 1177
<http://www.dataconnection.com>

eDial

781-895-3655
<http://www.edial.com>

Empire Communications

707-545-8300
<http://www.empirecomm.com>

Ericsson Inc.,

972-583-0000
<http://www.ericsson.com/>

Esna Technologies Inc

905-707-9700 x346
<http://www.esnatech.com>

FacetCorp

800-235-9901
<http://www.facetcorp.com>

iKnowWare

512-215-4305
<http://www.iKnowWare.com>
 (See our enhanced listing in the alphabetical section.)

Interactive Intelligence Inc.

317-872-3000 x3
<http://www.ININ.com>

IP Unity

408-582-1100
<http://www.ip-unity.com>

IPeria, Inc

781-993-3500
<http://www.iperia.com>

NACT Telecommunications

801-802-3000 x368
<http://www.nact.com>

Nortel Networks

800-4NORTEL
<http://www.nortelnetworks.com>

Orative

408-625-3100
<http://www.orative.com>

OZ

514-390-1333
<http://www.oz.com>

Pactolus Communications Software

508-616-0900
<http://www.Pactolus.com>

Pandora Networks

800-805-0558 x1
<http://www.pandoranetworks.com>
 (See our enhanced listing in the alphabetical section.)

Pangea Communications Corp.

503-221-2121
<http://www.pangea-comm.com>

S&D Marketing

267-254-5051
<http://www.sdmarketing.com>

serVonic

+49 8142 4799 x12
<http://www.servonic.com>

Siemens Communications

800-765-6123
<http://www.communications.usa.siemens.com/home.html>

Signius

609-921-7450
<http://www.signius.com>

SS8 Networks

408-944-0250
<http://www.SS8.com>

Teltronics, Inc.

941-753-5000 x7315
<http://www.teltronics.com>

Toshiba America Information Systems, Digital Solutions Div.

949-583-3000 x3715
<http://www.telecom.toshiba.com>

Vodavi Communications Systems

480-443-6441
<http://www.vodavi.com>

Vonexus Inc.

888-817-5904
<http://www.vonexus.com>

Workgroup Technology Partners

207-856-5300
<http://www.wgtech.com>

69. Virtual Assistant**1Number4U**

866-824-8245
<http://www.1number4u.com>

AccessLine Communications

206-654-1013
<http://www.accessline.com>

Adomo

408-996-7086
<http://www.adomo.com>
 (See our enhanced listing in the alphabetical section.)

Applied Voice & Speech Technologies (AVST)

949-699-2300
<http://www.avst.com>

Invores Systems, Inc.

516-868-5455
<http://www.invores.com>

LumenVox LLC

877-977-0707 xSales
<http://www.LumenVox.com>

TurboSchedule

888-398-6100

UbiCall Communications

+ 32 65 321 546
<http://www.ubicall.com>

70. Virtual/Distributed Call Center**1Number4U**

866-824-8245
<http://www.1number4u.com>

Amcom Software Inc.

800-852-8935
<http://www.amcomsoft.com>

AnswerNet Network

800-411-5777
<http://www.answer.net>

Astute Solutions

614-508-6142
<http://www.astutesolutions.com>

CosmoCom, Inc.

631-940-4200
<http://www.cosmocom.com>

Earthphone.ca

905-853-4966
<http://www.earthphone.ca>

Ericsson Inc.,

972-583-0000
<http://www.ericsson.com/>

Interactive Intelligence Inc.

317-872-3000 x3
<http://www.ININ.com>

LumenVox LLC

877-977-0707 xSales
<http://www.LumenVox.com>

NetHertz.com, Inc.

701-282-5555

Nortel Networks
800-4NORTEL
<http://www.nortelnetworks.com>

NUASIS Corporation
650-318-2200
<http://www.nuaslis.com>

Nuvio
816-444-4422
<http://www.nuvio.com>

Pandora Networks
800-805-0558 x1
<http://www.pandoranetworks.com>
(See our enhanced listing in the alphabetical section.)

Signius
609-921-7450
<http://www.signius.com>

Spanlink Communications
763-971-2000
<http://www.spanlink.com>
(See our enhanced listing in the alphabetical section.)

Tadiran America
866-595-4900
<http://www.tadiranamerica.com>
(See our enhanced listing in the alphabetical section.)

Telephony@Work, Inc
858-410-1600 x735
<http://www.telephonyatwork.com>

UCN, Inc.
888-UCN-0002
<http://www.ucn.net>
(See our enhanced listing in the alphabetical section.)

Virtual PBX
888-825-0800 x382
<http://www.virtualpbx.com>

Voxpilot
864-627-1442
<http://www.voxpilot.com>

71. Virtual Private Networks

Accuva Technologies
877-480-7727
<http://www.accuva.net>

BayPackets, Inc.
510-743-2500
<http://www.baypackets.com>

BTNAcess
703-621-1635
<http://www.btnaccess.com>

CapRock Communications
832-668-2300
<http://www.caprock.com>

Check Point Software Technologies
650-628-2000
<http://www.checkpoint.com>

enKoo
408-978-3526
<http://www.enkoo.com>

Intoto Inc.
408-844-0480 x323
<http://www.intoto.com>

Kentrox
503-350-6001
<http://www.kentrox.com>

NEON Communications, Inc.
508-616-7837
<http://www.neoninc.com>

Net2Phone
91-79-22124427
<http://www.net2phone.com>

NetWolves Corporation
813-286-8644
<http://www.netwolves.com>

Nortel Networks
800-4NORTEL
<http://www.nortelnetworks.com>

SES AMERICOM
609-987-4555

Telco Systems, a BATM Company
800-221-2849 x2250
<http://www.telco.com>

TelCove
724-743-9567
<http://www.telcove.com>

Verio
800-438-8374
<http://www.verio.com>

72. Web/Call Center Integration

Accurate Always
800-828-9428 x1
<http://www.accuratealways.com>

AltiGen Communications, Inc.
510-252-9712
<http://www.altigen.com>

Amcom Software Inc.
800-852-8935
<http://www.amcomsoft.com>

Astute Solutions
614-508-6142
<http://www.astutesolutions.com>

Avaya Inc.
800-784-6104
<http://www.avaya.com>

BTNAcess
703-621-1635
<http://www.btnaccess.com>

Cerida Corporation
978-659-6500
<http://www.cerida.com>

Computer Talk Technology, Inc.
800-410-1051
<http://www.computer-talk.com>

CosmoCom, Inc.
631-940-4200
<http://www.cosmocom.com>

CrystalVoice Communications
805-899-4260
<http://www.crystalvoice.com>

Digital Talk
954-949-0501 x505
<http://www.pcfonica.com/webcalling>

Earthphone.ca
905-853-4966
<http://www.earthphone.ca>

Empire Communications
707-545-8300
<http://www.empirecomm.com>

Five9
925-201-2096
<http://www.five9.com>

High Tech High Touch Solutions, Inc.
425-398-9292
<http://www.HTHTS.com>

iKnowWare
512-215-4305
<http://www.iKnowWare.com>
(See our enhanced listing in the alphabetical section.)

Know IT!, Inc.
888-566-9284
<http://www.knowit-cti.com>

MCI
800-465-7187
<http://www.mci.com>

NextPage
801-748-4500
<http://www.nextpage.com/getsmart>

Nortel Networks
800-4NORTEL
<http://www.nortelnetworks.com>

NUASIS Corporation
650-318-2200
<http://www.nuaslis.com>

Siemens Communications
800-765-6123
<http://www.communications.usa.siemens.com/home.html>

Teltronics, Inc.
941-753-5000 x7315
<http://www.teltronics.com>

UCN, Inc.
888-UCN-0002
<http://www.ucn.net>
(See our enhanced listing in the alphabetical section.)

Witness Systems
770-754-8651
<http://www.witness.com>

WIRELESS

74. Handsets/PDAs

DSP Group
408-986-4470
<http://www.dspg.com>

SpectraLink
303-583-5321
<http://www.spectralink.com>

TeleCommunication Systems, Inc. (TCS)
410-263-7616
<http://www.telecomsys.com>

Toshiba America Information Systems, Digital Solutions Div.
949-583-3000 x3715
<http://www.telecom.toshiba.com>

TurboSchedule
888-398-6100

Zultys Technologies
408-328-0450
<http://www.zultys.com>

75. Location-Based Services (Mobile e-commerce)

IntelliNet Technologies, Inc.
321-726-0686
<http://www.intellinet-tech.com>

TeleCommunication Systems, Inc. (TCS)
410-263-7616
<http://www.telecomsys.com>

76. Short Message Service

Globalstar
408-933-4543
<http://www.globalstar.com>

TeleCommunication Systems, Inc. (TCS)
410-263-7616
<http://www.telecomsys.com>

VeriSign
650-961-7500
<http://www.verisign.com>

77. Third-Generation Wireless (3G)

Adamind Inc.
408-468-3915
<http://www.adamind.com>

Adax
510-548-7047 x182
<http://www.adax.com>

IntelliNet Technologies, Inc.
321-726-0686
<http://www.intellinet-tech.com>

Multi-Tech Systems, Inc.
800-328-8717 x5178
<http://www.multitech.com>

Openet Telecom
866-873-7614
<http://www.openet.com>

VeriSign
650-961-7500
<http://www.verisign.com>

VoiceAge Corporation
514-737-4940 x274
<http://www.voiceage.com>

78. Wireless Data/Internet/WAP

Ceragon Networks, Inc
201-845-6955 x23
<http://www.ceragon.com>

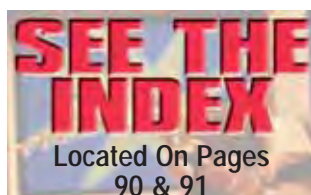
Interactive Intelligence Inc.
317-872-3000 x3
<http://www.ININ.com>

International Systems Research Co.
650-570-6960
<http://www.isrus.com>

Openet Telecom
866-873-7614
<http://www.openet.com>

Proxim Corporation
408-542-3979
<http://www.proxim.com>

SES AMERICOM
609-987-4555



TeleCommunication Systems, Inc. (TCS)
410-263-7616
<http://www.telecomsys.com>

79. Wireless Internet Telephony

ADigit Technologies, Corp
886-3-5720379
<http://www.adigit.com.tw>

Artisan Communications
214-269-2751
<http://www.artisancommunications.net>

Ceragon Networks, Inc
201-845-6955 x23
<http://www.ceragon.com>

Cicero Networks
+353 1 6636510
<http://www.ciceronetworks.com>

DiamondWare, Ltd.
480-380-1122
<http://www.dw.com>

International Systems Research Co.
650-570-6960
<http://www.isrus.com>

KIRK telecom Inc.
404-614-1751
<http://www.kirktelecom.com>

Net2Phone
91-79-22124427
<http://www.net2phone.com>

Orative
408-625-3100
<http://www.orative.com>

PackeTalk, LLC
212-400-3730
<http://www.packetalk.net>

Proxim Corporation
408-542-3979
<http://www.proxim.com>

SES AMERICOM
609-987-4555

Softswitch Consulting
720-839-4063
<http://www.softswitchconsulting.com>

SPIRIT
+7 095 912-7103
<http://www.spiritdsp.com>

SyChip
972-202-8847
<http://www.sychip.com>

TeleCommunication Systems, Inc. (TCS)
410-263-7616
<http://www.telecomsys.com>



Texas Instruments
800-477-8924 x4500
<http://www.ti.com/voip>

Vonexus Inc.
888-817-5904
<http://www.vonexus.com>

World on IP
0039011971413
<http://www.worldonip.com>

80. Wireless LAN

CapRock Communications
832-668-2300
<http://www.caprock.com>

Ceragon Networks, Inc
201-845-6955 x23
<http://www.ceragon.com>

Intoto Inc.
408-844-0480 x323
<http://www.intoto.com>

Meru Networks
408-215-5357
<http://www.merunetworks.com>

NEC Unified Solutions, Inc.
214-262-6384
<http://www.necunifiedsolutions.com>
(See our enhanced listing in the alphabetical section.)

Network Instruments
952-932-9899
<http://www.networkinstruments.com>

NewLogic Technologies
+43 5577 995-0

PackeTalk, LLC
212-400-3730
<http://www.packetalk.net>

Pronto Networks
925-227-5500
<http://www.prontonetworks.com>

Proxim Corporation
408-542-3979
<http://www.proxim.com>

Scitec
800-451-4035 x222
<http://www.scitecinc.com>

Siemens Communications
800-765-6123
<http://www.communications.usa.siemens.com/home.html>

Sprint North Supply
800-755-3004
<http://www.sprinthsupply.com>

SyChip
972-202-8847
<http://www.sychip.com>

Trapeze Networks
925-474-2274
<http://www.trapezenetworks.com>

Westell
630-898-2500
<http://www.westell.com>

WildPackets
925-937-3200
<http://www.wildpackets.com>

World on IP
0039011971413
<http://www.worldonip.com>

Zoom Technologies, Inc.
617-753-0691
<http://www.zoom.com>

NETWORK EQUIPMENT

81. Aggregator/Concentrator

Actelis Networks
510-545-1059
<http://www.actelis.com>

Amedia Networks
732-949-2350
<http://www.amedianetworks.com>

ARRIS
770-622-8691
<http://www.arrisi.com>

RAD Data Communications, Inc.
201-529-1100 x330
<http://www.radusa.com>

Zhone Technologies
510-777-7000
<http://www.zhone.com>

82. Applications Server

BEA Systems Inc.
408-570-8701
<http://www.bea.com/wlcom>

Cognitronics
203-830-3523
<http://www.cognitronics.com>

Epygi Technologies
972-692-1166 x38
<http://www.epygi.com>
(See our enhanced listing in the alphabetical section.)

Subscribe FREE online at <http://www.itmag.com>

Excel Switching Corporation
508-862-3091
<http://www.excelswitching.com>

IPCMall
972-234-4343 x204
<http://www.ipcmall.com>

ipeya
408-727-0440 x103
<http://www.ipeya.com>

Natural Convergence
613-280-2000
<http://www.naturalconvergence.com>

NetCentrex
408-521-7400
<http://www.netcentrex.net>

NewCross Technologies
650-347-5045 x1
<http://www.newxt.com>

Pactolus Communications Software
508-616-0900
<http://www.Pactolus.com>

SS8 Networks
408-944-0250
<http://www.SS8.com>

Technoland, Inc.
408-992-0888 x211
<http://www.technoland.com>

Tekelec
919-380-3842
<http://www.tekelec.com>

Veraz Networks
408-750-9400
<http://www.veraznetworks.com>

VocalData, A Tekelec Company
972-354-2100
<http://www.vocaldata.com>

83. Bridges

Polycom, Inc.
800-POL-YCOM
<http://www.polycom.com>

VAPPS
201-420-1155 x21
<http://www.vapps.com>

84. Carrier Class Gateways

Amedia Networks
732-949-2350
<http://www.amedianetworks.com>

Carrius Technologies, Inc.
214-572-8094
<http://www.carriustech.com>

General Bandwidth
512-681-5400
<http://www.genband.com>

Mediatix Telecom, Inc.
514-285-0058
<http://www.mediatix.com>

NewCross Technologies
650-347-5045 x1
<http://www.newxt.com>

NMS Communications
508-271-1682
<http://www.nmss.com>

sentitO Networks
888-747-0110 x246
<http://www.sentito.com>

Sonus Networks
617-894-2807
<http://www.sonusnet.com>

Stratus Technologies
978-461-7000
<http://stratus telecom.com>

Veraz Networks
408-750-9400
<http://www.veraznetworks.com>

Versatel Networks
819-771-0011 x271
<http://www.versatelnetworks.com>

World Telecom Labs
0041845573222
<http://www.wtl.be>

85. CO Switch

Amedia Networks
732-949-2350
<http://www.amedianetworks.com>

sentitO Networks
888-747-0110 x246
<http://www.sentito.com>

Sonus Networks
617-894-2807
<http://www.sonusnet.com>

86. CSU/DSU

ADTRAN, Inc.
256-963-8000
<http://www.adtran.com>

Alltel CPI
800-725-5835
<http://www.alltelcpi.com>

RAD Data Communications, Inc.
201-529-1100 x330
<http://www.radusa.com>

Sprint North Supply
800-755-3004
<http://www.sprinthnorthsupply.com>

87. Data-Enabled PBX

Precision Communication Services, Inc.
813-237-3805
<http://www.precisioncommunications.com>

Rhino Equipment Corp.
480-940-1826 x6311
<http://www.rhinoequipment.com>

88. Edge Access Device

Actelis Networks
510-545-1059
<http://www.actelis.com>

ARRIS
770-622-8691
<http://www.arrisi.com>

Clarisys
847-439-4333 x440
<http://www.clarisys.com>

Conklin-Intracom
770-295-2500
<http://www.conklin-intracom.com>

Pedestal Networks
510-578-0158
<http://www.pedestalnetworks.com>

Telco Systems, a BATM Company
800-221-2849 x2250
<http://www.telco.com>

89. Fax Servers

Copia International, Ltd.
800-689-8898
<http://www.copia.com>

CTI Squared Ltd
+972 9 9605220
<http://www.cti2.com>

Natural Data Inc.
905-884-3338
<http://www.naturaldata.com>

90. Firewalls

ADTRAN, Inc.
256-963-8000
<http://www.adtran.com>

Check Point Software Technologies
650-628-2000
<http://www.checkpoint.com>

Ingate Systems
603-883-6569
<http://www.ingate.com>

Intertex Data
508-385-6335
<http://intertextdata.com>

IPCMall
972-234-4343 x204
<http://www.ipcmall.com>

ipeya
408-727-0440 x103
<http://www.ipeya.com>

Kentrox
503-350-6001
<http://www.kentrox.com>

NetWolves Corporation
813-286-8644
<http://www.netwolves.com>

Ranch Networks
732-817-1900 x230
<http://ranchnetworks.com>

91. Gatekeeper

IPCB.net (SM)
866-744-1140
<http://www.IPCB.net>

IPCS (ICC Public Communication Systems)
562-926-0734 x139
<http://www.internetvoip.com>

Koncept International Inc.
626-796-7688
<http://www.konceptusa.com>

Polycom, Inc.
800-POL-YCOM
<http://www.polycom.com>

Quintum Technologies, Inc.
732-460-9000 x238
<http://www.quintum.com>

SMART NETWORK SOLUTIONS
305-808-7361
<http://www.smartisvoip.com>

Sonus Networks
617-894-2807
<http://www.sonusnet.com>

World on IP
0039011971413
<http://www.worldonip.com>

92. Integrated Access Device

Adomo
408-996-7086
<http://www.adomo.com>
(See our enhanced listing in the alphabetical section.)

ADTRAN, Inc.
256-963-8000
<http://www.adtran.com>

Alltel CPI
800-725-5835
<http://www.alltelcpi.com>

Converged Access Inc.
978-436-9111 x404
<http://www.convergedaccess.com>

Mediatrix Telecom, Inc.
514-285-0058
<http://www.mediatrix.com>

Motorola Broadband
215-323-1000

RAD Data Communications, Inc.
201-529-1100 x330
<http://www.radusa.com>

Sipura Technology, Inc.
408-572-5674
<http://www.sipura.com>

Telco Systems, a BATM Company
800-221-2849 x2250
<http://www.telco.com>

U4EA Technologies
+441173736775
<http://www.u4eatech.com>

Westell
630-898-2500
<http://www.westell.com>

Zhone Technologies
510-777-7000
<http://www.zhone.com>

93. Internet Telephony Appliances

Alliance Systems
972-633-3400
<http://www.alliancesystems.com>

ARRIS
770-622-8691
<http://www.arrisi.com>

CrystalVoice Communications
805-899-4260
<http://www.crystalvoice.com>

Earthphone.ca
905-853-4966
<http://www.earthphone.ca>

GN Netcom, Inc.
800-826-4656 x743
<http://www.gnned.com>

Grandstream Networks, Inc.
617-566-9300
<http://www.grandstream.com>

Hyperfone
517-745-1530
<http://www.myhyperfone.com/shawn>

Ingate Systems
603-883-6569
<http://www.ingate.com>

ipeya
408-727-0440 x103
<http://www.ipeya.com>

Linksys, a Division of Cisco Systems
408-853-7682
<http://www.linksys.com>

Metropark Communications
314-439-1900
<http://www.metropark.com>

Motorola Broadband
215-323-1000

pbxnsip inc.
978-364-0072 x111
<http://www.pbxnsip.com>

Ranch Networks
732-817-1900 x230
<http://ranchnetworks.com>

Sipura Technology, Inc.
408-572-5674
<http://www.sipura.com>

UbiCall Communications
+ 32 65 321 546
<http://www.ubicall.com>

VoIPVoice
0044 161 772 3000
<http://www.voipvoice.com>

VoxIP Canada
866-869-4722 x6400
<http://www.voxip.ca>

Zoom Technologies, Inc.
617-753-0691
<http://www.zoom.com>

Zultys Technologies
408-328-0450
<http://www.zultys.com>

94. Internet Telephony Gateways

Aculab
850-763-9281
<http://www.aculab.com>

Alliance Systems
972-633-3400
<http://www.alliancesystems.com>

Allworx
585-421-3850 x124
<http://www.allworx.com>
(See our enhanced listing in the alphabetical section.)

AudioCodes
408-577-0488
<http://www.audiocodes.com>

Carrius Technologies, Inc.
214-572-8094
<http://www.carriustech.com>

Contek Networks, Inc.
650-352-4777
<http://conteknet.com>

Corinex Communications Corp.
778-371-7697
<http://www.corinex.com>

Diversified Technology
800-443-2667
<http://www.dims.com>

Earthphone.ca
905-853-4966
<http://www.earthphone.ca>

Epygi Technologies
972-692-1166 x38
<http://www.epygi.com>
(See our enhanced listing in the alphabetical section.)

Grandstream Networks, Inc.
617-566-9300
<http://www.grandstream.com>

IN-Call Company
626-912-0388
<http://www.in-call.com>

Intertex Data
508-385-6335
<http://intertextdata.com>

IPCS (ICC Public Communication Systems)
562-926-0734 x139
<http://www.internetvoip.com>

Koncept International Inc.
626-796-7688
<http://www.konceptusa.com>

Linksys, a Division of Cisco Systems
408-853-7682
<http://www.linksys.com>

Mediatrix Telecom, Inc.
514-285-0058
<http://www.mediatrix.com>

Metropark Communications
314-439-1900
<http://www.metropark.com>

Motorola Broadband
215-323-1000

Multi-Tech Systems, Inc.
800-328-8717 x5178
<http://www.multitech.com>

NetFabric Corporation
203-775-1178
<http://www.netfabric.net>

NMS Communications
508-271-1682
<http://www.nmss.com>

Quintum Technologies, Inc.
732-460-9000 x238
<http://www.quintum.com>

Rhino Equipment Corp.
480-940-1826 x6311
<http://www.rhinoequipment.com>

Sipura Technology, Inc.
408-572-5674
<http://www.sipura.com>

Sonus Networks
617-894-2807
<http://www.sonusnet.com>

Source, Inc.
800-788-9598
<http://www.source.com>

SOYO Group, Inc.
909-292-2500 x2503
<http://www.soyogroup.com>

SysMaster Corporation
877-900-3993
<http://www.sysmaster.com>

Tadiran America
866-595-4900
<http://www.tadiranamerica.com>
(See our enhanced listing in the alphabetical section.)

VegaStream
858-824-6388
<http://www.vegastream.com>
(See our enhanced listing in the alphabetical section.)

Vodavi Communications Systems
480-443-6441
<http://www.vodavi.com>

VoiceGenie Technologies
416-736-0905
<http://voicegenie.com>

VoxIP Canada
866-869-4722 x6400
<http://www.voxip.ca>

World Telecom Labs
0041845573222
<http://www.wtl.be>

WorldACCXX LLC
866-VOI-PBOX
<http://www.thebox.com>

Zhone Technologies
510-777-7000
<http://www.zhone.com>

95. IP-Enabled PBX

Alltel CPI
800-725-5835
<http://www.alltelcpi.com>

Allworx
585-421-3850 x124
<http://www.allworx.com>
(See our enhanced listing in the alphabetical section.)

Ascendent Systems
888-507-1777
<http://www.ascendenttelecom.com>

Avaya Inc.
800-784-6104
<http://www.avaya.com>

Bway.net
212-982-9800
<http://www.bway.net>

Carroll Communications
732-751-0101
<http://www.carrollcommunications.com>

Conklin-Intracom
770-295-2500
<http://www.conklin-intracom.com>

Contek Networks, Inc.
650-352-4777
<http://conteknet.com>

CorpoTel
877-420-5111
<http://www.corpotel.com>



Dialexia Communications Inc.
514-421-1151 x214
<http://www.dialexia.com>

Empire Communications
707-545-8300
<http://www.empirecomm.com>

Epygi Technologies
972-692-1166 x38
<http://www.epygi.com>
(See our enhanced listing in the alphabetical section.)

Ericsson Inc.,
972-583-0000
<http://www.ericsson.com/>

FacetCorp
800-235-9901
<http://www.facetcorp.com>

Intertex Data
508-385-6335
<http://ntertexdata.com>

ipeya
408-727-0440 x103
<http://www.ipeya.com>

Linksys, a Division of Cisco Systems
408-853-7682
<http://www.linksys.com>

M5 Networks
646-230-5000
<http://www.m5net.com>

NEC Unified Solutions, Inc.
214-262-6384
<http://www.necunifiedsolutions.com>
(See our enhanced listing in the alphabetical section.)

netVOICE communications
604-484-8647 x102
<http://www.netvoice.ca/>

NETXUSA Inc.
864-271-9868 x122
<http://netxusa.com>

NextWest Phone Systems
877-446-6398
<http://www.nextwest.com>

pbxnsip inc.
978-364-0072 x111
<http://www.pbxnsip.com>

Rhino Equipment Corp.
480-940-1826 x6311
<http://www.rhinoequipment.com>

Samsung BCS
972-761-7000
<http://www.samsung.com/bcs>

Scitec
800-451-4035 x222
<http://www.scitecinc.com>

ShoreTel
408-331-3369
<http://www.shoretel.com>

Siemens Information & Communication Networks
800-765-6123
<http://communications.usa.siemens.com>

Source, Inc.
800-788-9598
<http://www.source.com>

Spanlink Communications
763-971-2000
<http://www.spanlink.com>
(See our enhanced listing in the alphabetical section.)

Sprint (OEM)
913-791-7700
<http://www.sprint.com/equipment>

Sprint North Supply
800-755-3004
<http://www.sprintnorthsupply.com>

Stratus Technologies
978-461-7000
<http://stratustelecom.com>

SysMaster Corporation
877-900-3993
<http://www.sysmaster.com>

Tadiran America
866-595-4900
<http://www.tadiranamerica.com>
(See our enhanced listing in the alphabetical section.)

TalkSwitch
888-332-9322 x111
<http://www.talkswitch.com>

Toshiba America Information Systems, Digital Solutions Div.
949-583-3000 x3715
<http://www.telecom.toshiba.com>

Vodavi Communications Systems
480-443-6441
<http://www.vodavi.com>

Zultys Technologies
408-328-0450
<http://www.zultys.com>

96. IP Phone (SIP, H.323, Ethernet...)

Aastra Telecom
905-760-4200
<http://www.aastra.com>

Alltel CPI
800-725-5835
<http://www.alltelcpi.com>

Altigen Communications, Inc.
510-252-9712
<http://www.altigen.com>

Carroll Communications
732-751-0101
<http://www.carrollcommunications.com>

Clarisys
847-439-4333 x440
<http://www.clarisys.com>

Conklin-Intracom
770-295-2500
<http://www.conklin-intracom.com>

Contek Networks, Inc.
650-352-4777
<http://conteknet.com>

CrystalVoice Communications
805-899-4260
<http://www.crystalvoice.com>

DSP Group
408-986-4470
<http://www.dspg.com>

eyeP Media
41244239420
<http://www.eyepmedia.com>

Grandstream Networks, Inc.
617-566-9300
<http://www.grandstream.com>

IPCS (ICC Public Communication Systems)
562-926-0734 x139
<http://www.internetvoip.com>

Linksys, a Division of Cisco Systems
408-853-7682
<http://www.linksys.com>

Metropark Communications
314-439-1900
<http://www.metropark.com>

Motorola Broadband
215-323-1000

netVOICE communications
604-484-8647 x102
<http://www.netvoice.ca/>

NETXUSA Inc.
864-271-9868 x122
<http://netxusa.com>

PBX.NET CORPORATION
248-553-7100 x#12
<http://www.pbx.net>

Polycom, Inc.
800-POL-YCOM
<http://www.polycom.com>

ReView Video
630-723-0254
<http://www.solutionsoverip.com>

ShoreTel
408-331-3369
<http://www.shoretel.com>

Sipura Technology, Inc.
408-572-5674
<http://www.sipura.com>

snom technology AG
++49-(0)30-39833 x104
<http://www.snom.com>

Source, Inc.
800-788-9598
<http://www.source.com>

SpectraLink
303-583-5321
<http://www.spectralink.com>

Teledex LLC
408-363-3100
<http://www.teledex.com>

Toshiba America Information Systems, Digital Solutions Div.
949-583-3000 x3715
<http://www.telecom.toshiba.com>

Xten Networks, Inc.
604-878-0440 x5
<http://www.xten.com>

97. Media Gateway

Alliance Systems
972-633-3400
<http://www.alliancesystems.com>

AudioCodes
408-577-0488
<http://www.audiocodes.com>

Carrius Technologies, Inc.
214-572-8094
<http://www.carriustech.com>

Centillum Communications, Inc.
510-771-3700
<http://www.centillum.com>

Excel Switching Corporation
508-862-3091
<http://www.excelswitching.com>

General Bandwidth
512-681-5400
<http://www.genband.com>

Grandstream Networks, Inc.
617-566-9300
<http://www.grandstream.com>

Motorola Embedded Communications Computing Group
602-437-3623
<http://www.motorola.com/computing>

Quantum Technologies, Inc.
732-460-9000 x238
<http://www.quantum.com>

SBE
925-355-2000
<http://www.sbei.com>

sentitO Networks
888-747-0110 x246
<http://www.sentito.com>

Tekelec
919-380-3842
<http://www.tekelec.com>

Versatel Networks
819-771-0011 x271
<http://www.versatelnetworks.com>

Voxpilot
864-627-1442
<http://www.voxpilot.com>

World Telecom Labs
0041845573222
<http://www.wtl.be>

98. Multipoint Control Unit

Convedia Corporation
604-918-6300
<http://www.convedia.com>

Digital Talk
954-949-0501 x505
<http://www.pcfonica.com/webcalling>

Polycom, Inc.
800-POL-YCOM
<http://www.polycom.com>

100. Network PBX

Allworx
585-421-3850 x124
<http://www.allworx.com>
(See our enhanced listing in the alphabetical section.)

Carroll Communications
732-751-0101
<http://www.carrollcommunications.com>

Ericsson Inc.,
972-583-0000
<http://www.ericsson.com/>

FacetCorp
800-235-9901
<http://www.facetcorp.com>

IPCMail
972-234-4343 x204
<http://www.ipcmall.com>

ipeya
408-727-0440 x103
<http://www.ipeya.com>

Samsung BCS
972-761-7000
<http://www.samsung.com/bcs>

ScopServ Inc
514-373-8103
<http://www.scopserv.com>

ShoreTel
408-331-3369
<http://www.shoretel.com>

Source, Inc.
800-788-9598
<http://www.source.com>

Tadiran America
866-595-4900
<http://www.tadiranamerica.com>
(See our enhanced listing in the alphabetical section.)

TalkSwitch
888-332-9322 x111
<http://www.talkswitch.com>

VoxIP Canada
866-869-4722 x6400
<http://www.voxip.ca>

101. Programmable Switches

Alliance Systems
972-633-3400
<http://www.alliancesystems.com>

APCON, Inc.
503-639-6700
<http://www.apcon.com>

Carrius Technologies, Inc.
214-572-8094
<http://www.carriustech.com>

Excel Switching Corporation
508-862-3091
<http://www.excelswitching.com>

PC Telecom
860-536-1199
<http://www.pctelecom.com>

PC Telecom Global
(65) 6562 8709

Versatel Networks
819-771-0011 x271
<http://www.versatelnetworks.com>

102. Remote Access Concentrators

Zhone Technologies
510-777-7000
<http://www.zhone.com>

103. Routers

ADTRAN, Inc.
256-963-8000
<http://www.adtran.com>

Alltel CPI
800-725-5835
<http://www.alltelcpi.com>

Epygi Technologies
972-692-1166 x38
<http://www.epygi.com>
(See our enhanced listing in the alphabetical section.)

Intertex Data
508-385-6335
<http://intertexdata.com>

Kentrox
503-350-6001
<http://www.kentrox.com>

Multi-Tech Systems, Inc.
800-328-8717 x5178
<http://www.multitech.com>

SOYO Group, Inc.
909-292-2500 x2503
<http://www.soyogroup.com>

Zoom Technologies, Inc.
617-753-0691
<http://www.zoom.com>

104. Softswitch

Aculab
850-763-9281
<http://www.aculab.com>

Adaptive Digital Technologies, Inc.
610-825-0182
adaptivedigital.com

Doretel Communications, Inc.
404-755-5721
<http://www.doretel.com>

Earthphone.ca
905-853-4966
<http://www.earthphone.ca>

Emergent Network Solutions
888-879-3674
<http://www.emergent-netsolutions.com>
(See our enhanced listing in the alphabetical section.)

FacetCorp
800-235-9901
<http://www.facetcorp.com>

Freeway Communications
213-225-2200
<http://freeway.com>

IPCB.net (SM)
866-744-1140
<http://www.IPCB.net>

LignUp
650-265-2000
<http://www.lignup.com>

MERA Systems, Inc.
888-238-0057
<http://www.mera-systems.com>

NetCentrex
408-521-7400
<http://www.netcentrex.net>

netVOICE communications
604-484-8647 x102
<http://www.netvoice.ca/>

NewCross Technologies
650-347-5045 x1
<http://www.newxt.com>

NexTone Communications
240-912-1310
<http://www.nextone.com>

PC Telecom
860-536-1199
<http://www.pctelecom.com>

PC Telecom Global
(65) 6562 8709

RealEast Networks, LLC
+7 8312 729802 x224
<http://www.realeastnetworks.com>

sentitO Networks
888-747-0110 x246
<http://www.sentito.com>

Softswitch Consulting
720-839-4063
<http://www.softswitchconsulting.com>

Sonus Networks
617-894-2807
<http://www.sonusnet.com>

Sprint North Supply
800-755-3004
<http://www.sprintnorthsupply.com>

Tekelec
919-380-3842
<http://www.tekelec.com>

Telicor Communications
949-335-0150
telicor.net

TransNexus
404-526-6060
<http://www.transnexus.com>

Veraz Networks
408-750-9400
<http://www.veraznetworks.com>

VoX Communications
813-217-9777
<http://www.voxcorp.net>
(See our enhanced listing in the alphabetical section.)

World Telecom Labs
0041845573222
<http://www.wtl.be>

105. Signaling Gateway

Aastra Telecom
905-760-4200
<http://www.aastra.com>

Adax
510-548-7047 x182
<http://www.adax.com>

Doretel Communications, Inc.
404-755-5721
<http://www.doretel.com>

IntelliNet Technologies, Inc.
321-726-0686
<http://www.intellinet-tech.com>

sentitO Networks
888-747-0110 x246
<http://www.sentito.com>

Stratus Technologies
978-461-7000
<http://stratustelecom.com>

Tekelec
919-380-3842
<http://www.tekelec.com>

World Telecom Labs
0041845573222
<http://www.wtl.be>

106. Enhanced Services Platform

Allot Communications
952-697-4203
<http://www.allot.com>

Ascendent Systems
888-507-1777
<http://www.ascendenttelecom.com>

Carrius Technologies, Inc.
214-572-8094
<http://www.carriustech.com>

Cognitronics
203-830-3523
<http://www.cognitronics.com>

Convedia Corporation
604-918-6300
<http://www.convedia.com>

CTI Squared Ltd
+972 9 9605220
<http://www.cti2.com>

Diversified Technology
800-443-2667
<http://www.dtim.com>

Excel Switching Corporation
508-862-3091
<http://www.excelswitching.com>

Subscribe FREE online at <http://www.itmag.com>

NetFabric Corporation
203-775-1178
<http://www.netfabric.net>

NMS Communications
508-271-1682
<http://www.nmss.com>

PC Telecom
860-536-1199
<http://www.pctelecom.com>

SS8 Networks
408-944-0250
<http://www.SS8.com>

Stratus Technologies
978-461-7000
<http://stratus telecom.com>

Versatel Networks
819-771-0011 x271
<http://www.versatelnetworks.com>

107. Voice Data Multiplexers

Converged Access Inc.
978-436-9111 x404
<http://www.convergedaccess.com>

PC Telecom Global
(65) 6562 8709

RAD Data Communications, Inc.
201-529-1100 x330
<http://www.radusa.com>

Rhino Equipment Corp.
480-940-1826 x6311
<http://www.rhinoequipment.com>

Telco Systems, a BATM Company
800-221-2849 x2250
<http://www.telco.com>

108. Voice/Data Switch

Allworx
585-421-3850 x124
<http://www.allworx.com>
(See our enhanced listing in the alphabetical section.)

Avaya Inc.
800-784-6104
<http://www.avaya.com>

Carroll Communications
732-751-0101
<http://www.carrollcommunications.com>

Emergent Network Solutions
888-879-3674
<http://www.emergent-netsolutions.com>
(See our enhanced listing in the alphabetical section.)

PC Telecom
860-536-1199
<http://www.pctelecom.com>

PC Telecom Global
(65) 6562 8709

Ranch Networks
732-817-1900 x230
<http://ranchnetworks.com>

Source, Inc.
800-788-9598
<http://www.source.com>

Sprint (OEM)
913-791-7700
<http://www.sprint.com/equipment>

Trapeze Networks
925-474-2274
<http://www.trapezenetworks.com>

Zhone Technologies
510-777-7000
<http://www.zhone.com>

110. Wireless Base Station

DSP Research, Inc.
408-481-0264
<http://www.dspr.com>

KIRK telecom Inc.
404-614-1751
<http://www.kirktelecom.com>

Motorola Broadband
215-323-1000

PC Telecom
860-536-1199
<http://www.pctelecom.com>

PC Telecom Global
(65) 6562 8709

Proxim Corporation
408-582-3979
<http://www.proxim.com>

SERVICE PROVIDERS

111. CLEC

Anew Broadband
305-261-7778 x173
<http://www.anewbroadband.com/>

Cbeyond Communications
678-424-2400
<http://www.cbeyond.net>

CommPartners
702-367-8647 x1017
<http://www.commpartners.us>
(See our enhanced listing in the alphabetical section.)

GOOD LIFE TECHNOLOGY INC.
818-726-8647
<http://www.goodlifetech.cm>

MCI
800-465-7187
<http://www.mci.com>

RNK Telecom
781-613-6000
<http://www.rnktel.com>

TelCove
724-743-9567
<http://www.telcove.com>

US LEC
704-319-6875
<http://www.uslec.com>

VoIP Inc.
954-434-2000
<http://www.voipsolutions.com>

Voxbone
+32 22 18 55 39
<http://www.voxbone.com>

112. Internet Fax Service Provider

Pangea Communications Corp.
503-221-2121
<http://www.pangea-comm.com>

113. Internet Telephony Wholesaler

3Com, SIP Solutions
847-262-7262
<http://www.3com.com/sip>

Accuva Technologies
877-480-7727
<http://www.accuva.net>

Adaptive Digital Technologies, Inc.
610-825-0182
<http://adaptivedigital.com>

ADigit Technologies, Corp
886-3-5720379
<http://www.adigit.com.tw>

Anew Broadband
305-261-7778 x173
<http://www.anewbroadband.com/>

Artisan Communications
214-269-2751
<http://www.artisancommunications.net>

Bway.net
212-982-9800
<http://www.bway.net>

CommPartners
702-367-8647 x1017
<http://www.commpartners.us>
(See our enhanced listing in the alphabetical section.)

Freeway Communications
213-225-2200
<http://freeway.com>

GM Voices, Inc.
770-752-4500
<http://www.gmvoices.com>

GOOD LIFE TECHNOLOGY INC.
818-726-8647
<http://www.goodlifetech.cm>

HostedSwitch
866-744-1140
<http://www.HostedSwitch.com>

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Located On Pages
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Level 3 Communications
877-2LE-VEL3
<http://www.Level3.com>

Mantis Telecom, Inc.
954-315-1754
<http://www.mantistelecom.com>

New Global Telecom
303-278-0700
<http://www.ngt.com>

Nuvio
816-444-4422
<http://www.nuvio.com>

PackeTalk, LLC
212-400-3730
<http://www.packetalk.net>

PBX.NET CORPORATION
248-553-7100 x#12
<http://www.pbx.net>

Teleglobe International Holdings Ltd.
514-868-7272
<http://www.teleglobe.com>

VoIP Inc.
954-434-2000
<http://www.voipsolutions.com>

VoX Communications
813-217-9777
<http://www.voxcorp.net>
(See our enhanced listing in the alphabetical section.)

Voxbone
+32 22 18 55 39
<http://www.voxbone.com>

Zoom Technologies, Inc.
617-753-0691
<http://www.zoom.com>

114. ISP

Anew Broadband
305-261-7778 x173
<http://www.anewbroadband.com/>

Artisan Communications
214-269-2751
<http://www.artisancommunications.net>

Bway.net
212-982-9800
<http://www.bway.net>

Cbeyond Communications
678-424-2400
<http://www.cbeyond.net>

Concentric, An XO Communications Service
866-500-9696
<http://www.concentric.com>

MCI
800-465-7187
<http://www.mci.com>

PackeTalk, LLC
212-400-3730
<http://www.packetalk.net>

TelCove
724-743-9567
<http://www.telcove.com>

Teleglobe International Holdings Ltd
514-868-7272
<http://www.teleglobe.com>

US LEC
704-319-6875
<http://www.uslec.com>

Verio
800-438-8374
<http://www.verio.com>

115. ITSP

Bway.net
212-982-9800
<http://www.bway.net>

IN-Call Company
626-912-0388
<http://www.in-call.com>

IP-Centrex.ca
604-484-8647 x102
<http://www.IP-Centrex.ca/>

M5 Networks
646-230-5000
<http://www.m5net.com>

PackeTalk, LLC
212-400-3730
<http://www.packetalk.net>

PBX.NET CORPORATION
248-553-7100 x#12
<http://www.pbx.net>

116. Next-Gen Telco

1WorldFone
+45 32 51 13 82
<http://www.1WorldFone.com>

Anew Broadband
305-261-7778 x173
<http://www.anewbroadband.com/>

Artisan Communications
214-269-2751
<http://www.artisancommunications.net>

Cbeyond Communications
678-424-2400
<http://www.cbeyond.net>

DFA, Inc.
770-394-7944
<http://dfaco.com>

GlobalPhone Corp.
703-533-2122
<http://www.gphone.com>

IP-Centrex.ca
604-484-8647 x102
<http://www.IP-Centrex.ca/>

Level 3 Communications
877-2LE-VEL3
<http://www.Level3.com>

NextWest Phone Systems
877-446-6398
<http://www.nextwest.com>

NuCall Communications Inc.
617-275-4100 x4103
<http://www.nucall.com>

PointOne
512-735-1200
<http://pointone.com>

Telicor Communications
949-335-0150
<http://telicor.net>

VeriSign
650-961-7500
<http://www.verisign.com>

VoIP Inc.
954-434-2000
<http://www.voipsolutions.com>

Voxbone
+32 22 18 55 39
<http://www.voxbone.com>

117. Prepaid

CPDI
360-694-2977
<http://cpdi.com>

GOOD LIFE TECHNOLOGY INC.
818-726-8647
<http://www.goodlifetech.com>

IP-Centrex.ca
604-484-8647 x102
<http://www.IP-Centrex.ca/>

APPLICATION SERVICE PROVIDERS

118. Application Infrastructure Provider

AdvancedVoIP.com
213-341-1431
<http://www.AdvancedVoIP.com>

BEA Systems Inc.
408-570-8701
<http://www.bea.com/wlcom>

Motorola Embedded Communications Computing Group
602-437-3623
<http://www.motorola.com/computing>

telic.net
212-400-8181 x1102
<http://www.telic.net>

Versatel Networks
819-771-0011 x271
<http://www.versatelnetworks.com>

119. Independent Software Vendor

BEA Systems Inc.
408-570-8701
<http://www.bea.com/wlcom>

CTI — Customer Transaction Intelligence
800-800-2333
<http://www.ctigroup.com>

CTI Squared Ltd
+972 9 9605220
<http://www.cti2.com>

Electric Cloud, Inc.
650-968-2950
<http://www.electric-cloud.com>

Envision
206-225-0800 x500
<http://www.envisioninc.com>

EyeBill
877 649 5622
<http://www.eyebill.net>

I.S. Associates, Inc.
888-583-3440 x153
<http://www.isassoc.com>

Invores Systems, Inc.
516-868-5455
<http://www.invores.com>

LumenVox LLC
877-977-0707 xSales
<http://www.LumenVox.com>

Natural Convergence
613-280-2000
<http://www.naturalconvergence.com>

Pronexus Inc.
877-766-3987
<http://www.pronexus.com>

SAS Institute
866-270-5734
<http://www.sas.com>

SER Solutions, Inc.
703-948-5500
<http://www.ser.com>

serVonic
+49 8142 4799 x12
<http://www.servonic.com>

Traxi Technologies, LLC
212-812-9450 x114
<http://www.traxitech.com>

Ulticom, Inc.
856-787-2700
<http://www.ulticom.com>

120. Collaborative ASP (groupware, e-mail, video conferencing...)

V-SPAN
888-44V-SPAN
<http://www.vspan.com>

VIACK Corporation
480-735-5925
<http://www.viack.com>

121. Communications ASP

Cbeyond Communications
678-424-2400
<http://www.cbeyond.net>

Computer Talk Technology, Inc.
800-410-1051
<http://www.computer-talk.com>

Globalstar
408-933-4543
<http://www.globalstar.com>

Telicor Communications
949-335-0150
telicor.net

UCN, Inc.
888-UCN-0002
<http://www.ucn.net>
(See our enhanced listing in the alphabetical section.)

122. Consumer ASP (MS Office, AppleWorks, StarOffice...)

NetHertz.com, Inc.
701-282-5555
123. Telephony ASP

3Com, SIP Solutions
847-262-7262
<http://www.3com.com/sip>

Adaptive Digital Technologies, Inc.
610-825-0182
adaptivedigital.com

AdvancedVoIP.com
213-341-1431
<http://www.AdvancedVoIP.com>

Cbeyond Communications
678-424-2400
<http://www.cbeyond.net>

Computer Talk Technology, Inc.
800-410-1051
<http://www.computer-talk.com>

CPDI
360-694-2977
<http://cpdi.com>

CPT International Inc.
866-388-8358
<http://www.cptii.com>

CTGi — Coastal Technologies Group, Inc.
800-448-2835
<http://www.CTGi.biz>

DFA, Inc.
770-394-7944
<http://dfaco.com>

Five9
925-201-2096
<http://www.five9.com>

FlashTalk Communications
301-585-4481 x305
<http://www.flashtalk.com>

GM Voices, Inc.
770-752-4500
<http://www.gmvoices.com>

High Tech High Touch Solutions, Inc.
425-398-9292
<http://www.HTHTS.com>

I.S. Associates, Inc.
888-583-3440 x153
<http://www.isassoc.com>

Invores Systems, Inc.
516-868-5455
<http://www.invores.com>

IP-Centrex.ca
604-484-8647 x102
<http://www.IP-Centrex.ca/>

M5 Networks
646-230-5000
<http://www.m5net.com>

NetHertz.com, Inc.
701-282-5555

Nuvio
816-444-4422
<http://www.nuvio.com>

PBX.NET CORPORATION
248-553-7100 x#12
<http://www.pbx.net>

Virtual PBX
888-825-0800 x382
<http://www.virtualpbx.com>

WorldACCXX LLC
866-VOI-PBOX
<http://www.thebox.com>

124. Wireless ASP

CPDI
360-694-2977
<http://cpdi.com>

Teleglobe International Holdings Ltd.
514-868-7272
<http://www.teleglobe.com>

125. Voice Portal

Elix
514-768-1000 x2323
<http://www.bceelix.com>

GM Voices, Inc.
770-752-4500
<http://www.gmvoices.com>

Invores Systems, Inc.
516-868-5455
<http://www.invores.com>

LumenVox LLC
877-977-0707 xSales
<http://www.LumenVox.com>

Nuance
650-480-4017
<http://nuance.com/>

Phonetic Systems, Inc.
978-439-3600
<http://www.PhoneticSystems.com>

Pronexus Inc.
877-766-3987
<http://www.pronexus.com>

VoiceGenie Technologies
416-736-0905
<http://voicegenie.com>

Voxpilot
864-627-1442
<http://www.voxpilot.com>

126. Arbitrage

Teleglobe International Holdings Ltd.
514-868-7272
<http://www.teleglobe.com>

127. Clearinghouse

HostedSwitch
866-744-1140
<http://www.HostedSwitch.com>

IPCB.net (SM)
866-744-1140
<http://www.IPCB.net>

128. Consultant

Cerida Corporation
978-659-6500
<http://www.cerida.com>

Connexn Technologies
303-301-6200
<http://www.cnnxn.com>

CorpoTel
877-420-5111
<http://www.corpotel.com>

High Tech High Touch Solutions, Inc.
425-398-9292
<http://www.HTHTS.com>

Mantis Telecom, Inc.
954-315-1754
<http://www.mantistelecom.com>

NextCentra Integrated Communications Solutions
+54 11 4903-6817
<http://www.nextcentra.com>

S&D Marketing
267-254-5051
<http://www.sdmartketing.com>

Silver Telecom
+44 1633 811833
<http://www.silvertel.com>

Softswitch Consulting
720-839-4063
<http://www.softswitchconsulting.com>

Sterling Audits
877-504-5145
<http://www.sterlingaudits.com>

tekVizion PVS, Inc.
214-242-5916
<http://www.tekVizion.com>



Telacquire Marketing Group Inc.
604-677-7780
<http://www.telacquire.com>

Tracespan Communications
734-846-0549
<http://www.tracespan.com>

VoxMedia Consulting, Inc.
781-259-0404
<http://www.voxmediaconsulting.com>

129. Developer

Accurate Always
800-828-9428 x1
<http://www.accuratealways.com>

AZ Technology
256-837-9877 x123
<http://www.aztechnology.com>

CTI — Customer Transaction Intelligence
800-800-2333
<http://www.ctigroup.com>

DiamondWare, Ltd.
480-380-1122
<http://www.dw.com>

Globalscape, Inc.
210-308-8267 x143
<http://www.globalscape.com>

I.S. Associates, Inc.
888-583-3440 x153
<http://www.isassoc.com>

iQ NetSolutions, Inc.
508-870-3228
<http://www.iqnetsolutions.com>

IVR USA
971-249-1322
<http://www.ivrusa.com>
(See our enhanced listing in the alphabetical section.)

KIRK telecom Inc.
404-614-1751
<http://www.kirktelecom.com>

Koncept International Inc.
626-796-7688
<http://www.konceptusa.com>

LumenVox LLC
877-977-0707 xSales
<http://www.LumenVox.com>

Millenigence Inc.
949-955-3180 x110
<http://www.millenigence.com>

PentaWare Inc.
888-998-1492
<http://www.pentaware.com>

Silver Telecom
+44 1633 811833
<http://www.silvertel.com>

Spanlink Communications
763-971-2000
<http://www.spanlink.com>
(See our enhanced listing in the alphabetical section.)

tekVizion PVS, Inc.
214-242-5916
<http://www.tekVizion.com>

Traxi Technologies, LLC
212-812-9450 x114
<http://www.traxitech.com>

Viziqr Solutions
508-248-9896
<http://www.viziqr.com>

130. Distributor

CoMatrix
714-992-5982

Fidelio Communications System
847-993-5442
<http://www.fidelioconnect.com>

Hyperfone
517-745-1530
<http://www.myhyperfone.com/shawn>



KIRK telecom Inc.
404-614-1751
<http://www.kirktelecom.com>

Precision Communication Services, Inc.
813-237-3805
<http://www.precisioncommunications.com>

ReView Video
630-723-0254
<http://www.solutionsoverip.com>

SMART NETWORK SOLUTIONS
305-808-7361
<http://www.smartisvoip.com>

Sprint North Supply
800-755-3004
<http://www.sprinthnorthsupply.com>

131. Interconnect

Empire Communications
707-545-8300
<http://www.empirecomm.com>

IPCB.net (SM)
866-744-1140
<http://www.IPCB.net>

Mantis Telecom, Inc.
954-315-1754
<http://www.mantistelecom.com>

Newport Networks Limited
+44 (0) 1291 635830
<http://www.newport-networks.com>

Pipeline Telecom Inc.
321-409-9971 x11
<http://www.pipeline telecom.com>

Teleglobe International Holdings Ltd.
514-868-7272
<http://www.teleglobe.com>

telx
212-480-3300
<http://www.telx.com>

Viziqr Solutions
508-248-9896
<http://www.viziqr.com>

Voxbone
+32 22 18 55 39
<http://www.voxbone.com>

132. Long-Distance Broker

Accuva Technologies
877-480-7727
<http://www.accuva.net>

NetHertz.com, Inc.
701-282-5555

133. Reseller

Freeway Communications
213-225-2200
<http://freeway.com>

IVR USA
971-249-1322
<http://www.ivrusa.com>
(See our enhanced listing in the alphabetical section.)

Mantis Telecom, Inc.
954-315-1754
<http://www.mantistelecom.com>

Precision Communication Services, Inc.
813-237-3805
<http://www.precisioncommunications.com>

SMART NETWORK SOLUTIONS
305-808-7361
<http://www.smartisvoip.com>

Target Distributing
800-873-5528 x1120
<http://www.targetd.com>

Telacquire Marketing Group Inc.
604-677-7780
<http://www.telacquire.com>

TurboSchedule
888-398-6100

134. Systems Integrator

ADC
800-366-3889
<http://www.adc.com>

CorpoTel
877-420-5111
<http://www.corpotel.com>

Crystal Group Inc.
319-378-1636
<http://www.crystalpc.com>

CTI — Customer Transaction Intelligence
800-800-2333
<http://www.ctigroup.com>

High Tech High Touch Solutions, Inc.
425-398-9292
<http://www.HTHTS.com>

International Systems Research Co.
650-570-6960
<http://www.isrus.com>

IVR USA
971-249-1322
<http://www.ivrusa.com>
(See our enhanced listing in the alphabetical section.)

NEC Unified Solutions, Inc.
214-262-6384
<http://www.necunifiedsolutions.com>
(See our enhanced listing in the alphabetical section.)

SMART NETWORK SOLUTIONS
305-808-7361
<http://www.smartisvoip.com>

Technoland, Inc.
408-992-0888 x211
<http://www.technoland.com>

tekVizion PVS, Inc.
214-242-5916
<http://www.tekVizion.com>

Workgroup Technology Partners
207-856-5300
<http://www.wgtech.com>

OTHER

ACE*COMM Corporation
301-721-3000
<http://www.acecomm.com>
Telemanagement: Fault, Configuration, Accounting, and Performance Management

Acoustic Magic
978-440-9384
<http://www.AcousticMagic.com>
Microphones

Adamind Inc.
408-468-3915
<http://www.adamind.com>
Mobile Adaptation Software

Adax
510-548-7047 x182
<http://www.adax.com>
Protocol Controller Boards

ADC
800-366-3889
<http://www.adc.com>
Communications infrastructure (data, voice, video)

ADTRAN, Inc.
256-963-8000
<http://www.adtran.com>
Ethernet Switches

Adtron Corporation
602-735-0300
<http://www.adtron.com>
In-chassis data storage

Aktino
949-258-0545
<http://www.aktino.com>
Data Transmission Equipment

Allworx
585-421-3850 x124
<http://www.allworx.com>
VoIP Key & PBX Phone and Data Network System
(See our enhanced listing in the alphabetical section.)



AltiGen Communications, Inc.
510-252-9712
<http://www.altigen.com>
IP-PBX and IP Contact Center Solutions

Amedia Networks
732-949-2350
<http://www.amedianetworks.com>
FTTP Ethernet Access

American
707-539-3321
<http://www.controlroomsusa.com>
Custom control room and call center furniture, large screen video display system

Amity Systems, Inc.
408-436-1900 x113
<http://www.amity-systems.com>
Multimedia Application Routing Server

AnchorPoint
508-628-4511
<http://www.anchorpoint.com>
Telecom Expense Management for VoIP

AnswerNet Network
800-411-5777
<http://www.answer.net>
E-mail Management, Live Chat, Web Order Entry, Online Appointment Scheduling

Artesyn Technologies
608-826-8227
<http://www.artesyncp.com>
WAN Interfaces And CPU Boards

Atreus Systems, Inc.
613-233-1741 x109
<http://www.atreus-systems.com>
Service Provisioning, Self-management for VoIP and Advanced IP Offerings

Belden/CDT Networking
800-989-4295
<http://www.power-sense.com>
Power over Ethernet Hubs
(See our enhanced listing in the alphabetical section.)

BenchmarkPortal, Inc.
805-614-0123 x60
<http://www.BenchmarkPortal.com>
Benchmarking, Agent Satisfaction, Caller Satisfaction Measurement

Bway.net
212-982-9800
<http://www.bway.net>
Hosted PBX

CapRock Communications
832-668-2300
<http://www.caprock.com>
satellite communications

Catapult Communications Corporation
650-960-1025
<http://www.catapult.com>
Protocol Analyzer

Centillium Communications, Inc.
510-771-3700
<http://www.centillium.com>
VoIP System-On-Chip

Ceragon Networks, Inc.
201-845-6955 x23
<http://www.ceragon.com>
Fixed Broadband Wireless

Cerida Corporation
978-659-6500
<http://www.cerida.com>
Customer Relationship Management

Cicero Networks
+353 1 6636510
<http://www.ciceronetworks.com>
wVOIP Solutions

Clarisys
847-439-4333 x440
<http://www.clarisys.com>
IP Hardphone/Speakerphone For Softphone Applications

Cognitronics
203-830-3523
<http://www.cognitronics.com>
Media Servers

CommPartners
702-367-8647 x1017
<http://www.commpartners.us>
IP-Based Wholesale Solutions
(See our enhanced listing in the alphabetical section.)

ComputerPREP
800-228-1027 x4196
<http://www.ctpcertified.com>
CTP Certification Training and Education, Certification Testing

Concentric, An XO Communications Service
866-500-9696
<http://www.concentric.com>
Web Hosting, Email, Domain Name Registration

Connexn Technologies
303-301-6200
<http://www.cnnxn.com>
Revenue Assurance, Service Activation Software Services

Convedia Corporation
604-918-6300
<http://www.convedia.com>
Media Server

Corinex Communications Corp.
778-371-7697
<http://www.corinex.com>
200 Mbps Powerline Ethernet Adapters with QoS

CorpoTel
877-420-5111
<http://www.corpotel.com>
Relocation; Multi-branch Integration; Outsourcing; Management; Hosted IP-PBX

CosmoCom, Inc.
631-940-4200
<http://www.cosmocom.com>
Unified IP Contact Center

CPT International Inc.
866-388-8358
<http://www.cptii.com>
VoiceXML Application Hosting

Crystal Group Inc.
319-378-1636
<http://www.crystalpc.com>
IP Telephony Developer Platform

CTI — Customer Transaction Intelligence
800-800-2333
<http://www.ctigroup.com>
Billing Analysis, Invoice Processing, Call Management, TEM

CTI Squared Ltd
+972 9 9605220
<http://www.cti2.com>
Visual Voicemail, Video Messaging, Visual Mobile Client, Mobile Mail, Content

Cummins Power Generation
763-574-5000
<http://www.cumminspower.com>
Power Generation

Cummins Power Rent
623-572-4940
<http://www.cumminspowerrent.com>
Temporary turnkey power stations/rental generators

Data Connection Limited
011 44 20 8366 1177
<http://www.dataconnection.com>
IP Routing, VPN, MPLS and ATM.

DataProse Billing Solutions
408-255-5006
<http://www.dataprose.com/billing>
Electronic Bill Presentment & Payment

De Lage Landen Financial Services
800-669-9441 x5761
<http://www.delagelanden.com>
Financial Services to the Business Communications Industry

DiamondWare, Ltd.
480-380-1122
<http://www.dw.com>
Converged Enterprise Communications Solution, Low Latency Windows/PDA Softphone

Dictaphone Corporation
800-886-4908
<http://www.dictaphone.com>
Recording, Quality Monitoring, Workforce Relationship Management

Digital Talk
954-949-0501 x505
<http://www.pcfonica.com/webcalling>
ASP VoIP Conferencing Portals; B2B VoIP Integration with Third-Party Web Applications

Digium, Inc.
256-428-6000
<http://www.digium.com>
Asterisk, the Open Source PBX
(See our enhanced listing in the alphabetical section.)

Doretel Communications, Inc.
404-755-5721
<http://www.doretel.com>
Cisco Registered Partner, Quintum VoIP Products

ECI Telecom
972-3-926-8341
<http://www.ecitele.com>
MSPP, Bandwidth Management, SDH Integrated Access Unit, DSLAM, xDSL modems

eDial
781-895-3655
<http://www.edial.com>
Web Conferencing

Elix
514-768-1000 x2323
<http://www.bceelix.com>
contact center solutions

Emergent Network Solutions
888-879-3674
<http://www.emergent-netsolutions.com>
Session Border Controller
(See our enhanced listing in the alphabetical section.)

Envision
206-225-0800 x500
<http://www.envisioninc.com>
Business Intelligence, Quality Monitoring, Workforce Management and eLearning

Esna Technologies Inc
905-707-9700 x346
<http://www.esnatech.com>
Unified Communications

Forum Communications International
972-680-0700 x1581
<http://www.forum-com.com>
Emergency Response/Collaboration

General Telecom
303-278-0700
<http://www.gentel.net>
Full-Service TDM And IP Network Management Solutions Provider

Global IP Sound
415-397-2555
<http://www.globalipsound.com>
Embedded Voice Processing Software

Global Knowledge
919-388-1032
<http://www.globalknowledge.com>
VoIP & Telephony Training

Globalscape, Inc.
210-308-8267 x143
<http://www.globalscape.com>
VoIP Services

Globalstar
408-933-4543
<http://www.globalstar.com>
Satellite communications

GM Voices, Inc.
770-752-4500
<http://www.gmvoices.com>
Voice Branding, Speech Recognition, International Telephony, Corporate Storytelling

GOOD LIFE TECHNOLOGY INC.
818-726-8647
<http://www.goodlifetech.com>
Termination and Origination

High Tech High Touch Solutions, Inc.
425-398-9292
<http://www.HTHTS.com>
Help Desk, CRM, Call Center Consulting Services

HigherGround, Inc.
818-591-3133 x249
<http://www.highergroundinc.com>
Call Recording Solution

Hyperfone
517-745-1530
<http://www.myhyperfone.com/shawn>
VoIP Business Opportunity With Both Dial-Up and Broadband

Ingate Systems
603-883-6569
<http://www.ingate.com>
SIP-Enabled Firewalls and SIParators, NAT traversal, remote connectivity

Integrated Research
303-283-7700
<http://www.ir.com>
IP Telephony Infrastructure Management

Intrado
877-856-7504
<http://www.intrado.com>
E9-1-1 Solutions

IP Unity
408-582-1100
<http://www.ip-unity.com>
Media Server and Applications Servers for Web Conferencing, Video Chat, Enhanced/IP Services Platform

Jeongmin electronics
82 2 21132256
<http://jeongmin.com>
IP video phone

kasenna
650-943-8600
<http://www.kasenna.com>
Video Network Systems

LignUp
650-265-2000
<http://www.lignup.com>
Software Media Server; VoiceXML Web Services (Development tools)

MERA Systems, Inc.
888-238-0057
<http://www.mera-systems.com>
Session Border Controller

Meru Networks
408-215-5357
<http://www.merunetworks.com>
WLAN Access Points, WLAN Controllers, Radio Switch family

MINACOM
514-879-9111 x228
<http://www.minacom.com>
Single-End VoIP Probes
(See our enhanced listing in the alphabetical section.)

Mindspeed Technologies, Inc.
949-579-3650
<http://www.mindspeed.com>
Comcerto enterprise and carrier-class VoIP processing solutions

Morgle
01452614271
<http://www.morgle.com>
New Voip Directory

Motorola Embedded Communications Computing Group
602-437-3623
<http://www.motorola.com/computing>
Communications Server

Natural Convergence
613-280-2000
<http://www.naturalconvergence.com>
Hosted VoIP Applications Software

Natural Data Inc.
905-884-3338
<http://www.naturaldata.com>
Fax for Sabanes Oxley Act

NEON Communications, Inc.
508-616-7837
<http://www.neoninc.com>
Ethernet, Wavelength, SONET Private Line, Colocation

NetCentrex
408-521-7400
<http://www.netcentrex.net>
Triple Play

NetFabric Corporation
203-775-1178
<http://www.netfabric.net>
Intelligent Call Router

NetScout Systems
888-999-5946
<http://www.netscout.com>
Application Performance Management

NETXUSA Inc.
864-271-9868 x122
<http://netxusa.com>
Asterisk Boards and Devices

New Global Telecom
303-278-0700
<http://www.ngt.com>
Comprehensive Wholesale VoIP for Service Providers

Newport Networks Limited
+44 (0) 1291 635830
<http://www.newport-networks.com>
Session Border Controller

NexTone Communications
240-912-1310
<http://www.nextone.com>
Session Border Control



Nuance
650-480-4017
<http://nuance.com/>
Voice recognition software

NUASIS Corporation
650-318-2200
<http://www.nuaslis.com>
IP-based Contact Center Software

Octasic Inc.
514-282-8863
<http://www.octasic.com>
Chips For Packetization, Compression

Openet Telecom
866-873-7614
<http://www.openet.com>
Rating and Mediation

OZ
514-390-1333
<http://www.oz.com>
Mobile messaging (IM & Email)software

Phonetic Systems, Inc.
978-439-3600
<http://www.PhoneticSystems.com>
Voice-Enabled Technology

Pipeline Telecom Inc.
321-409-9971 x11
<http://www.pipeline telecom.com>
PC-to-Phone

Plantronics
800-544-4660 x5521
<http://www.plantronics.com>
Headsets for the computer

ProsoftTraining
800-228-1027 x4196
<http://www.ctpcertified.com>
CTP Certification Training and Education, Certification Testing

Protus IP Solutions
613-733-0000 x551
<http://www.protus.com>
Voice Broadcasting; On-Line Fax Service

Proxim Corporation
408-542-3979
<http://www.proxim.com>
Point-To-Point Wireless Bridges

Qovia, Inc.
301-846-0020
<http://www.qovia.com>
VoIP Monitoring and Management

Quintum Technologies, Inc.
732-460-9000 x238
<http://www.quintum.com>
Session Border Controllers, Call Routing Servers

RAD Data Communications, Inc.
201-529-1100 x330
<http://www.radusa.com>
TDMoIP Gateways

Rhino Equipment Corp.
480-940-1826 x6311
<http://www.rhinoequipment.com>
Channelbanks

RNK Telecom
781-613-6000
<http://www.rnktel.com>
VoIP Wholesaler

Rodopi Software
858-410-6985
<http://www.rodopi.com>
Applications and Services: 100 Percent Web-based Billing Engine

S&D Marketing
267-254-5051
<http://www.sdmarketing.com>
Online Live Person Interactive Sales, Disconnection Prevention

SAS Institute
866-270-5734
<http://www.sas.com>
Business Intelligence, Customer Relations Management

Sennheiser Communications
877-736-6434 x195
<http://sennheiserusa.com>
Telephone headsets, PC/IP headsets

SES AMERICOM
609-987-4555
Satellite Communications

Shenzhen Koncept Technology Development Co.,Ltd
(86)755 82197307 x823
<http://www.konceptusa.com>
VOIP

Silver Telecom
+44 1633 811833
<http://www.silvertel.com>
Line Interface, FXS and FXO

SS8 Networks
408-944-0250
<http://www.SS8.com>
Lawful Intercept

SyncVoice
714-415-6690
<http://www.syncvoice.com>
Voice Management

SysMaster Corporation
877-900-3993
<http://www.sysmaster.com>
Integrated VoIP Solutions

System Engineering International
301-694-9601 x216
<http://www.seipower.com>
Mid Span Power over Ethernet

TalkSwitch
888-332-9322 x111
<http://www.talkswitch.com>
Telephone Handsets

Telco Systems, a BATM Company
800-221-2849 x2250
<http://www.telco.com>
VDSL, IP Platforms, Fiber Transport Terminals, Frame Relay

TelCove
724-743-9567
<http://www.telcove.com>
Metro and Inter-City Ethernet

Telecommunications Industry Association
703-907-7721
<http://www.tiaonline.org>
Non-Profit Trade Association

TelePartners
800-482-5556
<http://www.telepartners.com>
E-mail management, live chat, hosting, database development

Telerox
800-2TE-LERX
<http://www.telerox.com>
CRM Customer Relationship Management

Telicor Communications
949-335-0150
<http://telicor.net>
VoIP / SIP Transport Supplier

telx
212-480-3300
<http://www.telx.com>
Operator of Network Interconnection Facilities

Texas Digital Systems, Inc.
979-693-9378
<http://www.txdigital.com>
Reader Boards

The Great Voice Company
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Alan Pound
CEO
Aculab



Founded in 1978, **Aculab** ([news](#) - [alert](#)) has been focused on providing computer telephony components to its customers since 1990. Aculab's product line is geared towards bringing its customer base real value, reduced costs, increased client satisfaction, and competitive advantage. Aculab employs nearly 200 employees in five countries. Aculab's CEO Alan Pound had this to say about his firm heading into the next generation of IP telephony.

GG: What is Aculab's mission?

AP: Technology, people, profit. Aculab has always focused on providing leading edge technology to the marketplace and employing the best people to make this vision a reality. As an independent and privately owned company, we answer only to the market's needs, generating profit, which is reinvested into R&D.

We have always strived to be one step ahead, which we have achieved in numerous ways—be it by supporting the broadest set of protocols in the marketplace or by being first-to-market with a combined media processing and E1/T1 digital network access card. There is also our technical support, which is cost-free and provided by qualified engineers in our R&D department. We are continuing to build on these achievements as we progress into an IP-centric era of communications.

GG: What is your vision for Aculab and how is the company positioned in the next-generation telecom market?

AP: Our vision is to be both the main technology provider for the next-generation telecom market and a key stepping stone to help both enterprise and telco customers alike make the move to IP-based networks and solutions. Aculab brings together a wealth of expertise, covering a number of factors that will be crucial in the new IP market—media processing resources, digital connectivity (TDM and IP), and convergence, combining features with functionality.

The fact that we have been developing these technologies and competencies for

many years now, with numerous success stories, provides solution developers the reassurance they need to commit to new technology. They can be certain that, with Aculab's technology, they will have a competitive advantage in the ever-changing communications marketplace.

GG: Now that it appears that growth and opportunity are the trends in the VoIP industry, what possible hurdles do you see that might upset this momentum?

AP: I don't think there are many new hurdles. The rewards are too great for any significant delays to occur. Solutions will be found and, in an era of increasingly open standards and extensibility, the momentum is unstoppable. The market has, for some time, however, been aware of different factors that could slow progress.

Regulation still poses a threat to cost advantages, though to a somewhat lesser degree than in the past. Regulators need to pick a side—the consumers' or the carriers'. Failure to meet QoS expectations can still dampen enthusiasm or worse—potential customers may start thinking, "This is not as good as what I have now, or what I used to have." It also is critical to focus on meeting actual market needs. There have been many great new application ideas, but how many actually addressed a particular service provider or enterprise need? Focus has to go on the end user and not on the wonders of the technology.

Finally, the open source model, which is opening up the market and making new technology accessible to more mar-

kets, may spark the development of a number of cost-effective but poorly designed products. It takes only one unhappy experience to turn a customer away from a technology—and that would be bad news for all. We all have a part to play in ensuring customers have a positive 'IP experience' and help advocate the technology.

GG: What are some of the technology areas where Aculab is increasingly focusing? Why are these areas important to the future of the company?

AP: IP is certainly the area where Aculab is placing its focus and resources. Over the past couple of years, Aculab has launched Prosody S, its host media processing solution and, most recently, Prosody X, which has challenged many of the traditional ideas behind hardware design and functionality for the IP network.

The fundamental change behind Prosody X is the principle around which the product is built. It is constructed around an IP core, while maintaining the optional ability to interface with E1/T1 connections, which are still in widespread use.

IP is, therefore, inherent in the design, making this architecture the ideal platform for creating large-scale, cost effective, revenue generating applications for solution providers and telcos offering IP-centric products.

Along with the change in environment comes a parallel change in the available DSP technology we have used to construct our next-generation hard-

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technology—and
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news for all.

ware. Using the latest DSP families—created with VoIP in mind—allows the choice of devices that are, by design, application-friendly to both VoIP and rich media processing applications.

Standards also have a critical role. Aculab's portfolio of products support a number of standards, from hardware format to new software standards, such as MRCP for speech technologies. We also support both H.323 and SIP (define - news - alert) and, since we are already seeing SIP take off, we are increasingly focusing energy in this area. Aculab's new SIP implementation, SIP

Bridge, makes it possible to use Aculab's highly integrated SIP protocol stack in a much more powerful manner. For use with Prosody X, the Aculab SIP

Bridge breaks the assumption that the media and signalling will both be terminated in the same place, allowing developers to build back-to-back user agents and third-party call control products.

Next-generation networks are being built and used today—Prosody X and Prosody S will see that Aculab has a role to play both in the migration to these networks as well as their long term

development.

GG: Describe your view of the future of the IP telephony industry.

AP: The future of the IP telephony industry goes hand in hand with the future of the communications industry as a whole. In essence, IP becomes the future of communications, which means large-scale change for all the players in the IP telephony industry. I doubt there will be many players who have not re-assessed their organization and product offerings to adapt to the new marketplace. Those that have not likely won't be around long. Everything is changing—from who traditional competitors are, to the supply chain, to where and how revenue is generated. IT

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